

Study on the Development of Domestic Sea Transportation and Maritime Industry in the Republic of Indonesia

Assistance for Public Ship Finance Scheme and
Advanced Maritime Education Program

(STRAMINDO II)

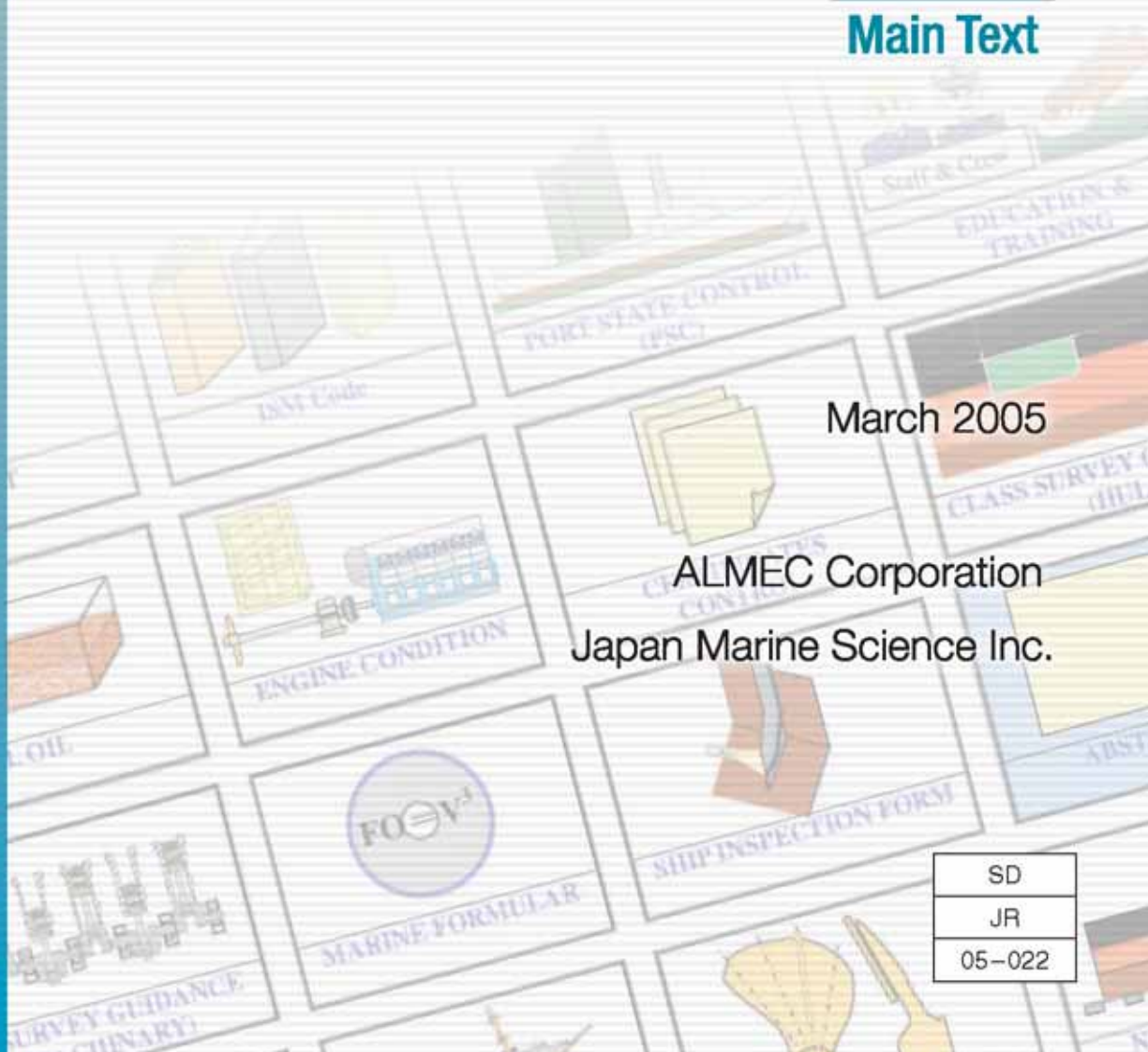
FINAL REPORT

Main Text

March 2005

ALMEC Corporation
Japan Marine Science Inc.

STRAMINDO II



JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

STRAMINDO II

STUDY ON THE DEVELOPMENT OF DOMESTIC SEA TRANSPORTATION
AND MARITIME INDUSTRY IN THE REPUBLIC OF INDONESIA: ASSISTANCE FOR
PUBLIC SHIP FINANCE SCHEME AND ADVANCED MARITIME EDUCATION PROGRAM

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The exchange rate used in the report is:

J.Yen 105 = US\$ 1 = Indonesian Rupiah 9,000
(average in October 2004)

PREFACE

In response to the request from the Government of the Republic of Indonesia, the Government of Japan decided to conduct “the Study on the Development of Domestic Sea Transportation and Maritime Industry in the Republic of Indonesia: Assistance for Public Ship Finance Scheme and Advanced Maritime Education Program” and entrusted the study to the Japan International Cooperation Agency (JICA).

JICA selected and dispatched a team to Indonesia between August 2004 and March 2005, which was headed by Mr. KUMAZAWA Ken of ALMEC Corporation (ALMEC) and was comprised of ALMEC and Japan Marine Science Inc (JMS).

The team conducted the study in collaboration with the Indonesian counterpart team including policy dialogue, establishment of public ship finance scheme and introduction of advanced maritime education program, and then held a series of discussions with the officials concerned of the Government of Indonesia. Upon returning to Japan, the team duly finalized the study and delivered this report.

I hope that this report will contribute to the development of domestic shipping and its maritime industry in Indonesia and to the enhancement of friendly relationship between our two countries.

Finally, I wish to express my sincere appreciation to the officials concerned of the Government of Indonesia for their close cooperation extended to the team.

March 2005

MATSUOKA Kazuhisa
Vice President
Japan International Cooperation Agency

March 2005

MATSUOKA Kazuhisa

Vice President

Japan International Cooperation Agency

Tokyo

LETTER OF TRANSMITTAL

Dear Sir,

We are pleased to formally submit herewith the final report of the “Study on the Development of Domestic Sea Transportation and Maritime Industry in the Republic of Indonesia: Assistance for Public Ship Finance Scheme and Advanced Maritime Education Program”.

This report compiles the result of the study which was undertaken both in Indonesia and Japan from August 2005 to March 2005 by the Team, jointly organized by ALMEC Corporation and Japan Marine Science Inc.

We owe a lot to many people for the accomplishment of this report. First, we would like to express our sincere appreciation and deep gratitude to all those who extended their extensive assistance and cooperation to the Team, in particular the Ministry of Communications as well as the Ministry of Industry both in Indonesia.

We also acknowledge the officials of your agency, the JICA Advisory Committee and the Embassy of Japan in Indonesia for their support and valuable advice in the course of the Study.

We wish the report would contribute to the introduction of public ship finance scheme and implementation of advanced maritime education program which will promote sustainable development of domestic sea transportation and maritime industries in Indonesia.

Very truly yours,

KUMAZAWA Ken

Team Leader

The Team for the Study on the Development of Domestic Sea Transportation
and Maritime Industry in the Republic of Indonesia

: Assistance for Public Ship Finance Scheme and Advanced Maritime Education Program

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ACRONYMS

ADB	Asian Development Bank
AFAS	ASEAN Framework Agreement on Services
AFI	Apex Financial Institution
AFTA	ASEAN Free Trade Agreement
AHTS	Anchor Handling Tug Supply Boat
ASEAN	Association of Southeast Asian Nations
B/C	Cost Benefit Ratio
BAPINDO	<i>Bank Pembangunan Indonesia</i> / Development Bank of Indonesia (now BMI)
BAPPENAS	<i>Badan Perencanaan Pembangunan Nasional</i> / National Development Planning Agency
BI	Bank of Indonesia
BIMCO	Baltic and International Maritime Council
BKI	<i>Biro Klasifikasi Indonesia</i> / Indonesian Classification Bureau
BO/PO	<i>Biaya Operasional/Pendapatan Operasional</i> / Operational Cost/Operational Income)
BP3IP	<i>Balai Pendidikan Penyegaran dan Peningkatan Ilmu Pelayaran</i> / Hall of Reeducation and Improvement for Maritime Education
BPLPD	<i>Balai Pendidikan dan Latihan Pelayaran Dasar</i> / Hall of Education and Training for Basic Maritime
BPMIGAS	<i>Badan Pelaksana Kegiatan Usaha Hulu Minyak dan Gas Bumi</i> / Executive Agency for Upstream Oil and Gas Business Activities
BUMN, SOE	<i>Badan Usaha Milik Negara</i> / State Owned Enterprise
CAR	Capital Adequacy Ratio
Cb	Block Coefficient
CDS	Constructional Differential Subsidy
CGI	Consultative Group for Indonesia
Cm	Midship Coefficient
CPI	Consumer Price Index
CPO	Crude Palm Oil
CVP	Continuous Voyage Permit
DA Dept.	Development Assistance Department
DBP	Development Bank of the Philippines
DGMMEMI	<i>DGILMEA: Direktorat Jenderal Industri Logam, Mesin, Elektronika, dan Aneka</i> / Directorate General of Metal, Machinery, Electronics and Multifarious Industry
DGSC	Directorate General of Sea Communication
DIK	<i>Daftar Isian Kerja</i> / Form of Activity List
DIP	<i>Daftar Isian Proyek</i> / Form of Project List
DKB	<i>Dock Kodja Bahari</i> / an Indonesian Shipbuilding Company
DOC	Document of Compliance
DPS	<i>Dock Perkapalan Surabaya</i> / an Indonesian Shipbuilding Company
DSCR	Debt Service Coverage Ratio
DSMP	Domestic Shipping Modernization Program
DWT	Dead Weight Ton
DUP	<i>Daftar Usulan Proyek</i> / Project Proposal List
E/A	Executing Agency
EIRR	Economic Internal Rate of Return
ETA	Education and Training Agency
EU	Europe Union
EV	Existing Vessel
FBR	Fare-box Ratio
FIRR	Financial Internal Rate of Return
FSA	Financial Supervisory Authority

GATS	General Agreement on Trade in Services
GOI	Government of Indonesia
GT	Gross Tonnage
ILO	International Labor Organization
IMO	International Maritime Organization
INPRES	Presidential Instruction
INSA	Indonesian National Shipowners' Association
IPERINDO	<i>Ikatan Perusahaan Industri Kapal Nasional</i> Indonesia / Indonesian Shipbuilding Industries' Association
IRR	Internal Rate of Return
ISM-Code	International Safety Management Code
ISO 9000	International Standards for Quality Management
ITS	<i>Institut Teknologi Surabaya</i> / Institute Technology of Surabaya
JARC	Jones Act Reform Coalition
JBIC	Japan Bank for International Cooperation
JICA	Japan International Cooperation Agency
JMI	<i>Jasa Marina Indah</i> / an Indonesian Shipbuilding Company
KEPRES	<i>Keputusan Presiden</i> / Presidential Decree
KfW	<i>Kreditanstalt fuer Wiederauf</i> / a German International Bank Group
KMK	<i>Keputusan Menteri Keuangan</i> / MOF Decree
KPM	Dutch's State-owned Shipping Company Operated in Indonesia
L/A	Loan Agreement
LDR	Loan to Deposit Ratio
LR	Lloyd's Register
LTTC	Long Term Time Charter
MCC	Maritime Credit Cooperation
MCO	Maximum Continuous Output
MEPC	Marine Environment Protection Committee
MOC	Ministry of Communications
MOF	Ministry of Finance
MOI	Ministry of Industry / Former Ministry of Industry and Trade (MOIT)
MSP	Maritime Security Program
NCO	Normal Continuous Output
NIM	Net Interest Margin
NM	Nautical Miles
NPL	Non-Performing Loan
NPV	Net Present Value
NUSSP	Neighborhood Upgrading and Shelter Sector Project
OCIMF	Oil Companies International Marine Forum
OD	Origin-Destination
ODA	Official Development Assistance
ODS	Operating Differential Subsidy
OECD	Organization for Economic Cooperation and Development
OJK	<i>Otoritas Jasa Keuangan</i> / Supervisory and Regulatory Authority for Financial Market
OJT	On the Job Training
P3	<i>Pengelolaan Penerusan Pinjaman</i> / Subsidiary Loan Management
PELNI	<i>Pelayaran Nasional Indonesia</i> / an Indonesian state-owned shipping company
PERTAMINA	Perusahaan Pertambangan Minyak dan Gas Bumi Negara / Indonesia State Oil and Gas Mining Company
PFI	Participating Financial Institution
PI	Professional Indemnity
PIMPRO	<i>Pimpinan Proyek</i> / Project Manager
PIP	<i>Politeknik Ilmu Pelayaran</i> / Maritime Academy
PMU	Project Management Unit
PSC	Port State Control

PSV	Platform Supply Vessel
PT	<i>Perseroan Terbatas</i> / Limited Enterprise
PT. IKI	<i>PT. Industri Kapal Indonesia</i> / an Indonesian Shipbuilding Company
PT.PANN MF	PT.PANN Multi Finance
PT. PLN	<i>PT. Perusahaan Listrik Negara</i> / a State-owned National Electric Company
PV	Proposed Vessel
RENSTRA	<i>Rencana Strategis</i> / Strategic Plan
ROA	Return on Average Asset
ROE	Return on Average Equity
Ro-Ro	Roll on Roll off
RLS	Regular Liner Service
RM	Ringgit Malay
RT	Round Trip
SAPI	Special Assistance for Project Implementation
SAPROF	Special Assistance for Project Formation
SAPS	Special Assistance for Project Sustainability
SBI	<i>Sertifikat Bank Indonesia</i> / Bank of Indonesia Certificate
SLA	Subsidiary Loan Agreement
SMC	Safety Management Certificate
SME	Small and Medium Enterprises
SMEEDP	SME-Export Development Program
SMHC	Ship Management and Holding Company
SOLAS	International Convention of the Safety Of Live At Sea
SOLG	State-Owned Enterprises Owned by Local Government
STCW	Standards of Training, Certification and Watchkeeping
STIP	<i>Sekolah Tinggi Ilmu Pelayaran</i> / Maritime Higher Education and Training Institute
STMT	<i>Sekolah Tinggi Manajemen Transpor</i> / Higher Education of Transport Management Institute
SVP	Single Voyage Permit
TEU	Twenty feet Equivalent Units
TSL	Two-Step Loan
UPN	<i>Universitas Pembangunan Nasional</i> / University of National Development
VAT	Value Added Tax
VLCC	Very Large Crude Carrier
WPA	Water Plane Area
WTO	World Trade Organization

INTRODUCTION

Study Background

Maritime transport is definitely one of the most strategically important sectors in Indonesia. A concerted effort is therefore necessary under a clear long-term perspective. Under this premise, the Government of Indonesia in June 2001 requested the Government of Japan, a nation with an extensive technical experience in shipping and related industries, to conduct a master plan study on Indonesian domestic shipping and maritime industry. In response to this request, “The Study on the Development of Domestic Sea Transportation and Maritime Industry in the Republic of Indonesia (hereafter STRAMINDO)” was conducted to formulate a long-term master plan and short-term action plan. The Ministry of Communications and the then Ministry of Industry and Trade (now reorganized as the Ministry of Industry) were the counterpart agencies of the Study. The final report was submitted in March 2004.

The Indonesian Government expressed during the submission of the STRAMINDO draft final report that the overall Study results will be very important in the preparation of INPRES on the development of shipping industry. In addition, a part of the STRAMINDO action plan will be included in the next mid-term transport development strategy plan. In this connection, the government requested the extension of the Study period so that the Study Team can provide policy advices on the preparation of the plan and other related documents as well as to provide technical assistance in the implementation of the action plan (public ship finance scheme and advanced education program). Taking into account the effectiveness and optimization of providing continuous technical assistance, JICA decided to have conducted the follow-up study of STRAMINDO since August 2004.

Study Objectives

The overall objective of this follow-up Study is to provide further technical assistance in the implementation of the Action Plan recommended by the STRAMINDO Study. In addition to this overall objective, seminars and other technology transfer programs will be conducted.

More specifically, the Study focuses on three areas:

- a) Policy advice on domestic shipping development,
- b) Technical assistance in the implementation of a public ship finance scheme, and
- c) Technical assistance in the implementation of an advanced education program.

Study Organization and Implementation

The Study has been conducting through the typical Japanese technical cooperation scheme wherein the Japanese side organizes the JICA Advisory Committee and the JICA Study Team while the Indonesian government organizes the Steering Committee and the Counterpart Team.

➤ JICA Advisory Committee and Study Team

The members of the JICA Advisory Committee and the JICA Study Team are as follows:

JICA Advisory Committee

Mr. Ogura Shigeo	Chairman/ Fleet Development
Mr. Nakagawa Takanori	Shipping Policy
Mr. Mori Hirotsugu	JICA HQ Officer-In-Charge

JICA Study Team

Mr. Kumazawa Ken	Team Leader/ Maritime Transport Policy
Mr. Maeda Eiji	Ship Finance
Mr. Takino Seiichi	Basic Ship Design
Mr. Katsurada Toshisada	Shipping Business Modernization
Mr. Sakaguchi Kazuaki	Ship Management Education
Mr. Wakui Tetsuo	Economic/Financial Analysis 1
Dr. Espada, Ian	Economic/Financial Analysis 2
Ms. Sakai Yuko	Coordinator

➤ **Steering Committee and Counterpart Team**

Steering Committee is comprised of decision makers from relevant agencies including the Ministry of Communications, the Ministry of Industry, the National Development Planning Agency (BAPPENAS), the Coordinating Ministry of Economic Affairs, and the Ministry of Finance. The committee is chaired by Director General of Sea Communication.

Counterpart Team is organized from the members of Directorate General of Sea Communication (DGSC) of MOC, Directorate General of Metal, Machinery, Electronics and Multifarious Industries (DGMMEI) of MOI and relating organizations. The member of counterpart team is shown below:

Indonesia Counterpart Team

Mr. Jimmy AB. Nikijuluw	Director of Sea Traffic and Transportation (DGSC)
Mr. Putu Suryawirawan	Director of Metal Machinery and Maritime Industry (MOI)
Ir. Adolf R. Tambunan, MSc.	Head of sub Directorate of International Sea Transportation (DGSC)
Mr. Kemal Heryandri, Dipl. HE	Head of Planning Division (DGSC)
Mr. Udiyanto, SH	Head of sub Directorate of Sea Transportation Business Development (DGSC)
Mr. Bambang K, SH	Head of sub Directorate Sea Transportation System and Information (DGSC)
Mr. Loren Situmorang	Head of sub Directorate of Special Sea Transportation and Auxiliary Services (DGSC)
Ir. Abdul Azis	Head of sub Directorate of Domestic Sea Transportation

	(DGSC)
Capt. Indra Priyatna	Head of sub Directorate of Seafarer (DGSC)
Mr. Putu Juli Ardika	Head of sub Directorate of Program Development (MOI)
Mr. Thomas Sitorus, SE	Head of section Europe and America (DGSC)
Ms. Sri Lestari, SH, LLM	Head of section Asia and Africa (DGSC)
Mr. Simson Sinaga, SE, MSc	Staff of sub Directorate of International Sea Transport (DGSC)
Capt. Sahat Tua Simatupang	STIP, Indonesian State Marine Institute (DGSC)
Mr. Djoko Sunarjoto	Staff of sub Directorate of Ship Worthiness (DGSC)
Mrs. Gigih Purwanti	Staff of sub Directorate of Sea Transportation Business Development (DGSC)
Ir. Budi Indrayanto	Staff of sub Directorate Sea Transportation System and Information (DGSC)
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Mr. Nico Tanzil	INSA
Capt. Arthur Warokka	INSA
Mr. Djoko Wahono	INSA
Mr. I Komang Kotha	INSA
Mr. Asep Suparman	INSA
Mr. Wing Wiryawan	IPERINDO
Mr. Gompis L. Tobing	PT. PANN Multi Finance

➤ **Study Implementation**

The study has been conducted in coordination with the Indonesian side.

The counterpart team has organized a couple of working groups under the team so as to discuss more specific matters such as ship finance, ship design and maritime education. Moreover, the preparatory committee has set up with counterparts and relating agencies to prepare the advanced maritime education program.

Until the end of January 2005, the study convened two (2) Steering Committee Meetings, two (2) seminars, one (1) short-training course on ship-management, one (1) workshop and eight (8) working group meetings. In total, 541 persons from the both sides participated at those activities.

Structure of the Final Report

The Final Report consists of seven (7) chapters, followed by this introductory section:

Chapter 1 Shipping Policy: After this introductory section, Chapter 1 discusses a set of shipping policies to increase national shipping capabilities taking account of other countries' experiences and historical policy change in Indonesia. At the end, a desirable policy package is proposed including public ship finance.

Chapter 2 Public Ship Finance Scheme: This chapter depicts a public ship finance scheme to be sourced from JBIC's TSL facility including project preparation procedure, flow of fund and project implementation scheme. Prospective participating financial institutions including a ship leasing institution, PT. PANN MF, are also analyzed.

Chapter 3 Shipbuilding, Ship Improvement and Ship-Management: This chapter profiles the usage of public ship finance at the end borrowers' level. It includes suitable ship designs for domestic shipping fleets to be newly built such as container ship, CPO tanker, coal carrier, petroleum tanker and off-shore vessel, reconstruction of existing vessels and improvement of young second-hand vessels. Shipyards and ship-management companies are also analyzed as possible end-borrowers.

Chapter 4 Economic and Financial Evaluation: This chapter evaluates the proposed public ship finance scheme economically and financially. The economic evaluation covers all fleet to be procured under the public ship finance scheme while specific calculation is done on in the case of the container ships proposed in Chapter 3. The financial evaluation examines profitability throughout the project life focusing on three actors in the scheme such as (1) Apex Financial Institution, (2) ship leasing company, and (3) container shipping company.

Chapter 5 Need for Maritime Education: This chapter identifies the needs to improve maritime education during shipping operation at both land and onboard. As practical measures to improve ship-management, necessary teaching materials are conceptualized and partly developed for the personnel who are engaged in Indonesian domestic shipping.

Chapter 6 Advanced Maritime Education Program: This chapter outlines the proposed education program including courses, curricula, teaching staff and implementation scheme. In order to select a platform university, candidate universities are evaluated in a comparative manner. Financial analysis is done to show cost and revenue structures in the course of the program implementation.

Chapter 7 Study Conclusions and Update of Action Plan: Based on all the findings and proposals in the Study, conclusions and recommendations are made. The Action Plan is updated with reviewing the relevant activities after the STRAMINDO Study.

CHAPTER 1 SHIPPING POLICY

National policies related to shipping covers a wide variety of maritime related topics. Such topics are interconnected and should be viewed in the context of general transport policy that should facilitate the attainment of national economic objectives. The scope of the national shipping policies, the process of policy formulation, its enumeration and direction is the prerogative of each country. No country can however develop shipping policies without historical and international influences. Those influences have to be carefully analyzed if national shipping policies are to be developed on a sound basis. This is the reason why this starting chapter pays attention to various countries' shipping policy frameworks and historical review of Indonesia's shipping development.

Although shipping policy cover a variety of topics, the chapter mainly focuses on national shipping capabilities in domestic shipping. This is the natural consequence since the STRAMINDO project commenced in order to increase the share of Indonesian flagged vessels in domestic shipping. The issuance of Presidential Instruction on Shipping Industry Empowerment (No. 5/2005) is a landmark event worthwhile assessing in the chapter.

1.1 Comparative Shipping Policy Debates

1.1.1 Shipping Policy Objectives

Scope and Extent of Policies to Be Developed

The term 'shipping policy' may be interpreted broadly to cover the entire maritime sector or, in a narrow sense to cover trade and service related shipping policies. Even if the term is narrowly defined, shipping policies cannot be developed in isolation. From a competitive logistics services' viewpoint, shipping policies have to take into account policies being developed in ports, infrastructure and operation, land access transports and related industries. Under liberalized trade regimes, the degree of liberalization in maritime transport services is another concern in policy setting. Although the WTO-GATS and the AFAS exempted domestic shipping in its negotiation, costly domestic products can be easily substituted for competitive imported goods. Therefore, domestic shipping, in most cases, could not enjoy protectionism without meeting users' satisfaction.

Today, national shipping policies should cover a wide range of maritime activities such as ship-owning, operating, seafaring and related activities in a logistics chain in port and on land. National shipping policies should be developed in consultation with macro and micro economic requirements. At the macro economic level, a mass of shippers and passengers stands to benefit from satisfactory services while the accumulated maritime industries generate a considerable economy and bring about balance of payment benefit. At the micro economic level, shipping and related industries sustain and modernize their services without considerable subsidy. National shipping policies are also harmonized with other national concerns such as security, defense and environment preservation.

Prioritization of Objectives in National Shipping Policies

In a broader sense, there are three possible areas of priority in shipping policies. They are (i) provision of competitive shipping services, (ii) development of national shipping

capability, and (iii) increasing concerns on safety, environment and security. To realize these priority areas, there is a need to choose a set of policy options and tools. However, each country has its inherent maritime resources and different conditions thus policy prioritization and option selection may differ (refer to Figure 1.1.1).

In general, countries may employ liberal measures when stressing on provision of competitive shipping services, protective measures for developing national shipping capability, and stringent regulations to improve safety, environment and security conditions. Therefore, it may be difficult for countries to equally address these three priority areas in developing a consistent shipping policy framework.

1.1.2 Country Study for Shipping Policy

This section briefly introduces examples of national shipping policies in other countries. Amazingly, each country has set a different policy direction. For example, Australia and New Zealand do not prioritize the development of national shipping capability, while, Malaysia strongly seeks for competitiveness in both gateway ports and national fleets.

USA: USA is the largest market place in the world. The carriage of its foreign trade is open to commercial competition from both national and foreign shipping companies. The basic principle of US shipping policy is to achieve the following objectives:

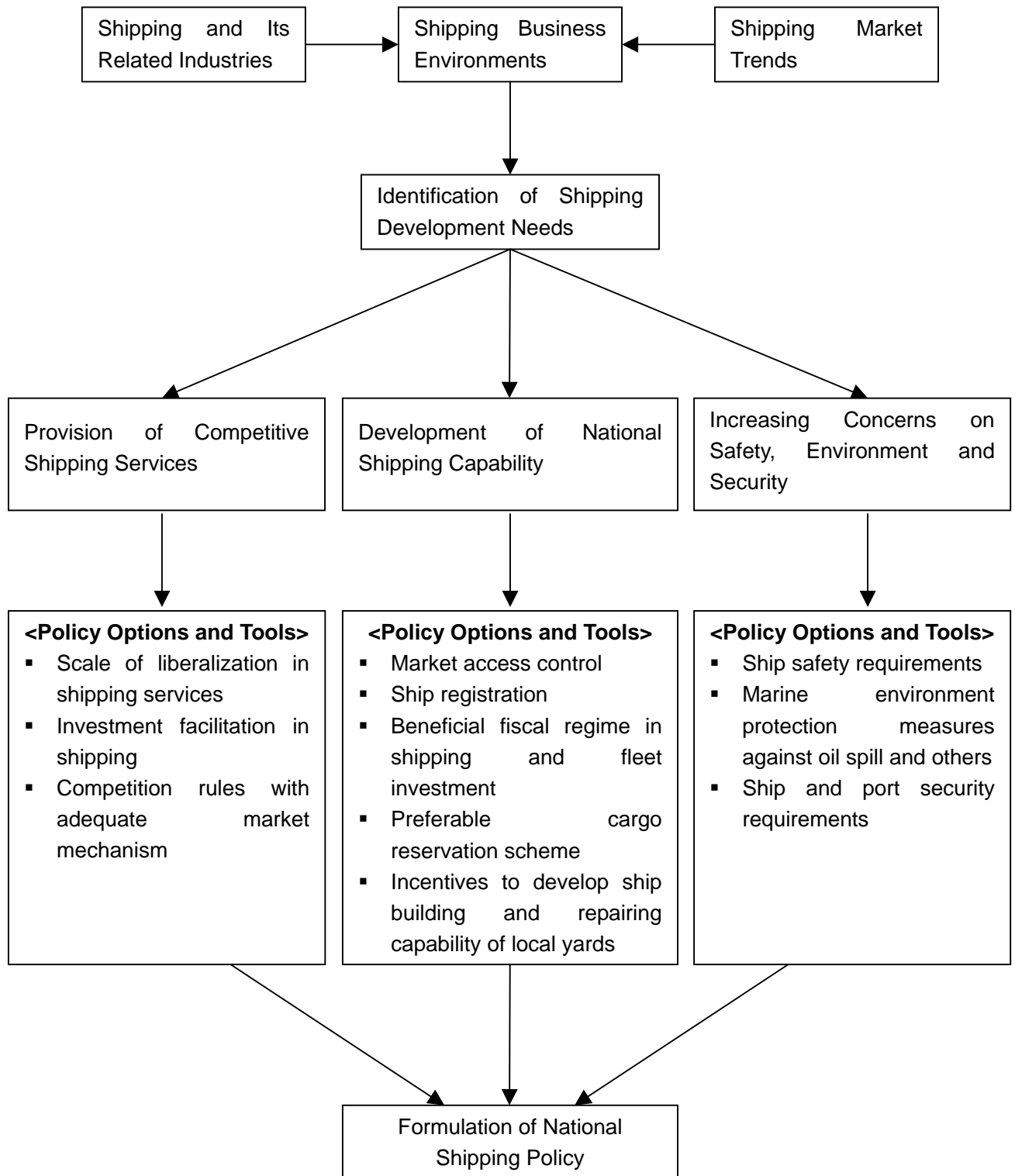
- Increase the competitiveness of shipping serving its international trade.
- Enhance the competitiveness of its national fleet to serve the interests of consumers by providing low cost and efficient shipping services.
- Maintenance of a national merchant fleet able to meet national security needs.

In practice, however, there are areas where USA's detailed shipping policies do not appear to match the principle of a free market such as subsidies and cargo preference schemes directed at the national shipping fleets. This inconsistency is the result of the dilemma between competitive service provision and maritime industry development, which is faced not only by the USA but many other countries.

Australia: The broad objective of Australia's shipping policy is to enable access to a more competitive and reliable shipping and waterfront services for Australia's tradable goods, and greater transparency in the service delivery cost of ports and shorebased cargo handling industries. The policy is totally users' oriented.

New Zealand: The New Zealand's shipping policy is to provide safe, efficient and environmentally sensitive shipping, and promote and safeguard reliable, competitive shipping services to the benefit of the economy. The policy disregards the importance of maritime industry development like in Australia.

Figure 1.1.1 Framework for Prioritization of National Shipping Policy



Source: JICA Study Team

India: Since its independence, India's shipping policy has kept five objectives: (i) to safeguard the import of essential supplies for the national economy, (ii) to reserve 100% of coastal trade for national flagged vessels, (iii) to ensure adequate provision of shipping services to meet the requirements of national trade, (iv) to improve the balance of payments position through import substitution and export of shipping services, and (v) to develop merchant fleet to act as a second line of defense to protect India's maritime interests and preserve its channels of communication. Thus the policy is comprehensive.

China, PR: The broad objectives of Chinese shipping policies are two-fold: introduction of market mechanism in shipping sector and provision of satisfactory shipping services. To meet the former objective, the government opened the Chinese shipping market step by step, encouraged enterprises to compete in the international shipping market, and strengthened the legal system to attain an environment of fair, reasonable and orderly competitive shipping market in China. Less attention was given to coastal domestic shipping.

Singapore: Singapore's shipping policy has always been addressed on how to promote the country as a premier port and an international maritime center and to safeguard its strategic maritime interest. The latest policy package¹ is to offer further business incentives, maritime ancillary services and education/training opportunities in order to attract more shipowners and shipping related companies to base their operations in Singapore. The scope of the maritime ancillary services includes ship financing, marine insurance, maritime R&D, maritime legal and arbitration services. Postgraduate degree programs in maritime studies opened at Nanyang Technological University in 2004.

Malaysia: Malaysia's shipping policy focused on two main issues: fleet expansion and port development. The aim of fleet expansion is to reduce dependence on foreign vessels for the carriage of Malaysian cargo and to minimize economic vulnerability caused by over-dependence on foreign fleets. While port development aims at making Malaysian ports into transshipment hubs for South East Asia, encouraging local shippers to ship through national ports to save the outflow of foreign exchange and ensure the growth of other maritime related services such as shipbuilding, bunkering, ship handling, banking and insurance.

Philippines: As an archipelagic country, the Philippines have many similarities with Indonesia in shipping policy. Some differences can be found as follows:

- Foreign capital and foreign flagged vessels: Domestic shipping is treated as a public utility industry to be protected against foreign capital. The maximum allowable foreign investment is limited to 40%. The usage of foreign flagged vessels is strictly controlled with issuance of special permit.
- There is no large state-owned shipping company like PT. PELNI in Indonesia. However, the domestic shipping market is monopolized by large privately-owned operators.
- The country adopts a liberalized ship registration system to have a substantial share to transport Philippine cargo in trade such as bareboat chartered vessels.

¹ Addendum to the President's Address in Parliament on 12 January 2005, Ministry of Transport, Singapore

- Since it is the largest seafaring country, various seafarers' education and training and manning agent activities are encouraged.

In May 2004, "an Act promoting the development of the Philippine domestic shipping, shipbuilding, ship repair and shipbreaking, ordaining reforms in government policies towards shipping in the Philippines and for other purposes" otherwise known as the Domestic Shipping Development Act of 2004 was enacted. Significant reforms introduced by the Act can be summarized as follows:

- (i) Grant of investment incentives to domestic shipping operators;
- (ii) Deregulation of the domestic shipping rates;
- (iii) Grant of regulatory power of intervention to the Maritime Industry Authority (MARINA), when necessary;
- (iv) Retention of the power to inspect ships and all equipment onboard ships by the MARINA;
- (v) Expanded powers/authority/jurisdiction of the MARINA;
- (vi) Compulsory insurance coverage of passenger and cargo;
- (vii) Reiteration of the principle against lifting of the cabotage law or the opening up of the domestic trade to foreign flagged ships, except in specified instances;
- (viii) Grant of shipbuilding and ship repair investment incentives;
- (ix) Restriction on vessel importation if proven that MARINA registered shipyards are capable of building ships below 500 gt;
- (x) Yearly evaluation of progressive capabilities of MARINA-registered shipyards;
- (xi) Mandatory classification of ships in the domestic trade; and
- (xii) Mandatory retirement program for unclassed ships.

Japan: The central government has developed completely separate policy packages for overseas shipping and domestic shipping. For the overseas shipping, the industry suffers from many flagged out vessels and decreasing and aging seafarers. To address them, the government has adopted some policy incentives as follows: (Refer to Figure 1.1.2 in comparison with other developed maritime countries)

- Favorable depreciation measures: An accelerated depreciation rate of 18% can be applied for the period of 5 years after acquisition of new vessels while normal depreciation of the declining balance method over the useful life of 13 to 15 years.
- Special exemption for the replacement of vessels with new ones (roll-over relief): Special exemption measures, such as tax-deferred income from the sale of old vessels when replacing with a new one.
- Vessel registration system: Since 1999, accumulated non-Japanese seafarers of 1,499, including 23 Indonesian seafarers, has been allowed to engage in Japanese flagged vessels.

For domestic shipping, the industry had been characterized as over-tonnage and small scaled for a long time. The government implemented the tonnage adjustment project through a scrap-and-build method between 1966 and 1998. During the period, the number of shipping companies reduced from 10,941 to 3,755 while the average ship size enlarged from 426 gt to 740 gt. To activate the industry, the tonnage adjustment project was terminated and the domestic shipping tentative measures program was launched in 1998.

Another strong policy tool in Japanese domestic shipping is the public ship finance program through a joint building and vessel owning method. At the early stage, it worked to solve tonnage shortage and fleet modernization. Nowadays it has matched with the prevailing government policies such as “modal shift” from road-based freight transport to shipping and diffusion of eco-ships. The Japanese experiences in this field are introduced in Section 1.2.5 of this report and more in detailed in STRAMINDO Main Text Volume 2, Section 12.5, Appendix of Chapter 12.

Figure 1.1.2 Policy Incentives Introduced by Shipping Countries

	Belgium	Denmark	Finland	France	Germany	Greece	Ireland	Italy	Holland	Norway	Portugal	Spain	Sweden	U.K.	U.S.A.	South Korea	Japan
1 Favorable depreciation measures	○	○	○	○				○	○	○				○	○		○
2 Special exemption for the replacement of vessels with new ones (roll-over relief)		○			○			○				○		○			○
3 Reduction in corporate tax using a tonnage-based taxation system	○	○		○	○	○	○		○	○		○		○			
4 Vessel registry system (e.g., Second Ship Registry System)		○	○	○	○			○	○	○	○	○		○		○	○
5 Reduction in/Exemption of crewmembers' income tax		○	○		○	○			○	○	○	○	○	○			
6 Reduction in crewmembers' social security premiums	○		○	○		○	○	○	○	○	○	○	○	○			
7 Subsidy for the dispatch/repatriation of seafarers		○												○			
8 Subsidy for the training of seafarers					○									○			
9 Vessel operation subsidy (U.S.)															○		

Source : JSA survey (known information as of September 30,2003).

1.1.3 Rationale for Developing National Shipping Capabilities

When a country prefers to hold and upgrade its national shipping capabilities, its shipping policy may reasonably justify such intention. From the examples of shipping policies in the previous section, some representative justifications is expressed. They include (i) stable carriage of goods, (ii) strategic national defense support, (iii) safeguard of the marine environment, (iv) balance of payment, and (v) accumulation of marine related industries.

Stable carriage of goods: The transport of bulk cargo, such as crude oil and petroleum, forms part of a supply chain where reliability is a critical factor. This is particularly so when they provide input into source industries such as power and steel production. High priority may be placed on stable carriage of essential goods either by the development of national shipping capability or through chartering of foreign flagged vessels. In reality, many countries perceive that transport of essential goods cannot be dependent on foreign vessels. It has sometimes led to government cargo reservation and other preferential schemes.

Strategic defense support: The potential utility of the fleet for military or civil defense purposes shall be directly related to the availability and suitability of the fleet for

military purpose. The value of national merchant fleet for defense is sensitive enough for governments to refrain from open discussions. Exceptionally, the United States has set strategic defense support as a key objective of its shipping policy. It is also important to note that in time of war or emergency, when foreign vessels are reluctant to engage in servicing trade, national merchant vessels could be used to ensure “business as usual”.

Safeguard of the marine environment: Every country in the region has placed the highest priority on the protection of the marine environment. Oil spill accidents from ships, particularly substandard ships, expose the marine environment to detrimental pollution risks. By holding an adequate ship registration system, the country is confident that its national fleet is more conscious of the need to protect the marine environment than overseas vessels.

Balance of payment: Some countries suffer from large deficits in their balance of payment. If a country develops national shipping capabilities, national flag vessels can carry cargoes in both external and internal trades with corresponding savings in foreign exchange paid out to foreign vessels.

Accumulation of maritime related industries: Countries in the region has observed scale of economies when various maritime-related industries are accumulated around national merchant vessels and the ports. Acquisition of vessels requires the establishment of a ship register, ship repair yards and other expertise to manage and operate vessels. The shipping industry gives rise to two types of employment – seafarers and shore-based personnel. Without a robust shipping industry in the country, the Philippines could not have become the largest seafarers supply country (198,324 Filipino seafarers on foreign vessels in 2000). The ports are another major industry that can grow out of the expansion of trade and shipping services. To illustrate, Singapore’s modern deep seaport has attracted not only ship calls but also the management units of internationally competitive shipping lines and various maritime related industries. It is also important to note that shippers located at its direct hinterland enjoy competitive maritime transport services in their trade transactions.

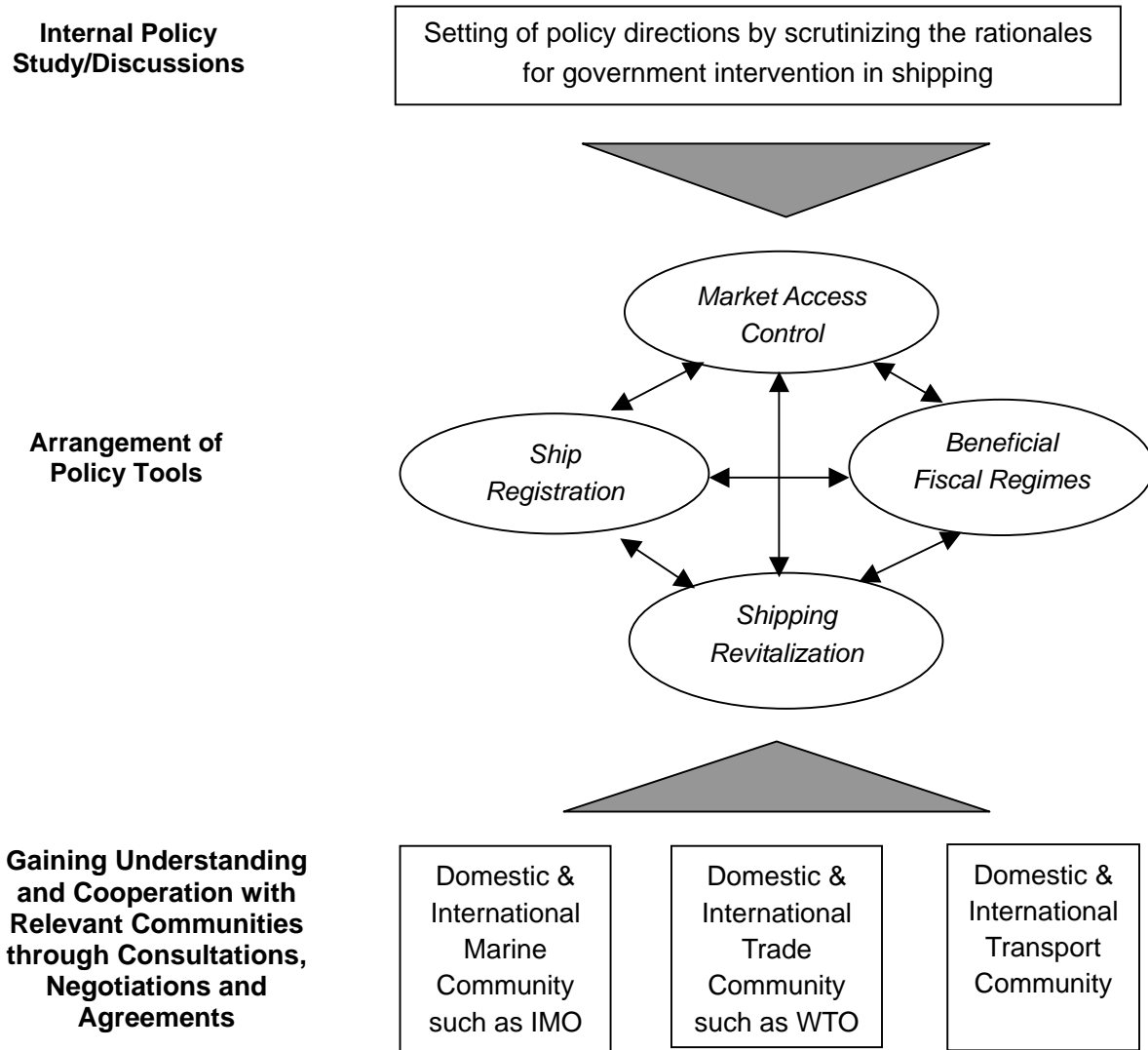
1.2 Available Policy Tools for Improving National Shipping Capabilities

The development of national shipping policy is the prerogative of the government. Well-developed shipping policies reflect the circumstances under which they were made. These include the prevailing financial and economic situation, both within and outside the country, and the trading and industrialization strategy of the country concerned.

There is a strong need to conduct an internal policy study to explore rationales for national shipping development. Therefore, this Study grouped available policy tools for developing national shipping capabilities into four, namely (i) market access control, (ii) ship registration, (iii) beneficial fiscal regimes, and (iv) shipping revitalization. A unilateral approach is not adequate to arrange these policy tools to best fit the country. It is necessary to take a participatory approach among shipping stakeholders such as other government agencies, traders and shippers, ship owners and operators, ship agents, port operators, freight forwarders, and other unimode transport providers. Lack of adequate

consultation may also lead to misunderstanding of the policy framework and result in lack of cooperation in the implementation of the policy. It is of growing importance to consult with relevant international communities particularly in the fields of maritime safety, security, marine environments and liberalization of shipping related services.

Figure 1.2.1 Process of Shipping Policy Formulation



Source: JICA Study Team

1.2.1 Market Access Control in General

Market access of shipping services has been discussed at the WTO's General Agreement on Trade in Services (GATS) and the ASEAN Framework Agreement on Services (AFAS). Under the prevailing service negotiation terms, market access is regarded as a typical protection measure to restrict "cross-border supply" (services supplied from one country to another or "Mode 1" under GATS and AFAS) and "commercial presence" (a foreign company setting up subsidiaries or branches to provide services in another country or "Mode 3"). It should be noted that the ASEAN Coordinating Committee on Services targets

no restriction for both Mode 1 and Mode 2 (“consumption abroad”) of International Passenger Transport Less Cabotage and International Freight Transport Less Cabotage to promote short-term liberalization. In practice, there are some protection measures in relation with Mode 3 such as limiting foreign equity share, allowing only branch/representative offices and restricting maritime-related services in Indonesia and other ASEAN Member countries.

Cabotage is commonly defined as the reservation of the transport task within a country’s territory to surface (land and water) and air transport industries and labor of that country. It is the area of water transport with which cabotage is usually associated and indeed the term is derived from the French word “caboter”, meaning to coast and is one of the most widely practiced measures of protection in shipping.

Most countries for many years have reserved coastal shipping trades under a cabotage regime. The negotiations on maritime transport services under both WTO- GATS and AFAS treat cabotage coastal shipping as out of their scope.

It is only in recent years that the combination of an increasing liberalization of international trade in services and the loss of competitiveness of fleets of developed countries has been increasingly challenged. Under a new AFTA regime, intra-ASEAN trade will be invigorated with limited trade barriers and thus local freight transport consumers who can access only costly and inefficient domestic shipping services may benefit from a dynamic regional logistics link. On the other hand, domestic freight movers may feel the threat of competition.

1.2.2 Various Perceptions and Practices in Relation to Cabotage

Although cabotage is an internationally recognized right attached to coastal and island countries, cabotage debate is still keen on some developed countries. In response to it, OECD compiled its policy in 2001. To compromise with domestic markets, some cabotage-holding countries allow foreign flagged vessels under special conditions like Thailand. This section introduces various perceptions and practices in relation to cabotage in selected countries.

USA

One of the clearest examples of cabotage is provided in the USA. The Jones Act 1920 and associated legislation require that ships used to carry cargoes and passengers between ports in the USA must be owned by USA citizens, built in USA shipyards and manned by USA crews.

The cabotage debate has been vigorous in the country. The contentiousness of the Jones Act was such that two lobby groups formed to represent the views of retaining and abolishing cabotage between the Maritime Cabotage Task Force and the Jones Act Reform Coalition (JARC). However, JARC disbanded in 2000 as a result of growing national security concerns.

It should be noted that the Bush Administration reconfirms to retain cabotage to protect its large coastal lines and substantial coastal freight tasks while it requests some countries to eliminate cabotage practices such as some of the Middle American Continent and the Philippines.

Australia

Australian maritime legislation by comparison does not refer to a ship's flag, its country of build, or the nationality of its crew when prescribing which shipping may engage in Australia's coastal trades. The only restriction is that any ship wishing to engage in the coasting trade must have a license issued under the Navigation Act 1912.

Licenses are issued subject to Australian wage rates onboard and no foreign subsidy in ship acquisition. Those restrictions secure a level playing field between domestic operators and foreign ones. The outcome is a disincentive to engage foreign flagged vessels resulting in another form of cabotage.

A small but steadily increasing proportion of coastal cargoes are now carried by unlicensed vessels, mainly foreign flagged, using the Single Voyage Permit (SVP) and Continuous Voyage Permit (CVP) under the Navigation Act 1912. The number of SVPs issued increased from 434 in 1994-95 to 704 in 1998-99, while 41 CVPs were issued in 1998-99.²

The Australian major trading fleet comprises 56 vessels over 1,000 dwt. The number of Australian flagged major trading ships has declined continuously from 78 vessels in 1994 to 56 vessels in 1999. The Australian fleet is now predominantly engaged in the coastal trade, enjoying a 90% share. However, it represents only about 3% of Australia's international shipping demand.

New Zealand

New Zealand maritime law by comparison allows foreign ships in transit, i.e., carrying international cargo into New Zealand, to also carry coastal cargo. However the time that a foreign ship can spend on the New Zealand coast as an extension of an international voyage is limited by migration laws which imposes a 28-day limit work period for foreign seafarers.

EU

The EU adopts a common cabotage regime, with ships from any Member State recognized by other Member States as national ships. This freedom to provide maritime transport within a Member State applies to EU shipowners who have their ships flying the flag of any Member State, provided that the ships comply with all conditions for carrying out cabotage in the Member State. (*Council Regulation No. 3577/92/EEC*)

Japan

In view of national security and stable transport of indispensable commodities for local inhabitants, the government recognizes that cabotage is an international practice to limit the domestic transport in each nation to the ships of its own national flag. Also in Japan, Section 3 of Ship Law regulates cabotage, and does not allow coastal shipping by any other ships other than those of Japanese flag.

Malaysia

The Government has lifted the cabotage right for Penang and Port Klang route whereby foreign shipping lines are allowed to carry between two Malaysian ports as

² Commonwealth of Australia (2001), Review of the Navigation Act 1912, p-11

part of its international legislation. The move is designed to push the Government's national load center policy.

Thailand

Domestic shipping in Thailand is reserved for domestic service suppliers. The vessel to be used for domestic shipping must be owned either by a Thai national or juristic person incorporated under Thai law with at least 70% Thai equity. The ship duly registered under this category may also be employed in international shipping if it meets safety standards and other standards relevant to international shipping. Seafarers working on Thai vessels engaging in domestic trade must be Thai citizens. Employing foreign vessel in domestic shipping may be allowed under certain conditions on a case-by-case basis.

OECD

Cabotage is recognized as being important to many countries. However, the effectiveness of cabotage in preserving employment and national fleets has been questioned, and its regulations have been relaxed within the European Union and elsewhere without obvious downside costs. Therefore, in view of the benefits that followed domestic liberalization in other economic sectors, it is suggested that those countries restricting cabotage should consider removing those provisions. Even if it is not politically feasible to achieve full liberalization immediately, serious consideration should be given to setting a time frame for such liberalization, with access initially given to OECD member countries. Full liberalization may then follow at a later stage.³

1.2.3 Ship Registration

Any country that wishes to acquire and develop a national fleet needs to establish a shipping register. In fact, all ASEAN countries except Lao PDR have ship registers. Registration, nationality and the right to fly a flag are three interlinked concepts that are essential to owning and operating a shipping fleet. The ship registration system can be regarded as a policy tool that could assist national fleets to be sustainable and competitive.

First of all, the shipping register plays an important role in achieving policy objectives of safety of life at sea and protection of marine environment as a flag country. If a country has a broad policy objective of developing a national shipping industry with employment and other economic and downstream industry benefits, it can identify ships that would be eligible for fiscal support and be eligible as collateral for a loan. Further, it can prohibit non-national crew onboard. The first (or national) ship register can be described by the above definition.

A country may, on the other hand, decide to adopt a policy of attracting overseas vessels to register in the country in order to create a revenue stream and generate maritime-related economic activity. This policy objective can be achieved through the establishment of an open register. The countries operating open registers are Panama, Liberia, Bahamas, Cyprus, Malta, etc. Recently, Cambodia has become an open register to foreign vessels.

³ Regulatory Issues in International Maritime Transport, Transport Division of OECD, 2001

Some countries that wish to draw the flagging out by national shipowners to attractive open registers may adopt a policy to establish a second register. The second register of a country generally has most of the characteristics of an open register, i.e. increased crew flexibility and access to more beneficial taxation to maintain international shipping competitiveness. The major difference is that most of the tonnage is owned by nationals of the flag state. In Asia, Korea and Malaysia established second registers in 1997, while Thailand is actively considering its adoption.

Table 1.2.1 Ship Registration in ASEAN and Its Neighbors

Country	National Register	Second Register	Title of Registration
Brunei Darussalam	Yes		
Cambodia	Yes		Royal Degree Nos. 901/902 NS and Nos. 403/69 BR
Indonesia	Yes	No	Commercial Code & Act No.21 of 1992
Lao PDR			
Malaysia	Yes	Yes	National Register: Merchant Shipping Ord. 1952 Second Register: Merchant Shipping Act 1997
Myanmar	Yes	No	
Philippines	Yes	No	Executive Order No. 125 as amended
Singapore	Yes	No	Merchant Shipping Act
Thailand	Yes	No, but considering	
Vietnam	Yes	No	Maritime Code 1990
Australia	Yes	No, but considering	Shipping Registration Act 1981
China	Yes	No	Regulations Governing the Registration of Ships 1994
Japan	Yes	No	
Korea	Yes	Yes	National Register: Ship Act No. 3641 amended in 1982 Second Register: Int'l Vessel Registration Act 1997

Source: The ASEAN Secretariat, 2002

1.2.4 Fiscal Incentives to Promote Fleet Development

Under liberalized international shipping environments, it is increasingly difficult for countries to subsidize their national tonnage in foreign trade. However, there are exceptions. USA for example, continues to release an annual subsidy of US\$ 100 million for national defense emergency. Many developing countries still hold state-owned shipping companies engaged in foreign trade with subsidized fleets. In the domestic shipping field, there are also many practices in subsidizing shipping operations and tonnage development. To enhance both competitiveness and financial sustainability of domestic shipping services, beneficial fiscal regimes such as soft loan and joint-owning fleet between public and private sectors have proved effective in Japan, Malaysia and Philippines.

USA

The USA started the fleet development subsidy program consisting of Constructional Differential Subsidy (CDS) and Operating Differential Subsidy (ODS) since 1937.

The purpose of the CDS was to cover the difference between possibly higher construction costs at an American yard compared to costs of a foreign yard. This shipbuilder's subsidy was suspended in 1981 due to budgetary constraints.

The ODS was granted to some USA flagged vessels operating in the carriage of essential trade, to place those vessels' operating costs on parity with those of foreign competitors. Subsidy was paid pursuant to 20-year contracts between the government and the operators, who agreed to equip their vessels with defense related features and also to make their vessels available in time of national emergency. The ODS provided US\$ 4 million in the contracted year, US\$ 2.5 million per year for next three years and US\$ 2.0 million thereafter. It was implemented until 1996 with a total subsidy amount of over US\$ 10 billion.

Maritime Security Program (MSP) was established and took over the CDS in 1996 in order to maintain 47 commercial military-useful ships sailing under US flags. This 10-year program subsidized US\$ 2.3 million per vessel in 1996 and US\$ 2.1 million per vessel for the remaining nine years.⁴

Japan

Among various Government assistance measures to the shipping industry in Japan, the one provided through "Senpaku Seibi Kodan" or Maritime Credit Corporation (MCC) was the most significant. The MCC has a unique fleet development method, i.e., joint-owning ship development.

The joint-owning project aims to promote building quality vessels jointly with the MCC and ship operators. One of the reasons for applying joint ownership method is that mere financing would only tend to tempt operators to gain excessive profits while building substandard vessels. Return on investment by the MCC is equivalent to the depreciation cost of their share and interest for their invested amount and all the revenues and expenses belong to the ship operators. Advantages of the project are briefly as follows:

- Collateral is not necessary at the MCC's share portion, i.e., 60-80% of ship value, which enables to attract minor operators.
- Repayment period could be lengthened according to the actual utilization time of vessel. Grace period and low interest rate are also provided.
- Technical assistance/control is more effectively practiced on design, supervision and inspection of vessels.

During the period 1959 – 2002, Japanese domestic shipowners built 3,638 vessels or 3,817,000 gross tons. The MCC's investment in joint-owning vessels amounted to 1,373 billion yen. While more than half of the Japanese domestic fleets were built through the joint-owning scheme, the government also enforced strict market interventions to prevent the fleet from being non-performing assets such as supply and demand adjustment policy in domestic fleet and vessel scrapping and building policy. However, those strong interventions have recently been lifted.

⁴ See Internet Site <<http://www.fas.org/man/dod-101/sys/ship/msp.htm>>

Malaysia

Bank Industri & Teknologi Malaysia Berhad was incorporated in 1979 and as of 2003, the Bank's paid up capital stood at RM 750.45 million. The principal interest of the Bank is to provide long-term financing to capital intensive, high-technology and export-oriented industries, particularly to the maritime, manufacturing and export-oriented sectors. The bank operates three typical facilities (shipping, shipyard and maritime related activities) and one special facility, namely Shipping Fund, in the maritime transport sector.

The financing facility for shipping cover new vessels built in Malaysia and abroad, second-hand vessels and ship operation revolving credit. The bank has also operated an allocated amount of RM 1.0 billion by the government under the New Malaysian Shipping Finance Fund since 2001.

Philippines

Since 1976, the Government has adopted a bareboat chartering program to develop and maintain a national fleet in the international trade of the country. For its domestic shipping fleet, the Domestic Shipping Modernization Program (DSMP), a policy-based lending program of the Government with the Development Bank of the Philippines (DBP) as the executing agency and the Japan Bank for International Cooperation (JBIC) as funding agency, is operational. The program aims to provide financial assistance to enterprises engaged in domestic shipping and shipping-related industries. JBIC has so far injected ¥ 35 billion since 1995.

1.2.5 Other Beneficial Regimes

Fiscal support measures can relate to the acquisition of tonnage and to the haulage of such tonnage. While financing schemes assist national shipowners to increase and upgrade their tonnage, favorable taxation schemes, such as corporate income tax, seafarers' income tax and import duties, it would assist national fleets to become internationally competitive:

Corporate Income Tax: The residual income remaining after corporate tax is a matter of importance to shipowners and potential investors. Singapore and Malaysia provide tax exemption to corporate income in order to promote the development of its national fleet. Thai shipowners were at a disadvantage against their neighboring countries' shipowners until 1997 due to them having to pay corporate tax at 30%. In 1997, Thailand followed Malaysia and Singapore. Indonesia seems to have insufficient financial capability to apply such tax incentives to their shipping lines, although the country suffers from an outflow of investment such as the relocation of headquarters/management offices from Indonesia to Singapore, e.g. Samudera Shipping.

Seafarers' Income Tax: Some countries provide exemption to personal income tax for crew on board a national ship. The shipowner benefits from this concession while it is also attractive for seafarers to work on national flag vessels. In the region, the Philippines, Malaysia, Singapore, and Thailand exempt personal income tax for crew while Indonesia and Vietnam can arrange special tax concessions on social security.

Import Duties: Import duty affects the initial acquisition cost of a ship. Import duty concessions are, therefore, one of the major fiscal measures, e.g. Malaysia, Philippines and Thailand. On the other hand, Vietnam gives tax incentives to local shipyards since they prioritize ship export.

As already stated, governments in the ASEAN region and elsewhere have used fiscal support measures as policy tools for the development of national fleets, and each country has its own justifications for doing so. Fiscal measures that amount to subsidies going against internationally accepted practices and could attract retaliatory measures from trading partners should take into account multilateral instruments that would be negotiated through the WTO-GATS and AFAS.

1.2.6 Shipping Revitalizing Measures

Access to cargo, ship registration and fiscal support measures can only become effective strategies in the event that the national shipping lines have a sound financial base, an effective management and a motivated workforce.

As public sector participation in shipping business gives way to the private sector, governments in some developing countries need to examine the most appropriate forms of such participation, depending on the objectives of economic development at the time. Introducing competition is a key word to revitalize national shipping lines. This situation is more likely to happen in domestic markets subject to the entry barrier of cabotage than in international trades.

At the same time governments need to identify basic services under these circumstances and is often described as a “community service obligation”. It is also necessary to examine the approaches for reducing the cost to the government in providing such services.

Commercialization is one prominent trend among publicly founded ASEAN shipping lines. The Malaysian International Shipping Corporation was incorporated as a public company in 1968 and was listed on the Kuala Lumpur Stock Exchange in 1997. The Thai Maritime Navigation Co. founded in 1940 as a public company is going to be privatized with minority equity to be held by the state. The VINALINES has promoted equitization among its member shipping companies since its establishment in 1996.

1.3 A Policy Package for Improving Indonesian Shipping Capabilities

1.3.1 Review of Indonesia’s Domestic Shipping Policy

Indonesia’s shipping policy in its early stage made intensive efforts to take over KPM (Dutch’s state-owned shipping company operated in Indonesia) shipping network. Thus, two state-owned shipping companies, PT. PELNI and PT. Djakarta Lloyd, were established in the early 1950s so as to be responsible for inter-island shipping and international shipping, respectively. Through an elaborate inter-island route licensing system, the government has long attempted to monitor the shipping industry and supply and demand in the inter-island trades. Particularly, Regular Liner Services (RLS) system had been set

up since 1969 as an attempt to give a structure to the industry and correct the over-expansion which followed in the early post-1965 New Order years.

Domestic shipping used to form a closed network until 1985. Presidential Instruction (INPRES) No.4/1985 was issued to boost export activities other than oil and gas and to reduce shipping and port costs. With increased open ports from only four to 127, Indonesian carriers were exposed to competitors such as foreign feeder operators which attracted cargoes at competitive freight-rates.

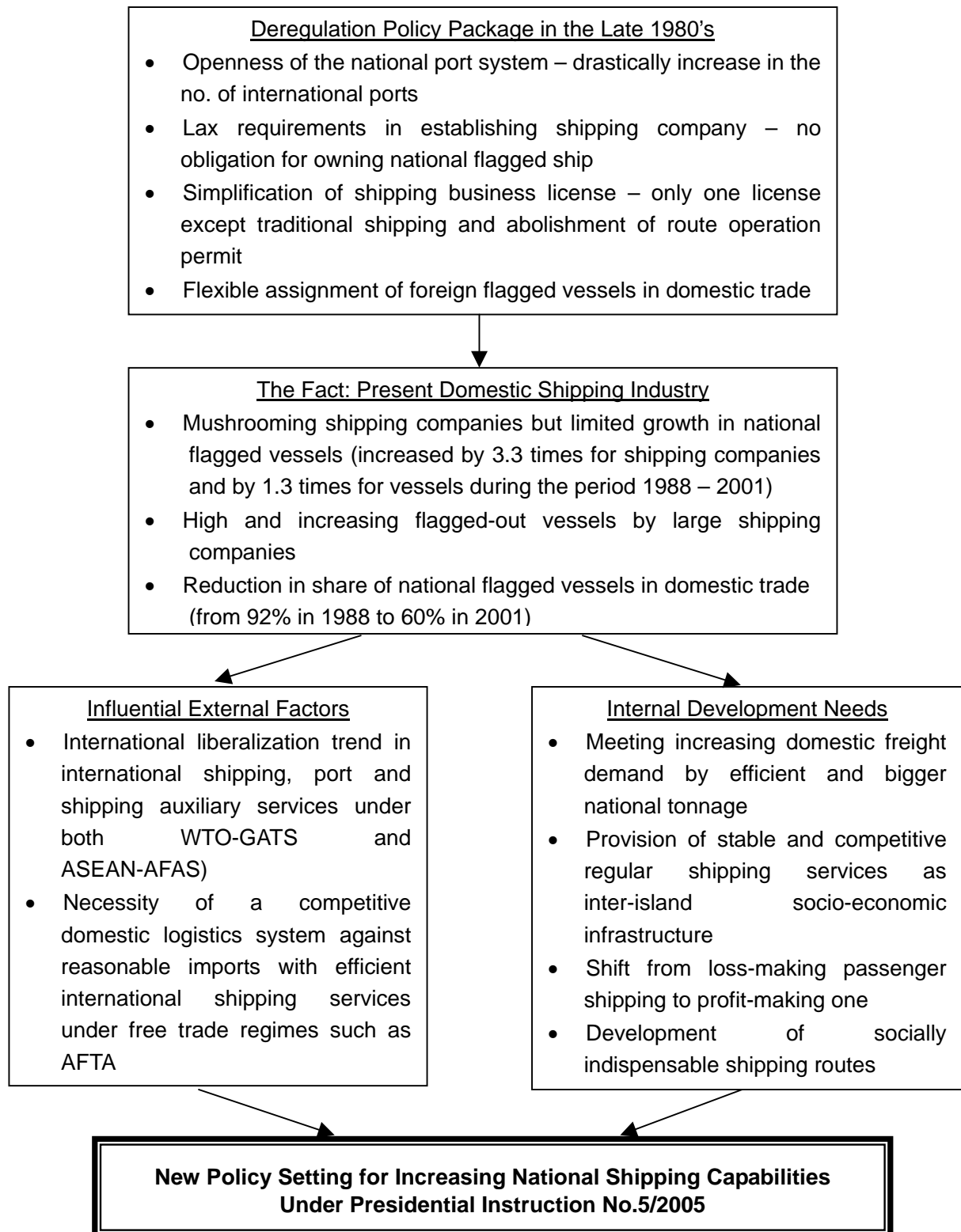
Furthermore, in 1988, the Government dropped its tight control in the domestic market. In establishing new shipping companies, possession of national flagged ship was not anymore an absolute requirement. Shipping licenses were streamlined from five to only two. Shipping companies received greater flexibility in shipping routes, ship assignment and even the use of a foreign flagged ship in domestic trade. Due to uncertain business environments, the share of Indonesian flagged vessels has declined while the number of shipping companies has been mushrooming since 1988.

Today, it is still difficult to evaluate the shipping deregulation policy comprehensively from the aspects of pros and cons. At least it can be said that it was an extraordinary policy initiative for a large archipelago country like Indonesia to hold it at that time in comparison with other similar countries. And this policy did not come from the shipping sector itself since it seemed to be part of foreign investment facilitation initiatives when the Government adopted it in the 1980's together with industrial, tourism and urban development and transportation such as toll roads. It is difficult to say that the policy has contributed to shipping service improvement and network expansion since many adverse results were reported. For sure, the policy has weakened the shipping industry in terms of the share of national tonnage in Indonesia's foreign and domestic trade.

The shipping industry has recently requested the Government to change the shipping policy in line with change in recognition from "shipping is only a supporting business to trade" to "shipping industry in Indonesia should be sustained and developed". This policy shift has steadily gained support from other sectors and marine communities. It is deemed a new challenge for Indonesia to increase national shipping capabilities taking into account both influential external factors and internal development needs.

Presidential Instruction No. 5/2005 was newly issued under such circumstances. It aims at empowering the national shipping industry with formulating and implementing adequate policies. It consists of six elements such as trade, finance, shipping and ports, shipbuilding industry, fuel, and education and training in a comprehensive way. The new INPRES shows a clear policy direction towards strengthening of national shipping capabilities. (Refer to Column 1: Outline of INPRES No.5/2005, and the full text translated in English is attached to Appendix 1-1)

Figure 1.3.1 Background of New Domestic Shipping Policy



Source: JICA Study Team

Column1

Outline of INPRES No.5 / 2005 on the Empowerment of the National Shipping Industry

1. Trade

- a. By virtue of this INPRES, domestic cargo shall be carried by Indonesia flag vessel and operated by the national shipping company as early as possible.
- b. Import central/local governments' cargo by the national shipping company.
- c. Encourage long-term carriage partnership between the shipper and the national shipping company.

2. Finance

- a. Taxation
 - 1) Re-arrange tax facility for the national shipping and shipyard industries.
 - 2) Revise tax policy for supporting national shipping and shipyard industries and give incentives.
 - 3) Apply penalty to national shipping and shipyard companies with partaking of incentives if they invest in other business
- b. Financial Institution
 - 1) Encourage national banks to actively finance the national shipping industry
 - 2) Develop non-bank financial institutions involved in shipping.
 - 3) Develop a financing scheme for national fleet development.
- c. Insurance
 - 1) The vessels under certain conditions shall be insured at least for hull & machinery.
 - 2) Cargo and passengers carried by the national shipping company shall be insured.
 - 3) Setting policy for national insurers to meet international shipping insurance standards

3. Transportation

- a. Sea Transportation
 - 1) Organize domestic shipping operation by Indonesian flagged vessels
 - 2) Reorganize shipping network b giving incentives to liner routes
 - 3) Reorganize re-flagging procedure
 - 4) Accelerate ratification of the international convention on maritime liens and mortgage with domestic legislation.
 - 5) Accelerate ratification of the international convention on arrest of ship with domestic legislation.
 - 6) Provide supporting measures to

traditional shipping

- 7) Establish an information forum for cargo and space in vessel (IMRK)

b. Port

- 1) Reorganize port management for effective and efficient services
- 2) Reorganize international and cross border ports
- 3) Develop port infrastructure and facility for offering the optimum services
- 4) Improve port management for enabling gradual separation of regulator and operator's roles and competition among terminals and ports
- 5) Exempt port charges if no service is provided
- 6) Reorganize procedures of ships, cargoes and passengers in ports

4. Industrialization

- a. Encourage the growth and development of the shipping industry, by way of:
 - 1) Develop centers for design, research and development
 - 2) Improve standards and components of vessels
 - 3) Foster ship chandlers and related industries
 - 4) Give incentives to national shipping companies that build their vessels in domestic shipyards
- b. Newly built ships by government budget must be constructed at domestic shipyard.
- c. When tapping foreign fund in the abovementioned ships (b.), maximum use of local materials and transfer of technology are required in shipbuilding.
- d. Maintenance and repairing by government budget must be done at domestic shipyards.

5. Energy and Mineral Resources

Provide guarantee in fueling for Indonesia flag vessels in domestic shipping

6. Education and Training

- a. Develop education and training centers for seafarers with IMO standards
- b. Improve cooperation between the education and training centers and the seafaring service users.

1.3.2 A Desirable Policy Package

While Indonesian domestic shipping is indispensable and there is a large development potential, there are a number of conditions to be met to realize the benefits of domestic shipping development. For a national shipping policy that is formulated and implemented for the benefit of all, it would be necessary to involve shippers and cargo owners. Therefore the main policy issue: increase in national shipping capabilities should be realized together with providing competitive shipping services and address increasing concerns on safety, security and the environment in shipping.

Based on STRAMINDO works and discussions with stakeholders, a desirable shipping policy package for Indonesia's domestic shipping is proposed as follows:

(1) Policies in regard to the establishment of shipping company and ship registration

- In Indonesia, national shipping lines are quite open to foreign investment since foreign interests are allowed up to 95% of the venture. Only traditional shipping is put in the negative list against foreign investment. On the other hand, it employs a closed ship registration to control the quality of national tonnage. This two-tier system: liberal investment environments and strict tonnage control should be operated effectively to achieve synergy effects.
- High and increasing flagged out vessels engaging in domestic trade can be partly explained by unfavorable ship finance environments in Indonesia. There is a strong need to enact a Law on Mortgages of Ships and to ratify International Convention regarding arrest of ship.
- In response to increasing safety and environment concerns, substandard vessels should be eliminated from the Indonesian waters by means of strict ship registration for national flagged vessels and PSC for foreign flagged vessels.

(2) Policies in regard to market access

- Cabotage regime in Indonesia shall be defined where carriers carrying cargoes and doing activity in the Indonesian ports should be flying the Indonesian flag and is being operated by national sea transportation companies. However, this principle is to be fulfilled without any additional burden on shipping users in the form of tariff hike and reduced/suspended operation due to insufficient fleet volume. Therefore cabotage will be firmly implemented but in line with the strengthening of domestic shipping industry.
- There is no reason to revive a centrally controlled routing system. However, not to bring about monopolized or too excessively competing environments, the maritime administration had better announce essential maritime traffic information such as assigned vessels and their frequency and occupancy on a certain route from time to time. Such information may enable shipping companies to appropriately judge ship assignment decisions. The responsible administration may also have dialogue with shipping companies for route assignment when necessary.
- Policies should be formulated to encourage efforts in providing stable and indispensable shipping services on a regular basis to maritime communities and

island economies. The responsible maritime administration should be empowered to grant an exclusive route operation right during a certain period such as five years.

(3) Policies in regard to beneficial fiscal regimes

- In order to facilitate replacement of old vessels and procurement of new vessels, relevant financial services shall be expanded at many channels and a related tax incentive shall be given.
- PT. PANN MF, the most experienced state-owned financial institution in the sector, shall be restructured to provide important shipping financial services such as ship leasing, credit guarantee and monitoring other ship loan contracts.
- New public ship finance shall be introduced to modernize the domestic shipping fleets,. To modernize the domestic shipping fleets in a sustainable manner, new public ship finance shall be managed through extending assistance to shipping operation and ship-management.
- Tax incentives shall be also given to shipyards in order to facilitate investment in shipbuilding and repair, and importation of spare parts and others.

(4) Policies in regard to shipping revitalization

- It is encouraged that partnerships by long-term transportation contracts shall be ventured between the owners of goods and the national sea transportation companies in order to allow shipping investment from a medium to long-term viewpoint.
- To foster a strong domestic shipping industry, it is necessary to review the roles of state-owned shipping companies and privatize the current competing roles in the shipping market.
- There is also a need to restructure numerous small shipping companies by way of joint marketing, joint-venture operation and merger and acquisition. On the other hand, more local shipping companies shall be organized to serve remote coastal/island areas in support of local governments.
- Human resources development shall be emphasized not only for seafarers but also for management and technical staff on land.
- Shipping related industries such as shipyards, port operators, forwarders, ship-management and marine insurers shall be developed simultaneously in order to realize a strong and accumulated maritime transport industry in Indonesia.

The new shipping INPRES adopts many of the proposed policy initiatives from STRAMINDO. It is a natural result since both the study works and the INPRES preparation works were done among the same stakeholders at the same time. It seems that the rest of the proposed policy initiatives are rather difficult to have built consensus among the agencies and parties concerned in a short period. In principle, a series of INPRES show the government's political priority among appointed ministers to implement a specific policy package in a certain period. Therefore it is expected that the STRAMINDO policy

package will be further discussed and concretized through the working group meetings and upper level meetings for the implementation of the new shipping INPRES.

1.3.3 Policy Justification to Introduce a Public Ship Finance Scheme in Indonesia

Public fund is an alternative as long as its mobilization in the domestic shipping sector can be justified economically and socially, and it may not negatively affect other non-publicly financed shipping activities.

Indonesian domestic shipping industry once experienced ODA-based ship finance service in the late 1970s. At that time PT. PANN purchased second-hand and new vessels built in domestic or foreign yards, in order to renew the then existing fleet, through ship financing, and owning and leasing. Priority was given to the development of the inter-island RLS shipping when it suffered from over tonnage and obsolete fleet. To enable PT. PANN to fund its programs, it obtained loans from the World Bank, and in addition got funds from BAPINDO and foreign countries in addition to PANN's equity.

Today, domestic shipping circumstances have drastically changed from those days. For instance, there is no strict government-controlled liner network like the inter-island RLS. However, significance of domestic shipping has remained the same under the national development context.

As already discussed in the previous sections, the countries who intend to develop national shipping capability with fulfilling cabotage right can resort to a sustainable public ship finance scheme. Provided that Indonesia would utilize a JBIC's two-step-loan (TSL) facility, it could meet several development needs while it could not accommodate others – the following elaborates on this point.

Justifiable Aspects

- **Development and advancement of inter-island liner shipping network as prime infrastructure of the national transportation system:** Indonesia must maintain a strong inter-island liner shipping network. However, shippers and passengers' satisfaction may differ from time to time. Modern fleets such as full container ships, dedicated RORO ships, RORO passenger ships and multi-purpose ships will be advantageous to cover the archipelago under anticipated severe competition with air transport. Government needs to deliberately encourage the domestic shipping industry to further develop its inter-island liner shipping network in line with investing in modern fleets.
- **Conversion of idle and unproductive domestic fleet into a competitive one:** Besides liner shipping, bulk shipping also needs more competitiveness. ASEAN shipping, intra-regional international shipping, associated with competitive ASEAN products is a new threat to Indonesian domestic shipping under the new trade regime of AFTA. It is also an external threat to government to practice cabotage right. Fulfilling cabotage and protecting domestic products must be undertaken together in a market mechanism. For this purpose, the existing idle and unproductive bulk fleet needs to be converted or replaced.
- **Increase in cabotage rate (national tonnage share):** As a whole, ODA projects are often implemented to show a strong government will in national development. Since the INPRES No.5/2005 confirms that fulfilling cabotage right is the truly

national policy in Indonesia, the proposed package will work effectively, particularly in extending financial support to national bulk tonnage since Indonesia substantially depends on foreign chartered vessels in liquid and dry bulk shipping.

- **Balanced development of both shipping and shipbuilding industries:** Shipping is an industry which needs wide supporting industries. Indonesia particularly needs to develop an effective ship life cycle, i.e., shipbuilding, repair and breaking. Shipbuilding has a different demand segment from repairing since local shipyards do not build all the domestic shipping fleet. In order to make domestic fleet competitive, however, local shipyards must at least successfully deliver small vessels and some strategic vessels which are desirable in Indonesia but difficult to find in the international second-hand markets. Strategic ODA project is ideal to coordinate shipping and shipbuilding industries and improve local building capability through absorbing advanced foreign shipyard' technology and experience.

Non-justifiable Aspects

- **Support to overseas shipping fleet:** Any ODA funds may not be tapped into overseas shipping fleet. As for multilateral ODA funds coming from the World Bank, ADB and others, the financing institutions have apprehension of such lending distorting the open shipping market. As for bilateral ODA funds like JBIC, it is difficult to remove the Japanese shipping industry's apprehension that the fund may invade their business interests in bilateral trade and others.
- **Provision of socially indispensable shipping services with government support:** Most of the local people residing in remote areas seriously require stable and affordable shipping services due to underdeveloped and agriculture dominated local economic conditions. However, the deregulation policy forced a paradigm shift from liner shipping being considered as public utilities, to purely commercial services. As a result, it left little room for internal cross-subsidy among liner operators. Under such policy environment, government should be responsible for delivering socially indispensable shipping services. However, it is not appropriate to use a TSL facility as long as those services are less commercial even with long-term and low-interest loans. Careful considerations are necessary to draw a line between government subsidy and public soft loan.
- **Support to state-owned shipping companies:** State-owned shipping companies are supposed to act as a government policy's implementation arm. They receive financial support from the Government accordingly. For example, all the PELNI ships are purchased by the government and legal ownership belongs to the government. The government in turn releases the ships to PELNI as its equity. All the ships are depreciated in 25 years straight-line method. However, their responsiveness to meet the shipping market is questioned. It was reported that PT. PELNI was the third biggest financial loser with Rp 3.558 trillion among all the state-owned enterprises in 2003.⁵ A TSL facility is designed to provide stable and long-term fund to the private sector to encourage fleet expansion and modernization. It is not suitable for state-owned companies to receive it unless they are in a level playing field with private companies (e.g. after privatization).

⁵ Kompas, Jakarta dated on 24 November 2004

CHAPTER 2 PUBLIC SHIP FINANCE SCHEME

It was identified in the STRAMINDO Report that the availability and access to finance on the financial aspect of the domestic shipping sector were one of the common issues raised by many business people including (1) difficulty of access to bank financing system, (2) high interest rates, (3) short repayment period, and (4) lack of government financial support and incentives. Therefore, the core component of the STRAMINDO Action Plan is to introduce a strategic public ship finance scheme.

Since policy justification has been made on this matter in the previous chapter, this chapter discusses available on-lending schemes taking into account Indonesian institutional and financial conditions in Section 2.1, illustrates organizations and fund flows for a likely public ship finance scheme using JBIC ODA fund in Section 2.2, and assesses possible players within the scheme in Section 2.3.

2.1 Available On-lending Project Schemes

In the prospective project to be implemented under the financial assistance of JBIC ODA Loan, the Two Step Loan scheme is adopted. The loan proceeds disbursed by JBIC are not used by GOI for a project that is owned by a government ministry or agency, but they are on-lent to end-borrowers such as shipping companies and shipbuilding companies through participating financial institutions (PFIs). The section analyzes the institutional arrangement and actual practices of such on-lending projects which is different from the ordinary project finance type under the context of Indonesian development finance.

2.1.1 Current Regulations on Foreign Loans with On-lending Mechanism

In Indonesia, there are a few on-going projects with on-lending mechanism financed by other foreign donors because of the Bank Indonesia Law No. 23 – 1999, which forbids BI to provide credit to enterprises and even the government. Meanwhile, the Ministry of Finance as a borrower is unwilling to take the foreign currency risk of donors' loan. In this regard, the Government has to organize an implementation body which is able to manage the currency risk of the donor's loan.

MOF Decree (Keputusan Menteri Keuangan; KMK) No. 185/95 provides the following rules regarding on-lending:

- (1) MOF will charge 0.5% to the Executing Agency by adding to the interest rate of the foreign loan;
- (2) Sub-Loan can only be given to:
 - (1) State-Owned Enterprises (SOE);
 - (2) Local Government; and
 - (3) State-Owned Enterprises owned by Local Government (SOLG).

Further, having learned from the previous crisis, there is an unwritten policy¹ by the Government for not taking currency risk arising from foreign loans, which means that the foreign currency of the loan is passed to the Executing Agency.

The points at issue are as follows:

¹ Asian Development Bank

- BI cannot provide any credit to enterprises.
- At least one of state-owned banks must participate in the Executing Agency to act as an apex financial intermediary between BI and other participating financial institutions (PFIs) and end-borrowers.
- The Executing Agency including the Apex Financial Institution needs to manage currency risk while end-borrowers are subject to pay foreign exchange risk premium included in the sub-loan interest.

Therefore, it is of great importance to establish an effective implementation mechanism to avoid or minimize any adverse results in project implementation such as currency and business risks.

From a bilateral cooperation viewpoint, the government of Indonesia itself becomes the borrower of such JBIC projects against the government of Japan. Finally, the government of Indonesia must shoulder all the financial risks after the disbursement of funds in accordance with a corresponding loan agreement.

2.1.2 On-going Project with On-lending Mechanism Financed by Other Donors

On-going and pipeline projects of the Asian Development Bank are as follows:

- On-going: 2 projects
 - SME Export Development Project (Loan No. 1978-INO) (L/A sign: in 2003; L/A Effective: May 2004)
 - NUSSP (Loan No. 1765/6-INO)
- Pipe-line (under preparation): 1 project (Rural Micro-finance Project)

On-going ADB SME-Export Development Project

The loan is given to the end borrower in US dollar. Therefore, the end borrower (beneficiaries) takes the currency risk. The period of loan from ADB is 15 years, while PFIs could lend to end borrowers for a maximum of 8 years (as usual practice for investment loan).

The rate from ADB to GOI is Libor + 0.6%. MOF will add 0.5% as surcharge fee. So that the funds coming to the Apex is Libor + 1.1%.

From Apex Bank to the other participating banks (PFIs), surcharge will be a minimum 0.15% administration fee + negotiated rate for margin (in which the total could be 1-1.5%). Therefore, the funds coming to PFIs will be around Libor + 2.6% (or around 4.4%). Then PFIs will re-lend it to the end borrowers at around 7% (the margin for PFIs is around 2 to 3%).

The proposed Rural Micro Finance Project

Interest mechanism to be applied to is as follows:

- ADB → MOF : US\$ Libor (6m/s) + 0.6%p.a. = A% in US\$
- MOF → Apex Financial Institution : A% + 0.5%p.a. = B% in US\$
- Apex Financial Institution → PFIs : SBI (1m/s) + 2.0%p.a. to 4.0%p.a. (in Rupiah)
(SBI is Bank Indonesia Certificate, which is equivalent to Treasury Bill.

Currently, interest rate of SBI (1m/s) is 7.5%p.a.. “2.0%p.a. ~ 4.0%p.a.” surcharge includes Exchange Risk (Rp/US\$), Apex bank’s administration cost, and profit. Therefore, PFIs receive the ADB’s loan proceeds at 9.5% ~ 11.5%p.a. in Rupiah.)

In the case of Rural Micro finance, it is inappropriate to ask farmers to take US\$ loan and repay in US\$ as well, so obviously ADB prefers the banks to take currency risk. However, for SME-Export Development Project, or SMEEDP, since the beneficiaries are SME exporters, there would be no problem to take US\$ loan since their revenue is also in US\$. ADB is supporting this mechanism as SME borrowers are basically doing “natural hedge” to take loan in US\$ and to pay back from their US\$ revenue.

Asian Development Bank’s (ADB) stance is to make sure that the currency risk should be handled appropriately. ADB wants to avoid a situation where in the future the beneficiaries receiving the loan will have to bear the risk that is not managed well from the beginning.

In conclusion, ADB is not saying that all loans should be re-lent in Rupiah. It is dependent on the project scope, although ADB prefers that the Apex Bank manages the currency risk and re-lend the sub-loans in Rupiah to PFIs. But the most obvious point is that the Government (MOF) right now is unwilling to take currency risk, so the risk should be borne by either Apex Banks or PFI or end beneficiaries.

ADB supports the new role of Bank Indonesia as stated in the new Amendment BI law year 2004, in which in the future BI will have no more control or no longer supervise banks, but the Financial Supervisory Authority (FSA), or OJK will be responsible for supervision and control of all the financial institutions in Indonesia including banks.

According to ADB, KfW has one on-going project using an on-lending mechanism.

Under the on-going KfW project with on-lending mechanism, KfW’s lending rate is 0.75 in Euro (30 years fixed), which is extremely low, so that the APEX FIs could on-lend to the PFIs in SBI + 1%.

2.2 Establishment of Public Ship Finance Scheme

This section maps out how to institutionalize the proposed public finance scheme at the planning phase, TSL arrangement and implementation.

2.2.1 Organizational Set-up during Planning Phase

DGSC of the Ministry of Communications, the agency responsible for administration of Indonesian maritime industry and transport including overseeing maintenance and operation as well as safety of ships and relevant policy development, has been acting as one of the two counterpart agency of the STRAMINDO Study. With regards to the prospective STRAMINDO project, DGSC, representing the Ministry of Communications, has initiated the process of requesting ODA loan assistance to the Japanese Government through BAPPENAS which is the agency responsible for managing the Blue Book, i.e. the list of prospective projects to be granted financial assistance by foreign donors and their preliminary supporting documents.

The Blue Book is compiled twice a year, normally on March/April and October/November,

by BAPPENAS, which is also responsible for the preparation and compilation of the Long List and Short List based on the Blue Book in collaboration with the Directorate of External Fund Management of the Directorate General of Treasury of the Ministry of Finance and related ministries and agencies. As the window organization for requesting ODA to donors, BAPPENAS takes responsibility in assisting project formulation of prospective ODA-assisted projects in collaboration with other line ministries and agencies as well as monitoring and evaluation of all realized projects. In the past, BAPPENAS has been appointed as the executing or coordinating agency of some projects which comprise several project components and/or sites and requiring coordination among different ministries and agencies for project implementation. Therefore, BAPPENAS and MOC may jointly prepare the prospective STRAMINDO project.

Directorate General of Metal, Machinery, Electronic and Multifarious Industries (DGMMEMI) under the Ministry of Industry, the agency responsible for administration of the Indonesian shipbuilding industry, is the other counterpart agency of the STRAMINDO Study. As one of line ministries, DGMMEMI will join in the discussion and negotiation with the JBIC Appraisal Mission during the appraisal phase.

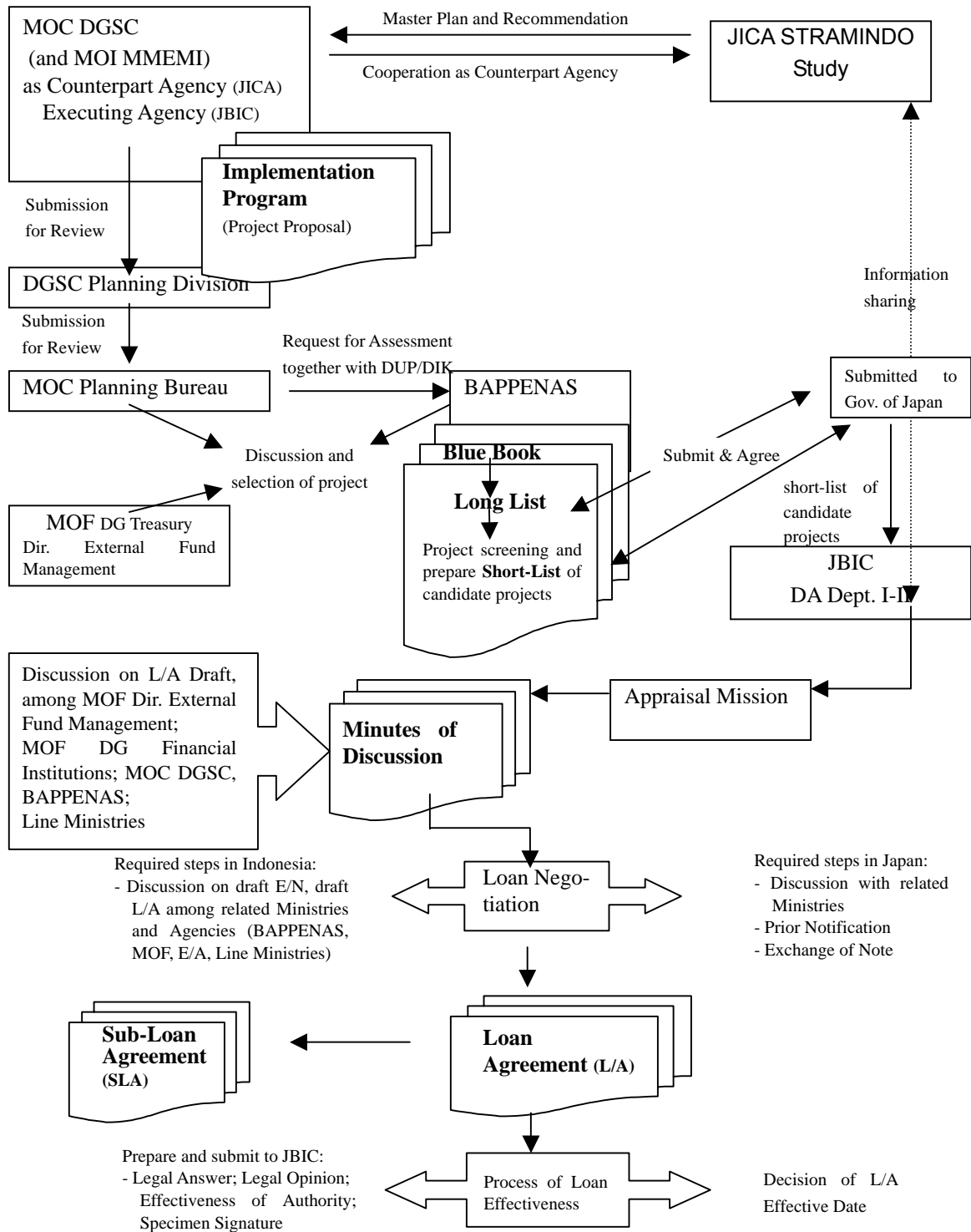
Procedures and the roles of related agencies during the planning phase for the prospective STRAMINDO project is described in Figure 2.2.1.

2.2.2 Overall Project Implementing Scheme and Flow of Fund

As a proto-type JBIC TSL procedure, JBIC loan is firstly disbursed and credited to the account of a central bank, which acts as the financial agent for the recipient government as provided in the Loan Agreement. Having received the loan proceeds from JBIC, a responsible financial administration for foreign loan instructs a central bank to on-lend the proceeds by transferring them to a PFI based on the terms and conditions of the Sub-Loan Agreement. The PFI provides the proceeds to the end-borrower in accordance with the terms and conditions of the loan agreement agreed between them.

Taking into account that implementation of TSL projects in Indonesia is a new experience, and the current institutional rules and regulations in which the government and BI do not take any risks and financial costs within the mechanism, the Study Team concludes that there is only one scheme that can be appropriately applied to the STRAMINDO project and is illustrated in Figure 2.2.2.

Figure 2.2.1 Procedures and Related Agencies during Project Planning Phase for Domestic Sea Transportation and Maritime Industry Development Project

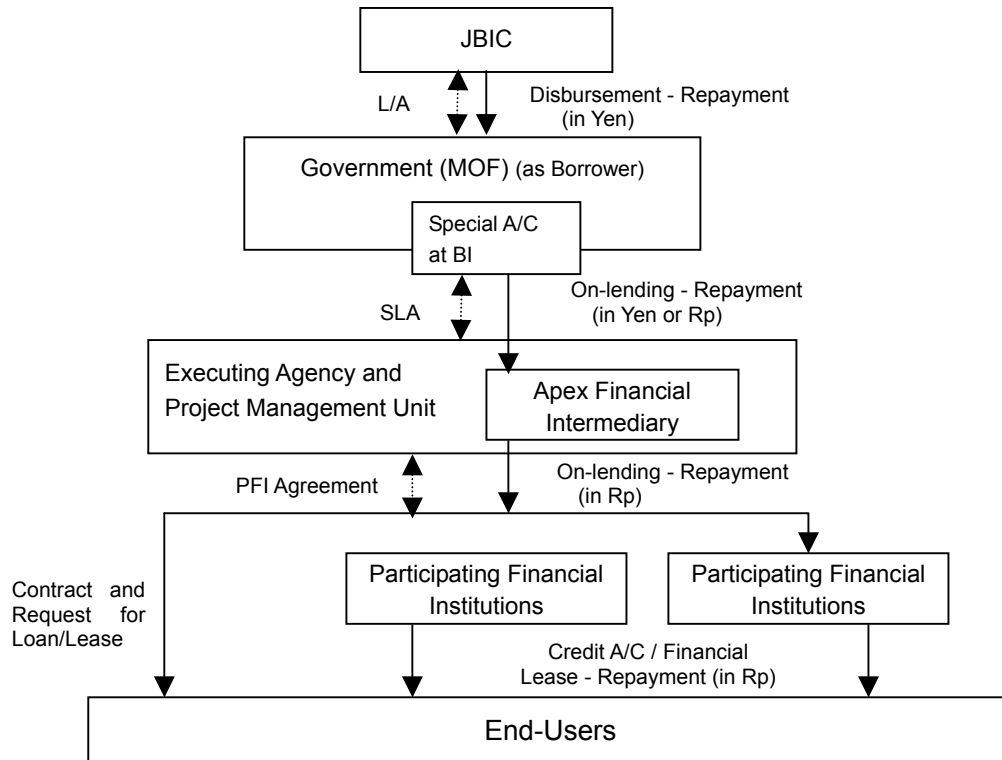


Note:

- Ministry of Industry (Formerly Ministry of Industry and Trade), DG of Metal, Machinery, Electronics and Multifarious Industry (MEMI) is one of the two agencies that worked as the Counterpart Team in STRAMINDO.
- Sub-loan Agreement is made between MOF DG Financial Institutions and each Participating Financial Institutions (PFI).
- DUP: Project Proposal List, DIK: Form of Activity List
- Blue Book is compiled and issued by BAPPENAS 2 times a year, normally in April and October.

Source: Prepared by JICA Study Team

Figure 2.2.2 Overall Project Implementing Scheme and Flow of Fund



Source: JICA Study Team

The Executing Agency responsible for the execution and overall management of the project and has the authorization to negotiate with JBIC and make decisions in a limited scope should be designated, and an Executing Agency's Project Management Unit responsible for the day-to-day project implementation works should also be established. Apex Financial Intermediary should be constituted partly by the Executing Agency, but its scope of authorization and duties should be clearly designed, so that JBIC is assured of the capability of the whole Executing Agency. Because of MOF Decree No. 185/95, the Apex Financial Intermediary must be an SOE as mentioned in Section 2.1.1, thereby it needs to be selected from the four state banks². The JICA Study Team considers that Bank Mandiri is the most suitable state bank to work as the Apex Financial Intermediary for the STRAMINDO Project because: (1) it is the biggest and most profitable commercial bank in Indonesia, and (2) it has experience in the activities of a state development bank (formerly BAPINDO).

Detailed procedures and the roles of related agencies during project implementation phase for the prospective STRAMINDO project is described in Table 2.2.1 and Figure 2.2.3.

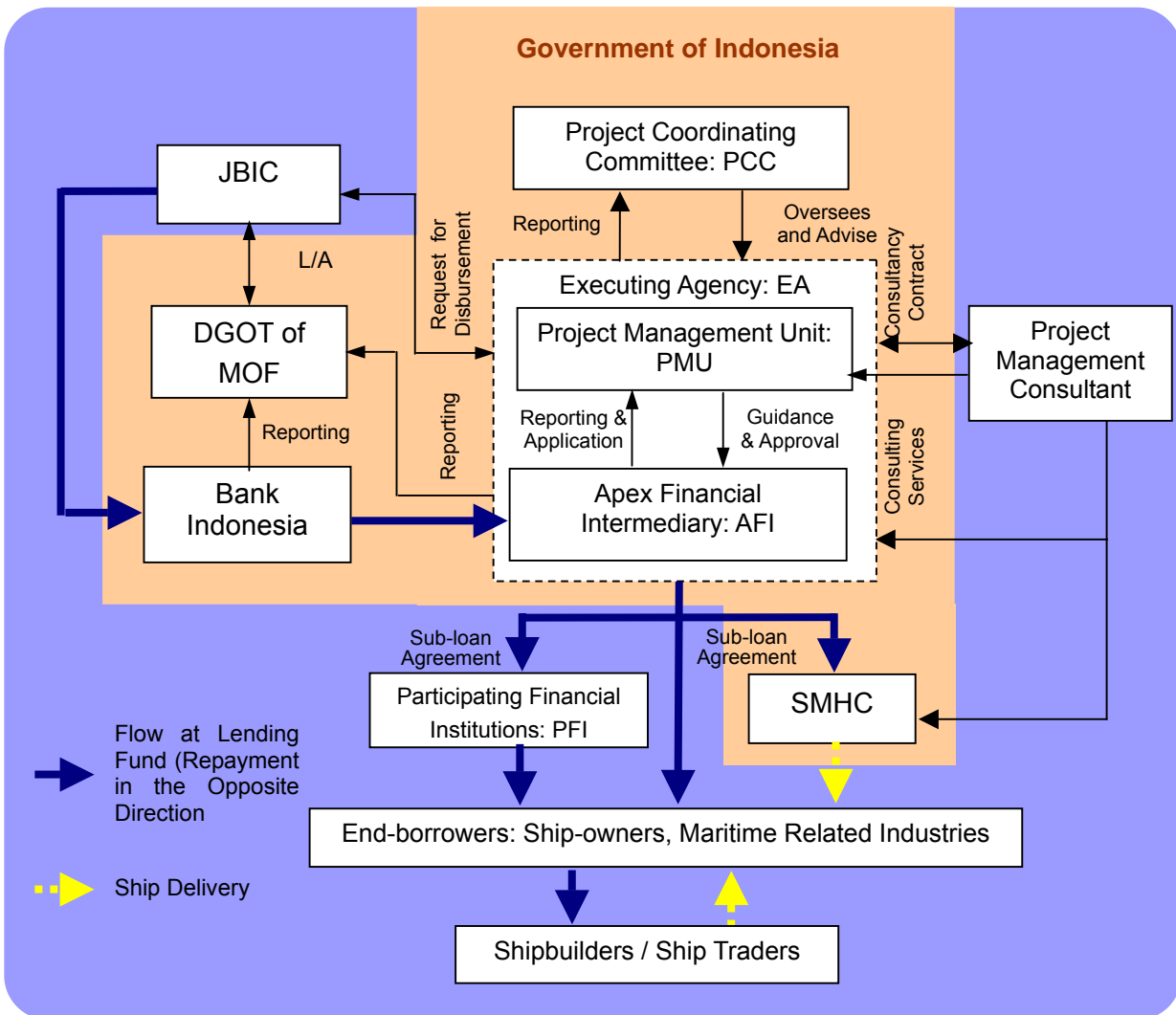
² Bank Mandiri, Bank Rakyat Indonesia, Bank Negara Indonesia and Bank Tabungan Negara

Table 2.2.1 Anticipated Roles among Relevant Agencies in the Scheme

Agencies	Anticipated Roles
Directorate of External Fund Management (DEFM), DGOT, MOF	<ul style="list-style-type: none"> Engagement of L/A with JBIC Engagement of Sub-loan Agreement with AFI Monitoring of Special A/C at BI
Bank Indonesia (BI)	<ul style="list-style-type: none"> Opening and Operating Special A/C for JBIC Fund Transferring on-lending procedures to AFI Periodical credit notice to MOF
Project Coordinating Committee (PCC)	<ul style="list-style-type: none"> Giving advice on project formulation including lending conditions and other important matters and supervising project implementation Coordinating project related interests and issues among senior officials, e.g., director-level, among the relevant governmental agencies
Executing Agency (EA)	<ul style="list-style-type: none"> Responsible for overall project formulation, preparation and implementation Consisting of PMU and AFI for daily operation and contracting Project Management Consultant for consulting services in financial and engineering aspects
Project Management Unit (PMU)	<ul style="list-style-type: none"> Daily management of the scheme including supervision of AFI and Project Management Consultant Preparation of periodical project progress reports and keeping communications with PCC, MOF and JBIC
Apex Financial Intermediary (AFI)	<ul style="list-style-type: none"> Assessment on sub-loan application from PFIs, SMHC, and end-borrower candidates and endorsement of qualified sub-loan applications for the EA's approval Application of fund disbursement to approved sub-loan projects through the EA to JBIC Risk-taking on currency exchange risk, since AFI borrows Japanese yen and lends Indonesian rupiah When directly lending sub-loans to eligible borrowers, AFI shall also take commercial lending risk
Project Management Consultant (PMC)	<ul style="list-style-type: none"> (To PMU) Policy advice and needs identification for suitable financing projects in the scheme (To AFI) Preparation of a financial audit manual and financial advice on sub-loan and ship lease applications (To SMHC) Preparation of a ship-management manual and financial and technical advise on ship leasing and ship-management (Others) Dissemination of the scheme's advantages among possible end-borrowers and assistance for reporting the project's progress and bilateral coordination between Indonesia and Japan
Participating Financial Institution (PFI)	<ul style="list-style-type: none"> Several commercial banks and non-bank financial institution can work as PFI under the EA's approval Each PFI shall make sub-project appraisal on the applications to be submitted by end-borrower candidates. After appraisal and selection, PFI shall submit a disbursement request for eligible sub-project(s) to the EA PFIs shall take commercial lending risk in their sub-projects
Ship Management and Holding Company (SMHC)	<ul style="list-style-type: none"> A special purpose company for the project to be established by both public and private sectors in order to implement the project smoothly and effectively Provision of ship leasing service and ship-management service for financed vessels within the scheme In case of overdue payment, SMHC shall take over the financed vessel in accordance with the agreement between SMHC and AFI/PFIs Provision of technical assistance such as ship-management techniques and modern shipping business management to the shipping companies which are participating in the scheme

Source: JICA Study Team

Figure 2.2.3 Outline of the Public Ship Finance Project by JBIC TSL



Source: JICA Study Team

Responsibilities of the Executing Agency /Project Management Unit (PMU) during project implementation are summarized as follows:

- Overall coordination and management of project implementation;
- The Executing Agency appoints the Project Manager and creates the Project Management Unit (PMU) within its office.
- Policy development and preparation of the laws and regulations, pertaining to the development of domestic sea transportation and maritime industry as well as augmentation of safe marine transportation, together with the enforcement necessary and other issues relevant to project implementation;
- To prepare, submit and get approval of the annual budget of the project, called DIP, and control the balance of the budget;
- To approve individual request for finance submitted by eligible end-users of the project, viz. shipping companies and shipyard, through designated financial institutions for the purpose of:
 - Ship acquisition, either newly built or secondhand,

- Improvement/replacement of various machine and equipment and related tools, and
- Modernization of shipyards.

These requests for JBIC Loan must comply with the scope of the project agreed in the Loan Agreement;

- Promotion and coordination with responsible agencies for ship management education;
- Reporting to JBIC the progress of the project in its required form as designated in the Loan Agreement and/or other related information;
- Reporting to the ministerial level Project Coordinating Committee, and related ministries and agencies of the Government of Indonesia regarding the progress of the project, problems and constraints of the project.

The Indonesian National Shipping Association (INSA) and The Indonesian Shipbuilding Industries Association (IPERINDO) lend their strong assistance to the JICA Study Team during the implementation of STRAMINDO II Study and capitalizing on their organizational strength have expressed their willingness to support the early introduction of the JBIC TSL through an Expression of Interest signed by their member companies at a STRAMINDO Final Seminar on 12 January 2005 in Jakarta.

In the implementation phase, therefore, both INSA and IPERINDO are expected to be in a good position to work as a coordinator between the financing institutions and the borrowers, i.e. shipping companies and shipyards.

2.2.3 Financial Outline of the Project by Component

Aside from the preparation and implementation scheme with flows of fund, the JBIC-TSL project can be outlined based on target end-borrowers, eligible sub-projects, disbursement procedures, loan amount, interest rate, sub-loan period, collateral and other financial guidelines. The Study proposes those components as follows:

Table 2.2.2 Financial Outline of the Project by Component

(1/2)

Component	The Project
Target Sector	Domestic sea transportation and related maritime industry
Target End-Borrowers	Shipping companies; Shipyards; Port-service providers; and Ship Management Companies
Eligible Sub-projects	<ul style="list-style-type: none"> - To be eligible, sub-projects need to satisfy requirements of appraisal and get approved by the corresponding PFI; - Each PFI submits a request for JBIC Loan finance in a given form to the Executing Agency. - Eligible sub-projects include, among others, <ul style="list-style-type: none"> Acquisition of newly built and second-hand vessels Ship leasing Reconstruction and improvement of existing vessels Procurement of shipbuilding and repairing facilities and equipment Procurement of port handling and other shipping related on-land equipments Establishment of ship-management company
Disbursement Procedure	<ul style="list-style-type: none"> - Primary Loan (JBIC → MOF/BI): JBIC Special Account Procedure will be applied for the project³. JBIC provides initial deposit as advance money to the Apex Bank so that the Apex Bank will not need to use their own funds in financing the sub-loans of the Project. Then this initial deposit may be replenished at any time according to the disbursement performances. - Sub-Loan (MOF/BI → PFI → End-Borrowers): Initial deposit should be passed through from MOF's Special Account at BI to the Apex Bank. Disbursement from the Apex Bank to PFI is dependent on their own arrangement. Normally, disbursement is made on reimbursement basis to secure the proper usage of the funds. The only problem with reimbursement basis is that a longer time is required for PFI to get approval from the Apex Bank and/or Executing Agency to draw the funds. Therefore, it would be better if the Apex Bank disburses the funds to PFI in advance or within a limited time after the PFI's request, so that the money for the end-borrower can be disbursed quickly.
Loan Amount	<ul style="list-style-type: none"> - Primary Loan (JBIC → MOF/BI): To be decided later as a result of loan negotiation between JBIC and GOI. As of the time of the Final Report of STRAMINDO II, the JBIC loan amount recommended by JICA Study Team for STRAMINDO II and total amount for investment are as follows: JBIC Loan: Yen 30.0 billion (80%) (equiv. to Rp. 2,571 billion) Own Fund: Yen 7.6 billion (20%) (equiv. to Rp. 651 billion) Total Investment: Yen 37.6 billion (100%)(equiv. to Rp. 3,222 billion) - Sub-Loan (MOF/BI → AFI → PFI → End-Borrowers): To be decided later based on value of ships/equipment to be procured. JBIC TSL should serve to strengthen the operational capabilities of the participating financial institutions and to develop the financial sector in general of the recipient country. In this context, some 20% of the sub-loan amount should be financed out of the PFIs' own fund. In case of financial lease, the lease finance company procures the ship or equipment from a supplier as duly requested and arranged in the sales contract between the end-borrower and the supplier.

³ Detailed description about JBIC Disbursement Procedure can be obtained through <http://www.jbic.go.jp/english/oec/disburse/index.php>.

Table 2.2.2 Financial Outline of the Project by Component (Continued)

(2/2)

Component	The Project
Interest Rate	<p>- Primary Loan (JBIC → MOF/BI): To be decided later as a result of loan negotiation between JBIC and GOI. For reference, standard rate of interest for Indonesia is 1.30%p.a. in Yen, with 30 years loan period and 5 years grace period.⁵</p> <p>- Sub-loans (including lease): JBIC will suggest MOF/Executing Agency that rates lower than market lending rate (lease charge in case of leasing) be applied to all sub-projects, so that concessional merits provided by JBIC ODA Loan are transferred to sub-loans. However, actual rates to be applied will be decided subject to prevailing rates at the time of sub-loan contract between PFI and end-borrower.</p>
Sub-Loan Period	<p>- for lease contract: (Maximum) 20 years – Age of the ship at the time of the contract⁶</p> <p>- for loan: To be negotiated</p>
Currency of Sub-loan	Indonesian Rupiah
Collateral	<p>- for lease contract: 4 months of lease charge as deposit only⁷</p> <p>- for loan: To be negotiated⁸.</p>
Appraisal for Each Sub-Loan	Subject to appraisal system/method of each financing institution.
Procurement of Consulting services	Consulting services will be procured for smooth and efficient implementation and for related technical and knowledge transfer.

Source: JICA Study Team

⁴ Detailed description about JBIC Disbursement Procedure can be obtained through <http://www.jbic.go.jp/english/oec/disburse/index.php>.

⁵ Current terms and conditions of JBIC Yen loans can be obtained through <http://www.jbic.go.jp/english/standard/index.php>

⁶ PT. PANN MF's policy. Normal economically operation years is supposed at 25 years. Depending on the market situation, contract period might be adjusted.

⁷ PT. PANN MF's policy.

⁸ A certain financing institution informed JICA Study Team that acceptable tangible asset equivalent to 50% of the loan amount will be required as collateral in addition to the ship mortgage.

⁹ PT. PANN MF's policy. Normal economically operation years is supposed at 25 years. Depending on the market situation, contract period might be adjusted.

¹⁰ PT. PANN MF's policy.

¹¹ A certain financing institution informed JICA Study Team that acceptable tangible asset equivalent to 50% of the loan amount will be required as collateral in addition to the ship mortgage.

2.3 Analysis of Likely Players in the Scheme

As already discussed in the proposed scheme, one state-owned bank will be appointed as Apex Financial Intermediary and some more commercial banks and non-banking institutions will be Participating Financial Institutions. Major commercial banks including state-owned and active leasing companies are being considered in this regard. Among them, PT. PANN MF is looked at carefully since it has abundant experiences in shipping finance thus, may be able to contribute to the proposed scheme as a whole and the effective operation of the Ship Management and Holding Company (SMHC) in particular.

The Study conducted the interview survey with shipping companies in order to assess possible end-borrowers' requirements and perceptions towards ship financing.

2.3.1 Commercial Banks

Participating commercial banks will be identified as PFIs to meet the needs for bank loans of the shipping companies, shipyards and other companies engaged in domestic shipping and maritime industry. Those PFIs will be selected in consideration of their financing experience and current activities in this sector, good network, their willingness to join the JBIC-TSL Project as well as their financial scale and capabilities. The following list of big banks in Indonesia provides a useful information for the selection of PFIs. To be nominated as PFI for the Project, each bank must conclude a contract with the Apex Bank.

**Table 2.3.1 The Big 10 of Universal Bank
(in the order of the size of credit; July 2003 – June 2004)**

No.	Bank	(Rp Million)												
		Total Assets		Third Party Fund #		Credit Provided			Share in the National Banking Total		Credit Growth/ Fund Growth		Capital	
		2004	▲ (%)	2004	▲ (%)	2004	▲ (%)	▲ (%)	▲ (%)	2004	▲ (%)	2004	▲ (%)	
1	Bank Mandiri	234,686,433	-8,96	171,616,806	-6,92	82,249,646	16,47	23,15	121,35	26,464,826	8,26			
2	Bank Rakyat Indonesia	99,287,395	8,15	19,637,809	7,15	54,970,353	11,01	26,33	215,53	10,835,918	73,23			
3	Bank Negara Indonesia	128,618,204	2,62	100,172,851	3,16	50,933,464	10,20	20,19	278,51	12,924,616	18,14			
4	Bank Central Asia	141,738,467	21,13	123,281,212	20,87	33,470,091	6,70	50,32	52,64	13,235,960	17,18			
5	Bank Danamon Indonesia	53,148,823	7,45	35,932,684	0,39	23,862,398	4,78	0,58	99,12	8,732,109	53,14			
6	Bank Niaga	25,377,067	17,04	20,640,065	17,45	16,530,354	3,31	39,14	151,66	2,028,643	32,64			
7	Bank Bukopin	16,968,511	18,42	14,101,148	19,62	14,254,315	2,85	14,16	76,44	1,281,801	51,65			
8	Bank Internasional Indonesia	35,085,259	1,63	28,705,223	4,34	12,365,000	2,48	52,17	355,18	3,311,052	17,54			
9	Permata Bank	30,455,656	5,42	24,822,343	6,49	12,063,194	2,42	42,39	237,30	1,682,982	59,49			
10	Bank Tabungan Negara	26,188,454	1,15	17,965,308	-4,96	11,550,725	2,31	6,30	73,06	1,031,360	19,23			
	Total 10 Banks	791,554,089	3,24	616,875,449	4,08	312,249,540	62,52	24,65	255,13	81,529,267	24,00			
	Bank Mean	79,155,409		61,687,545		31,224,954				8,152,927				
	Total National	1,189,663,875	7,53	917,015,100	8,88	499,417,169		24,07	129,47	131,462,773	20,46			
	National Mean	8,812,325		6,792,704		3,755,016				973,798				

Remarks:

- Credit segment is percentage of credit that were given by each bank divided total credit which were given by national banking;

#) : consist of gyro, saving and deposit

NPL : nonperforming loan (gross);

LDR : loan to deposit ratio;

▲ : growth;

ROA : return on average asset;

NIM : net interest margin;

CAR: capital adequacy ratio;

ROE : return on average equity;

BO/PO : biaya operasional / pendapatan operasional
(operational cost / operational income)

Source: birI (Biro Riset InfoBank - Research Bureau of InfoBank)
InfoBank Edisi Khusus No. 308, November 2004

2.3.2 Leasing Companies

In Indonesia, there are more than 100 multi-finance companies. Many of them are developing their business due to recent buoyant consumerism in the country. Out of those, JICA Study Team selected 20 big multi-finance companies as summarized in Table 2.3.2.

There is virtually only one leasing company engaged in ship leasing in Indonesia, which is PT. PANN MF, ranked at 15 in the order of revenue. Although PT. PANN MF is qualified,

other multi-finance companies may also be allowed to join the project as participating financing institution to comply with the requirement of Indonesian anti-monopoly law. But it is understood that due to the absence of a leasing law it would be extremely difficult and institutionally risky for other multi-finance companies to venture to provide lease finance on ships.

Table 2.3.2 Big 20 Multi-finance Companies in Indonesia

(unit: million Rp.)

No	Name	2003			
		Asset	Equity	Revenue	Net Profit
1	Federal Internasional Finance	2,015,361	463,795	1,144,212	211,612
2	GE Finance Indonesia	3,400,601	223,842	967,659	75,111
3	Astra Sedaya Finance	3,299,413	874,685	891,525	245,811
4	Adira Dinamika Multifinance	1,584,893	343,482	651,134	155,356
5	Dipo Star Finance	2,163,909	355,202	546,938	168,936
6	Oto Multiartha	1,825,489	554,440	498,497	92,113
7	Bussan Auto Finance	1,202,779	233,323	438,133	97,089
8	Wahana Ottomitra Mutiartha	756,573	180,362	361,146	53,780
9	Tiga Berlian Auto Finance	1,245,956	241,175	301,574	87,313
10	Tunas Financindo Sarana	1,083,699	183,057	294,931	50,883
11	BFI Finance Indonesia Tbk	1,126,413	611,947	270,654	98,265
12	Bina Danatama Finance Tbk	971,461	58,757	256,711	171,941
13	Primus Financial Services	858,208	125,078	209,031	34,201
14	Swadharna Indotama Finance	804,552	133,516	200,887	34,812
15	PANN Multi Finance	2,733,549	(324,297)	188,599	(152,258)
16	Bumiputera - BOT Finance	831,521	166,259	179,969	41,889
17	Mitsui Leasing Capital Indonesia	906,605	165,310	166,444	46,598
18	Multindo Auto Finance	429,343	51,314	128,990	21,314
19	Central Sari Finance	506,352	144,070	119,116	31,392
20	UFJ-BRI Finance	662,610	121,419	113,677	25,054

Source : Investor, Edition 109, 22nd Sept - 4 Oct 2004 (Compiled by PT. PANN)

2.3.3 PT. PANN MF

(1) Experiences and Capabilities

In this section, brief analyses are carried out on the current financial position, restructuring policy and future business strategy of PT. PANN Multi Finance (hereinafter called PT. PANN MF), the state-owned leasing company for ships. Consequently, some of the necessary financial measures that GOI might take for PT. PANN MF will become clear. With effective government support, this leasing company could perform sufficiently as mandated from its establishment and also as one of the Participating Financial Institutions in the execution of the STRAMINDO project.

Business activities of PT. PANN MF used to cover general leasing as mentioned in Section 2.2. Now it has been well-known that GOI is going to restructure PT. PANN MF to concentrate on shipping lease business, which is the original mandate of the company, as stipulated in draft INPRES, that the company may be able to contribute more than before to the development of sea transportation and maritime industry as a sector-specialized financial vehicle.

Since its establishment in 1974, the company has procured 152 units of vessels in various

types and sizes and has gained valuable experiences in purchasing and leasing of diverse vessels over 30 years. Now the company has gained a substantial share of ship financing, reaching to almost monopolistic status in financial lease for ships in Indonesia. For this reason, PT. PANN MF is considered suitable as one of the Participating Financial Institutions in the JBIC ODA loan under on-lending scheme, commonly called two-step-loan or TSL.

(2) History and Current Situation

(a) Past Experiences

Since its establishment, PT. PANN MF has concentrated in lease financing for ships, both newly built and secondhand, either built in foreign shipyard or local shipyard, based on financial leasing¹² arrangements with Indonesian shipping companies. The Minister of Finance Decree No.1105/KMK, 013/1991 dated November 12, 1991, expanded the company's activities to cover general leasing for vessels and other capital goods, factoring and consumers financing. Coinciding with the expansion of objects for its leasing businesses, the company changed its name from PT. PANN to PT. PANN Multi Finance in 1991. In recent years, the company is engaged in general leasing, with financed objects including various types of ships, aircrafts, hotels and truck trailers. Through ship financing, the company has contributed to the development of:

- inter-island transportation for staple and other goods as well as passengers;
- transmigration transport;
- transportation of export goods;
- growth of the maritime industry;
- creation of job opportunities;
- development of the fishing industry;
- development of national shipping companies and domestic shipyards; and,
- regional development and equal distribution of income.

Also, the company has been engaged in government projects since 1990, i.e. the building and leasing of 31 tuna long liner ships (fishing vessels), 10 aircrafts, 10 truck trailers and 3 hotels. However, due to the changes in the business environment, notably after the Asian economic crisis of 1997 and the September 11, 2001 terrorism incident in USA, which seriously affected the company's business, the company had no option but to shift its focus back to its core business, namely financial lease for ships, suspended lease for other objects and went through financial restructuring with the assistance and support of the Ministry of Finance, which holds 93% of the company's equity¹³, and the Ministry of State-Owned Enterprises, the responsible ministry for administration of the company.

In line with the government's program to intensify the utilization of marine resources, PT. PANN MF has retained a dominant share, almost monopolistic status, in financing lease

¹² The term "Financial Leasing" is not used in sea transport industry in principle, instead the term "Bareboat Hire Purchase (with Contract to Purchase at US\$1.00 at the Contract Termination, to be exact.)" is commonly used. However, "Financial Leasing" is widely used as a means of finance universally, and it is considered suitable to follow the practice as the subject of this chapter is to study financial means and scheme. Actually, PT PANN MF uses "Financial Leasing" in their business.

¹³ Remaining 7% of the equity is held by Bank Mandiri Indonesia.

for ships in the country, contributing to the development of the sea communications and fishery sector.

(b) Recent Business Results and Financial and Asset Position

Recent business results of the company, 1999 – 2003, are summarized in the table below. As reported, Operating Income and Net Profit have been negative throughout the reporting period. Interests paid on Bank Loan in Operating Expenses are too big to get positive operating profits. In 2003 for instance, 71.3 billion Rp was paid for Interests on Bank Loan is far bigger than the 63.8 billion Rp Total Revenue. In addition, Reserves for Bad Debts and Other Operational Cost have remained at a high level. Turning to its Balance Sheet, which is attached in Appendix 2-1, Equity has been in the negative because of huge accumulated loss up to the previous years with additional loss added each year throughout the reporting period. Clearly, the company is judged to be as financially not self-sufficient and totally dependent on Government financial support. As indicated in the balance sheet, loan from GOI takes 99.8% of total long-term liabilities as of the end of 2003.

**Table 2.3.3 Comparative Income Statement
 (December 31, 1999, 2000, 2001, 2002, 2003)**

(in thousand Rp)

Description	2003	2002	2001	2000	1999
Operating Revenue					
Leasing Revenue	63,801,626.82	79,484,859.02	94,961,957.16	93,030,988.20	82,646,637.46
Purchase on Installment Revenue	790,195.33	670,455.64	271,875.56	481,350.81	741,248.87
Cash Sales Revenue	-	-	-	-	-
Total Revenue	64,591,822.15	80,155,314.66	95,233,832.72	93,512,339.01	83,387,886.33
Operating Expenses					
Interest on Bank Loan	(71,251,600.91)	(80,013,702.09)	(82,885,828.38)	(75,704,978.37)	(83,070,479.38)
Reserves for Bad Debts and Other Operational Costs	(40,606,993.33)	(35,930,337.55)	(36,014,721.73)	(34,923,452.72)	(99,747,956.31)
Total Operating Expenses	(111,858,594.24)	(115,944,039.64)	(118,900,550.11)	(110,628,431.09)	(182,818,435.68)
Gross Income	(47,266,772.09)	(35,788,724.98)	(23,666,717.38)	(17,116,092.07)	(99,430,549.35)
General and Administration Expenses	(20,412,723.74)	(19,347,187.14)	(12,657,447.07)	(11,539,264.95)	(9,388,025.55)
Operating Income	(67,679,495.83)	(55,135,912.12)	(36,324,164.45)	(28,655,357.02)	(108,818,574.90)
Other Revenue	124,006,822.12	199,929,103.82	39,423,715.19	62,090,414.04	133,142,215.64
Other Expenses	(116,335,426.18)	(203,423,695.17)	(96,677,229.70)	(276,266,656.05)	(15,665,837.47)
Total Other Profit	7,671,395.94	(3,494,591.35)	(57,253,514.51)	(214,176,242.01)	117,476,378.18
Net Profit	(60,008,099.89)	(58,630,503.47)	(93,577,678.96)	(242,831,599.03)	8,657,803.28
Profit Before Income Tax	(60,008,099.89)	(58,630,503.47)	(93,577,678.96)	(242,831,599.03)	8,657,803.28
Income Tax	-	-	-	-	-
Deferred Tax Burden	(92,250,018.18)	-	32,456,321.79	-	-
Profit After Income Tax	(152,258,118.07)	(58,630,503.47)	(61,121,357.17)	(242,831,599.03)	8,657,803.28

(Source: PT. PANN MF)

According to the company, losses have been caused by the losses in the Minajaya Fishing Vessel Project and Aircraft Project. When these two losing projects are excluded, the company's core business, shipping lease, has been profitable as shown below:

Proforma Income Statement 2003 (Profit After Income Tax)

Leasing Business (National Commercial Fleet)	+ Rp.6.3 billions;
Minajaya Fishing Vessel Project	- (minus) Rp.28.6 billions;
Aircraft (Boeing 737-200) Project, 2003	- (minus) Rp.129.9 billions;
Consolidated	- (minus) Rp.152.2 billions.

The following table shows the breakdown of the company's present assets procured for leasing business.

Table 2.3.4 PT (Persero) PANN Multi Finance / Summary of Procured Capital Goods

Type	Over the Years ^(Note)		Current Position	
	Unit	Quantity	Unit	Quantity
General Cargo	105	263,057 DTW	22	73,744 DTW
Semi Container	20	63,381 DTW	13	46,350 DTW
Ferry Ro-Ro	8	12,216BRT	4	4,860 BRT
Tanker	2	6,462 DTW	1	5,962 DTW
Bulk Carrier	2	17,096 DTW	-	- DTW
Mina Jaya (Fishing Boat)	14	4,200 GT	14	4,200 GT
Cement Bare	1	6,000 GT	1	6,000 GT
Truck Trailer	10	Units	-	- Units
Aircraft	10	Units	10	- Units
Hotel	3	Units	2	- Units

Note : Customer-wise, PT. PANN MF has leased the above capital goods to 57 shipping companies, 1 freight forwarder, 4 airlines, and 3 hotels since establishment.)

(Source) PT. PANN MF

As already stated, objects for the company's leasing business were expanded during the 1990s under Caraka Jaya Program I, II and III, Mina Jaya Fishing Vessels Project and other projects. Caraka Jaya Program is aimed primarily at the development of both sea transport and shipbuilding industries as well as expanding export and savings on freight cost. The results of ship leasing under Caraka Jaya Program are summarized in Table 2.3.5.

Table 2.3.5 Operation Analysis of Caraka Jaya Program (as of 12 October 2004)

Program	DWT	UNIT	TOTAL DWT	Year of Built	Yard Builder	Ship Name	Operation Route (in the last six months tracking)	Lease Finance Operation				
								Executing Agency	Lessee	Lease Period (Year)	Current Position ³⁾ (Out/In the contract)	Monthly Lease Charge (million RP)
1	2	3	4	5	6	7	8	9	10	11	12	13
1. Phase I												
-Semi Container (prototype)	3000	1	3000	1986	PAL - Surabaya	CARAKA JAYA NIAGA III-01	Waisarisa, Bontang, Banjarmasin, Tg Priok (TRAMPING)	PT PANN MF	PT Pelni	20	4	42
	3000	4	12000	1987	D & P - Jakarta	CARAKA JAYA NIAGA III-02	Tg Priok, Banjarmasin, Tg Perak, Bontang, Palembang (TRAMPING)		PT Meratus	20	6	42
	3000			1990	Pelita Bahari - Jakarta	CARAKA JAYA NIAGA III-03	Tg Priok-Belawan (LINER)		PT Tanjung	20	6	42
	3000			1987	PAL - Surabaya	CARAKA JAYA NIAGA III-04	Tg Perak, Jayapura, Sorong, Ternate, Sindangole, Tg Priok, Banjarmasin, Bitung, Balikpapan, Bontang, Waisarisa, Labuhan (TRAMPING)		PT Pelni	20	6	42
	3000			1990	PT Kodja - Jakarta	CARAKA JAYA NIAGA III-05	Tg Priok - Palembang - Batam - Belawan - Panjang (TRAMPING)		PT PELPN	20	6	100,4
2. Phase II												
-On top Semi Container	4200 ¹⁾	2	11050	1989	PAL - Surabaya	CARAKA JAYA NIAGA III-06 ¹⁾	Tg Priok, Chrismast I, T Bayur, Tg Perak, Port Klang, Pasir Gudang, Dumai, Sandakan, Palembang, Pontianak (TRAMPING)	PT PANN MF	PT Surya	20	7	128,4
	3200	1989		PAL - Surabaya	CARAKA JAYA NIAGA III-07	Surabaya-Banjarmasin (LINER)	PT Amasusa P.		20	8	97,4	
	3650 (115 TEU's)	1		1990	PAL - Surabaya	CARAKA JAYA NIAGA III-08	Tg Perak, Makassar, Bontang, Banjarmasin, Palu (TRAMPING)		PT Meratus	20	9	132,2
- Semi Container	3650 (115 TEU's)	12	43800	1993	PAL - Surabaya	CARAKA JAYA NIAGA III-17	Tg Perak, Banjarmasin (LINER)	PT PANN MF	PT Meratus	20	9	133,9
		1993		PAL - Surabaya	CARAKA JAYA NIAGA III-23	Tg Priok, Banjarmasin (LINER)	PT Panurjwan (PNP)		20	9	136,6	
		1993		PAL - Surabaya	CARAKA JAYA NIAGA III-24	Tg Perak, Banjarmasin (LINER)	PT Meratus		20	9	136,2	
		1991		DPS - Surabaya	CARAKA JAYA NIAGA III-25	Tg. Priok, Banjarmasin (LINER)	PT CTP		20	8	165	
		1993		PAL - Surabaya	CARAKA JAYA NIAGA III-26	Tg. Priok, Pontianak, Tg. Perak (TRAMPING)	PT SPILL		20	10	155	
		1993		PAL - Surabaya	CARAKA JAYA NIAGA III-27	Semarang, Tg Perak, Tri Sakti, Makassar, Bontang, Banjarmasin, Kendari, Tg Priok, Pantoloan (TRAMPING)	PT IntilintasT N		20	10	155	
		1993		PAL - Surabaya	CARAKA JAYA NIAGA III-28	Tg Perak, Banjarmasin (LINER)	PT Meratus		20	10	159,9	
		1991		DPS - Surabaya	CARAKA JAYA NIAGA III-29	Tg. Perak, Makassar (TRAMPING)	PT SMN		20	9	85	
		1993		PAL - Surabaya	CARAKA JAYA NIAGA III-30		PTSPIL		20	10	165,2	
		1993		PAL - Surabaya	CARAKA JAYA NIAGA III-31	Tg Priok, Banjarmasin (LINER)	PT Panurjwan (PNP)		20	9	132	
		1992		DKB - Jakarta	CARAKA JAYA NIAGA III-09	Pontianak - Singapore (LINER)	PT SPILL		20	10	146,2	
		1993		DKB - Jakarta	CARAKA JAYA NIAGA III-10	Tg Priok, Belawan, Perawang, Batam, Cigading, Cirebon (TRAMPING)	PT IntilintasT N		20	10	145	
		1993		DKB - Jakarta	CARAKA JAYA NIAGA III-11 ²⁾	Tg Priok, Palembang, Belawan (TRAMPING)	PT MAS Lines		20	12	133,3	
		1993	DKB - Jakarta	CARAKA JAYA NIAGA III-12	Anchored in Tg. Perak due to main engine trouble	PT Surya	20	9	130			
		1991	JMI - Semarang	CARAKA JAYA NIAGA III-14 ²⁾	Anchored in Tg. Priok due to main engine trouble	PT MAS Lines	20	12	133,3			
		1993	DKB - Jakarta	CARAKA JAYA NIAGA III-15 ²⁾	Tg Priok, Jayapura, Karas, Poso (TRAMPING)	PT MAS Lines	20	12	133,3			
		1993	DKB - Jakarta	CARAKA JAYA NIAGA III-16	SEA area (Vietnam, Thailand, Singapore, Indonesia) (TRAMPING)	PT Isa Lines	20	10	140			
		1991	DKB - Jakarta	CARAKA JAYA NIAGA III-18	Tg Perak, Makassar, Tg Priok, Teluk Bayur, Panjang (TRAMPING)	PT Pagaruyung P.L.	20	10	123,8			
		1994	DKB - Jakarta	CARAKA JAYA NIAGA III-19	Pontianak - Tg Priok (LINER)	PT SPILL	20	10	146,1			
		1993	DKB - Jakarta	CARAKA JAYA NIAGA III-20	Tg. Priok, Teluk Bayur, Belawan, Panjang (TRAMPING)	PT Pagaruyung P.L.	20	9	128,7			
		1993	Intan S. - Palembang	CARAKA JAYA NIAGA III-21	Tg. Priok, Teluk Bayur, Belawan, Panjang (TRAMPING)	PT Pagaruyung P.L.	20	9	128,7			
		1993	Intan S. - Palembang	CARAKA JAYA NIAGA III-33	Anchored in Cilincing due to legal dispute	PT SMN	20	9	75			

(Source: PT. PANN MF)

Note

1) Capacity improvement, based on Indonesian Class. Cert.

2) Converted for carriage of container

3) Remaining lease period (in year)

(3) Business Strategy

PT. PANN MF decided to concentrate its resources and capabilities to its original and core business, namely shipping lease, and will no longer engaged in financing other capital goods. According to its managing directors, while awaiting the improvement of the national economy and better business environment, the company submitted their financial restructuring plan in 1999 to the Ministry of Finance, its dominant share holder, to which they are still waiting for the final answer and actual implementation of the restructuring plan. The future business strategies drawn by the company are as follows:

➤ Market approach

Vessels financed and provided by PT PANN MF should match market needs and

demand. Requirements of ships are decided by the shipping companies, and not by PT PANN.

➤ Create safe and profitable projects

Foster profitable projects, through transparent feasibility study. Select the best operator with good capability and commitment to fulfill all obligations as mentioned in the leasing contract.

- Balance portfolio between captive and competitive market, to minimize risks and optimize operational revenue.
- Having a maintenance agreement (mutual cooperation) with shipyards, suppliers and spare part vendors, thereby creating synergy, and forming maintenance network.
- Having an agreement with shipping agencies, to be able to monitor movement of vessels.
- Having an agreement with good shipping companies to provide crew for operating all vessels belonging to PT PANN MF.
- Having an arrangement with other institutions i.e. investors, banks, insurance companies, shipping companies, shippers, shipyards, suppliers, port authorities to ease business activities (win-win solution principles).

➤ “BUMN” (meaning State-Owned Enterprises) Incorporated

Develop BUMN synergy through profitable projects that contribute benefits to those involved in BUMN. For example, in coal carrier projects, PT. PANN MF, PT. Bahtera Adhiguna, PT. Bukit Asam, PT. Kereta Api Indonesia, PT. PLN can collaborate.

Note: Mortgage Law, ratification of international convention, and law of arrest of ship (in INPRES) will enhance PT PANN MF’s future business, especially ship finance.

(4) Financial Restructuring Plan and Optimization of Lease Operation

(a) Financial Restructuring Plan

PT PANN MF has proposed their loan restructuring plan to the Minister of Finance¹⁴, including the essential and urgent settlement of loans from the Ministry of Finance of the Minajaya fishing vessels and aircrafts.

The loan restructuring proposal is as follows:

- ✓ Conversion to equity (Government Equity): 70 %
- ✓ Cash Payment of Rp 150 billion.
- ✓ Loan (30% of cash payment) with interest rate at 1.0% p.a.
- ✓ Penalty and interest due to delayed payment to be erased.

The loan restructuring proposal was supported by many institutions, i.e. Minister of BUMN, Ministry of Industry and Trade, and the Coordinating Minister for Economy, Minister of Sea and Fishery. The Minister of Finance has processed and forwarded the proposal to the Parliament. Sub-Commission IX of the Parliament decided on the loan restructuring signal/fringe for PT PANN MF as follows:

¹⁴ Responsible Ministry for PT. PANN MF is currently Ministry of BUMN (SOEs).

- ✓ Penalty and interest due can be erased.
- ✓ Some principals can be put to equity (PMP) but some other principals remain as loan.

PT PANN MF's Letter No. 1092/KEU/PANNMF/1004 dated 21st October 2004 addressed to Minister of Finance, proposed that while awaiting for loan restructuring approval from the government, since 1st January 2004, PT PANN MF stopped accruing interest, and other cost/penalty for the Minajaya Fishing Vessels Project and Aircraft Project.

PT PANN MF's letter 1244/Keu/PANNMF/1104 dated 24th November 2004 addressed to the Minister of Finance, proposed the following:

- amendment of SLA (Subsidiary Loan Agreement) of Minajaya and Aircraft project; and
- freezing of all interest (and other burden) of Minajaya and Aircraft Project since the beginning of the project, and PT PANN's financial report will be adjusted.

The recent letter No. 1282/KEU/PANNMF/1204 dated December 6th, 2004 has been sent to the Secretary of the Vice President of the Republic of Indonesia, asking for assistance/support on the Minajaya Project settlement. By this letter PT PANN MF agreed with PT IKI's proposal that the portfolio asset of the Minajaya fishing vessels will be taken over by PT IKI, and the Minajaya loan will be transferred to PT IKI.

In the last meeting on 6th December 2004, the Secretary of Vice President of the Republic of Indonesia agreed with the settlement concept.

The final proposal on the loan restructuring for the Minajaya fishing vessel and Aircraft is being prepared by PT PANN MF, and will be submitted to the government (Secretary of Vice President of The Republic of Indonesia), before the end of this year (i.e. by the end of this month).

PT PANN MF is optimistic that the loan restructuring (for both Minajaya fishing vessel project and Aircraft project) will be decided by the Government of Indonesia (through Cabinet Meeting) in the near future, and expected to be done in the 1st quarter of 2005.

(b) Optimization of Lease Operation

In addition to financial restructuring, the company has sought to optimize their lease operation. Whenever possible, unproductive or non-operating production means – their lease assets - that create burden of cost are to be sold. Moreover, debt collection (i.e., the process and skills required) will be intensified through a Debt Collection Team. Also, outsourcing of debt collection will be taken up whenever necessary and considered more effective and advantageous. To reward prime ship operators who fulfill their repayment obligations properly, they will be given priority on future financing.

PT PANN MF has also done preventive action; by having “deal of time” (not money) with operators who are delinquent (unsettled 3 months lease payment). The deal can be described as follows:

The operator brings back the ships to PT PANN MF, and PT PANN will operate the ship for a certain period and the operator has no obligation to pay during the period. The debts will be paid for by the proceeds from the operation of the ship. After all debts are settled, then the operator will be able to or allowed to resume operation of the ship, till the end of

the contract.

As part of the optimization of their lease operation, the company has established their appraisal processes. The JICA Study Team reviewed the appraisal processes stated in their manual and gave some comments for improvement as part of its technical assistance. The revised manual is attached in Appendix 2-2.

2.3.4 Interview Survey of End-borrower and Analysis of Needs for JBIC TSL

Shipping Industry Interview Survey was conducted during STRAMINDO (I) with successful interview results from 80 domestic shipping companies located across the country. Utilizing the results of this interview survey¹⁵ and related information, JICA Study Team carried out additional and follow-up interview¹⁶ survey regarding prospective public ship finance scheme using the interview format provided in Appendix 2-3. The number of respondents is 40. Major responses by the survey are as follows:

- 31 respondents plans to acquire new vessels and/or increase their business shipping capacity by repair and refurbishing of their existing vessels;
- 37 respondents have experience to be financed by either bank or leasing.
- 23 respondents have no staff for ship maintenance and 15 respondents have only 1 or 2 staff. Limited efforts are made for ship maintenance;
- In terms of government's priority areas, 23 responded with 'policy and planning' and 15 with 'financial issues'; and
- 27 respondents expect the government to provide financial incentives including subsidy (10), loan (23) and guarantee (18). Salient results of the survey are as follows:

The following table summarizes the results of the interview survey. The detailed results are recorded in Appendix 2-4.

¹⁵ Chapter 3 of STRAMINDO Final Report

¹⁶ The interview survey was subcontracted to Indonesian consultant, PT. PANGRIPTA LOKA.

Table 2.3.6 Analysis of the Results of the Interview Survey

(1/2)

No.	Question	Answer
A. Company Profile and Technical Issues		
A-2	Company Location	All 40 shipping companies who responded to the survey are Jakarta based. Most of them do not have any branch offices. Only 5 have 1 or 2 branches.
A-3	Shareholders	Most of them are 100% Indonesian capital.
A-4	Established Year	Out of 38, 34 have been established within 10 years. But 3 are older than 20.
A-5	Registration	Out of 33, 5 are registered in IPERINDO; 22 in INSA; and 6 are not registered in any sector association.
A-6	Number of Employee	Out of 40, 28 have less than 20 employee including management officers; 5 have more than 21 but less than 30; only 7 have more than 31. This means that most of the respondents are SMEs.
A-7	Main Operating Lines	Fragmented answers were obtained, although Jakarta – Surabaya is the most popular line. Also, Jakarta and Surabaya are the most popular port of origin and destination.
A-8	Operating Revenue in 2003	Out of 40, 30 have revenue of 1,000 million Rp and under, which is very small, but 5 have revenue of 5,000 million Rp and more.
A-9	Breakdown of Operating Revenue	All respondents, 39, operate in only cargo shipping, which all of them said that their businesses are profitable.
A-10	Total Fixed Assets	Results are divided. Out of 38, 10 have 300 million Rp and more fixed assets.
A-11	Own Vessels	Out of 38, 35 own their own vessels. 13 have 3 – 10 vessels and 2 have more than 11 vessels. It looks like that some respondents have many vessels compared to the number of employees.
A-12	Way of Vessels Acquisition (Multiple answers allowed.)	Out of 45 answers, 18 responded with “Outright Purchase”, which probably means that Indonesian shipping companies would prefer to own vessels if they have money, rather than lease or charter. 13 responded with “Lease Purchase”, which probably means that shipping lease is commonly selected and alternative means to outright purchase. Time charter is the third means of vessels acquisition, then comes bareboat charter as the fourth means.
A-13	Plan to Buy New Vessels	Out of 40, 31 revealed that they have plans to buy new vessels. Out of those 31, 25 had plans to buy 3 – 10 vessels, which appears that they have a very positive and aggressive prospects toward their future business.
A-14	Source of Human Resources for Maintenance	Out of 38, 23 have no staff for ship maintenance and 15 have only 1 or 2 staff. This means that Indonesian shipping companies are almost totally dependent on outsourcing or subcontracting in terms of ship maintenance.
A-15	Description of Problems and Constraints on Shipping Operation	For details, see Appendix 2.9 Detailed Answers to Interview Survey. Key factors of difficulty are: <ul style="list-style-type: none"> ➤ Maintenance cost and licensing cost are high. ➤ Old ship, high operation cost. ➤ Lack of human resources for maintenance. ➤ Limited fund.
B. Use and Accessibility of Loan and Other Financial Issues		
B-1	a. Loan from Banks	Out of 40, 37 had received finance, either bank loan or lease. Credit balance as of the interview are: 13 Companies: 300 – 500 million Rp.; 19 Companies: 500 – 1,000 million Rp

Table 2.3.6 Analysis of the Results of the Interview Survey (Continued)

(2/2)

No.	Question	Answer
B-1	b. Duration of Loan	Duration of loan of past credit received appears to be shorter than that of their real needs: Up to 3 years: 7 Up to 3 – 5 years: 23 Up to 5 – 10 years: 4
	c. Interest Rate	
	Short Term	Majority: 6 – 7%pa
	Long Term	Majority: 6 – 7%pa for the loan less than 5 years; 3 Companies had loans at more than 10 % for 5 year and more.
	d. Use of Loan (Multiple answers allowed.)	It is interesting that the answers were almost equally divided to either new acquisition (20) or repair/renovation (21). JICA Study Team understands that repair/renovation could be the main purpose of the use of loan, therefore facilities and equipment of shipyard should be improved in order to assure good repair and maintenance of ships.
B-2	Contract Detail	Tanker, Container, and General Cargo are the three major contract.
B-3	Difficulties for Loan (Multiple answers allowed.)	Major difficulties are as follows: Insufficient mortgage: 15 Complicated Procedure: 21 High Interest Rate: 33 Loan Size is small.: 14
B-4	Necessity of Public Assistance	Out of 39, 27 responded with “Yes”, which reflects high expectation for public assistance. Major kind of assistance are: Subsidy: 10 Loan: 23 Guarantee: 18
B-5	Evaluation of Public Assistance	Out of 31, 21 responded with “Low Level of Satisfaction” and 5 responded with “Not satisfied at all.” Results of B-4 and B-5 could be interpreted that the industry as a whole has high expectation, but they had not been satisfied with the past interventions.
B-6	Kind of High Priority Assistance	Out of 38, 23 responded with “Policy and Planning” 15 responded with “Financial Issues” It should be noted that “Policy and Planning” is a high priority expectation. The industry as a whole is expecting correct and proper government interventions.
B-7	Company’s Future Development Plan	Out of 40, “Increase the ship fleet (by purchasing/leasing new ones or repair of old ship) and number of shipping lines” is by far No. 1 development plan. Increase financial capability (by increase of capital or soft loan) comes at second.
B-7	Problems and Issues on Financing	Limited capital or fund is the most serious issue. Other major issues are: Delay of payment from customer; High interest rate for loan

Source: JICA Study Team

CHAPTER 3 SHIPBUILDING, SHIP IMPROVEMENT AND SHIP-MANAGEMENT

The proposed public ship finance scheme in the previous chapter presents an opportunity for the domestic shipping industry to employ a more competitive and well managed fleet in the near future. This chapter discusses the effective implementation of the proposed public ship finance scheme from the viewpoint of domestic shipping sector development; i.e., how to build new tonnage with appropriate ship design; and how to renew and improve the existing domestic fleet and upgrade young second-hand vessels to be procured in the market. And finally, to develop a comprehensive system where Indonesian domestic fleet is to be expanded, improved and managed in a sustainable manner. This chapter also pays attention to the improvement of shipyards and ship-management companies.

3.1 Ship Design for New Building

3.1.1 Philosophy and Coverage of Designing Works

In relation to ship design, STRAMINDO Report has worked out modern ship designs for inter-island liner shipping, including shallow and wide container ship, Ro-Ro ship and multipurpose ship. This subsequent study considers eight (8) major commodities including seven (7) commodities under the cabotage program. In undertaking the basic ship design, the following key elements are given high consideration:

- Competitiveness
- Reliability
- Safety

The following points must be elaborated in the basic design of each type of ship:

- Suitable dimensions considering operation route and/or area;
- Optimal design of shallow draft ship;
- Suitable cargo handling equipment; and,
- Simple and reliable system for easy maintenance & repair.

As a result of the discussions of the Technical Working Group¹ on Ship Design, the following vessel types were determined to be subject to ship designing works:

- Container ship
- CPO tanker
- Coal carrier
- Petroleum tanker
- Off-shore vessels

Basically Indonesian shipbuilders are supposed to be able to engage in new shipbuilding works even though arrangements vary based on their capability. It is necessary to involve

¹ Composition of Technical Working Group on Ship Design: DGSC, DGILMEA, INSA and IPERINDO

advanced foreign shipyards under a joint venture arrangement if the Indonesian shipbuilding industry alone cannot deliver satisfactory vessels in terms of competitiveness in price, reliability in operation and seaworthiness.

3.1.2 Container Vessel

It is estimated that containerized cargo volume rapidly increased by 20-30% in 2004 which was more than STRAMINDO-I anticipated. Taking anticipated continuous increase in container cargo into account, there is an urgent need to take measures to expand and modernize the current container fleet.

Almost all container ships except Caraka-Jaya vessels in Indonesia are imported second hand vessels, and most of these vessels are no longer suitable in terms of performance and productivity. However, Indonesian shipping companies intend to continue procurement of second hand vessels because of inadequate financial sources and/or strict terms and conditions in financing new vessels as well as younger second hand vessels. In addition, due to unhealthy competition with sub-standard and inefficient port conditions, shipping operators have difficulty in generating revenue over large investment i.e. acquiring new ships or younger second hand ships. Shipping operators understand and seriously consider the need to modernize their own fleets, and that it is indispensable for sustainable management and operation. The government needs to carry out measures and policies for domestic shipping modernization to sustain a healthy and transparent competition in the market and to foster an attractive investing environment for shipping companies by phasing out sub-standard ships.

Two (2) types of container vessels were selected for study with realistic and practical reasons considering medium-term market demand and operational environment conditions. First is a 700TEU container vessel for medium and long distance routes and second is a 300TEU container vessel for short distance route with shallow draft especially for river port operation.

There are routes in Indonesia that have sufficiently high volume. Moreover, there are several primary ports in Indonesia that have sufficient depth and cargo handling capability. However, many of these routes are being served by small vessels, thereby leaving much room for improvement through the introduction of large-sized container vessels. It is for this reason that 700 TEU Container vessel is identified for further consideration.

Similarly, there are several large volume routes, but unfortunately they have to contend with lower capacity vessels due to shallow depth of ports, especially river ports. Thereby it has been proposed to consider high capacity vessels with shallow drafts of only 5 meters.

It is confirmed that ship owners must face difficulty when they look for both the 700-TEU container vessel and the 300-TEU shallow draft container vessel in the second hand market.

700TEU Container Vessel

(1) Basic Requirements

At the Technical Working Group meeting, current market conditions were reviewed and the most desirable requirements for the design of medium and long distance serviced

container vessels were selected as follows:

- Container Capacity : not less than 700TEU
- Container Loading Factor : 14 ton/TEU (homogeneous loading)
- Draft : less than 8 meters
- Ship speed : 15-16 knots
- Cargo handling gear : 40tons x 24-28 meters R x 2 sets

(2) Design Procedure & Result

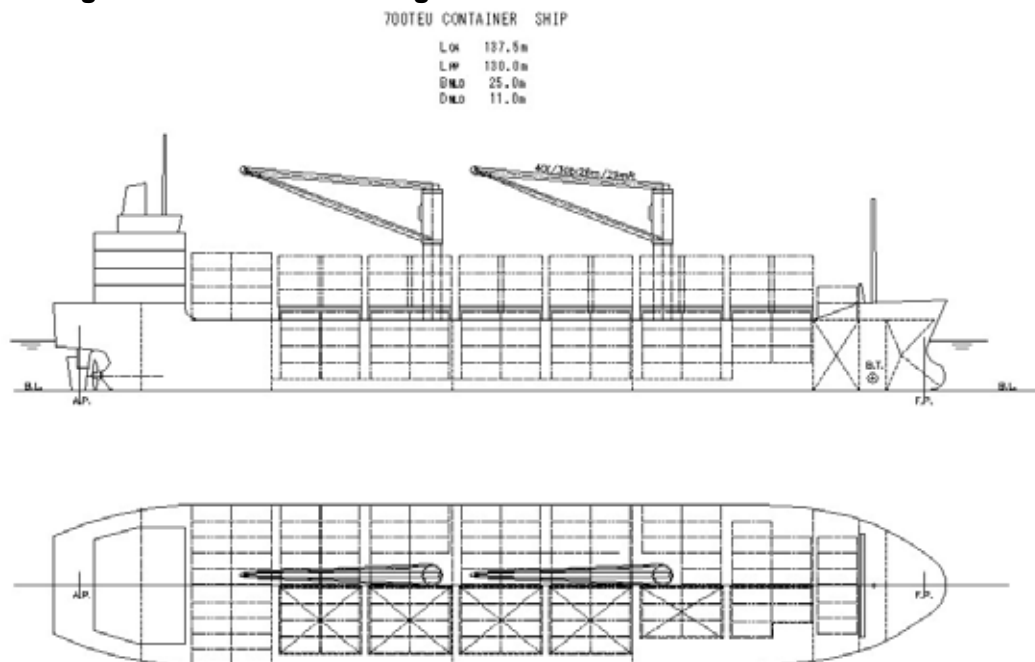
Due to the character of the container cargo in Indonesia, special consideration on the weight of containers is critically important since majority of loaded containers weigh 20-25 tons per TEU. In such cases, loading the required number of homogeneous containers is difficult or in case of a ship with a typical container vessel design, more water ballast is required for stability.

In order to maintain stability for a required number of homogeneous containers loaded, a V-shaped form with large water plane area (WPA) and small Block Coefficient (Cb) is adopted. Due to large WPA and small Cb, a large meta-center height can result into increased stability. Although displacement decreases under a small Cb, the necessary volume of ballast water for enough stability can be decreased and as a result, deadweight is increased.

A small Cb also contributes to high propulsion efficiency through smaller hull resistance at higher speed resulting in smaller propulsion engine. The optimal matching of Cb, WPA and displacement must be able to satisfy the basic requirements mentioned above.

Moreover, two crane sets for cargo handling are arranged at both fore and aft in order to provide a wide area for container handling. Bow thruster with 10 tons thrust is provided for smooth berthing and un-berthing.

Figure 3.1.1 General Arrangement of 700 TEU Container Vessel



Source: Prepared by JICA Study Team

PARTICULARS OF 700TEU CONTAINER VESSEL

1. Dimensions		
Length (over all)		abt. 137.50 m
Length (pp)		130.00 m
Breadth (mld)		25.00 m
Depth (mld)		11.00 m
Draft (mld)		7.70 m
2. Gross Tonnage (International)		abt. 9,800 tons
3. Classification Society	International Classification Society	
4. Cruising Range		Ocean going
5. Container Loading Capacity (Homogeneous)		
In Hold (Full Cell Guides)		282 TEU
On Deck		418 TEU
Total		700 TEU
<Refrigerated Container (included above)>		78 TEU>
6. Deadweight		
Total Deadweight		11,200 tons
Containers		9,800 tons
7. Complement		24 Persons
8. Speed		
Normal Output of Main Engine with 15% sea margin		abt. 16 knots
9. Endurance		6,000n.m.
10. Tank Capacity		
Diesel Oil Tank		abt. 100 m ³
Fuel Oil Tanks		abt. 800 m ³
Fresh Water Tanks		abt. 180 m ³
Water Ballast Tanks		abt. 4,000 m ³
11. Main Engine		
Low-speed Diesel Engine		1 set
Max. Continuous Output (MCO)		5,160 kW
Normal Continuous Output (NCO)		4,644 kW
12. Main Generators		
Electric Output		680 kW (each)
13. Cargo Handling Equipment		
40t/30t X26m/29m Deck Cranes		2 sets
14. Bow Thruster		
10 tons thrust		1 set

(3) Comparison between 700TEU and ordinary vessel

In order to examine the business viability of the designed 700TEU container vessel, a comparative analysis is made for the Surabaya-Makassar route considered as a typical medium distance container route. Comparison is made between the proposed 700 TEU vessel and an ordinary vessel (described below).

Surabaya port and Makassar port productivity is improving and the current average is 20 containers per gang per gantry, and vessels can use 2 gangways. It should however be noted that cargo handling productivity will depend on vessel condition, especially cargo hatch length.

In the case of the Surabaya-Makassar route, the most popular type of container vessel has a more or less capacity of 320 TEU. They are second-hand vessels with a service speed of 11 knots and a real intake of 320TEU homogeneous cargo. It could, on average, perform a round trip in 7 days for the total 916 nautical miles round trip voyage.

In the case of the designed 700TEU vessel, service speed is 16 knots and capacity is 700 TEU homogeneous cargos. It could cover one round trip in more than 8 days if ship cranes are used. However, round trip time can be reduced to 6 days if two (2) gangways are used under a Window System at port.

Table 3.1.1 Comparison of Container Shipping Performance between Present Ship Type and Proposed Large Ship Type on Surabaya – Makassar Route

Route	Surabaya(Tg.Perak) - Makassar			
	Present Ship Type		Proposed Large Ship Type	
Distance (NM)	458		458	
Gross Tonnage	8,000 tons		9,800 tons	
No. of TEU (Homogeneous)	320TEU		700TEU	
Deadweight	5,800 tons		11,200 tons	
Service Speed	11.00 knots		16.00 knots	
Commissioning days	330 days		350 days	
Days per Round Trip (RT)	7.19 days		8.67 days	
Total number of RT	45.9		40.4	
Total No. of Container carried	29,376TEU		56,560TEU	
Load Factor	0.65	0.80	0.65	0.80
Average Freight/TEU	1.850		1.850	
Revenue (million Rp/year)	41,503	46,726	79,910	89,968
Capital Cost (million Rp)	11,112		17,718	
Fixed Operation Cost (million Rp)	6,106	6,106	7,228	7,228
Port, Cargo & FO Cost (million Rp)	13,866	14,021	26,051	26,268
Container per diem (million Rp)	7,776	7,776	17,010	17,010
Total Cost (million Rp)	39,160	39,015	68,007	68,224
Profit/Loss per Year (million Rp)	2,342	7,711	11,903	21,744
Revenue/Cost	1.060	1.198	1.175	1.319

Source: Prepared by JICA Study Team

Simulated performance indices of each vessel are shown in Table 3.1.1. As a result, the designed 700TEU container vessel can carry 1.9 times of container volume, and profit per year increases by 5 times and 2.8 times in case of a load factor of 0.65 and 0.8 respectively compared with the ordinary vessel. The ratio of Revenue and Cost for the 700TEU Container vessel is 10% higher than the ordinary vessel.

300TEU Container Vessel

(1) Basic Requirements

The Technical Working Group examined the most desirable design for a shallow draft and short distance service container vessels taking the following physical conditions into account:

- Container Capacity : not less than 300TEU
- Container Loading Factor : 14 ton/TEU(Homogeneous loading)
- Draft : less than 5meters
- Ship speed : 13 knots
- Cargo handling gear : 40tons x 24-28 meters R x 2 sets

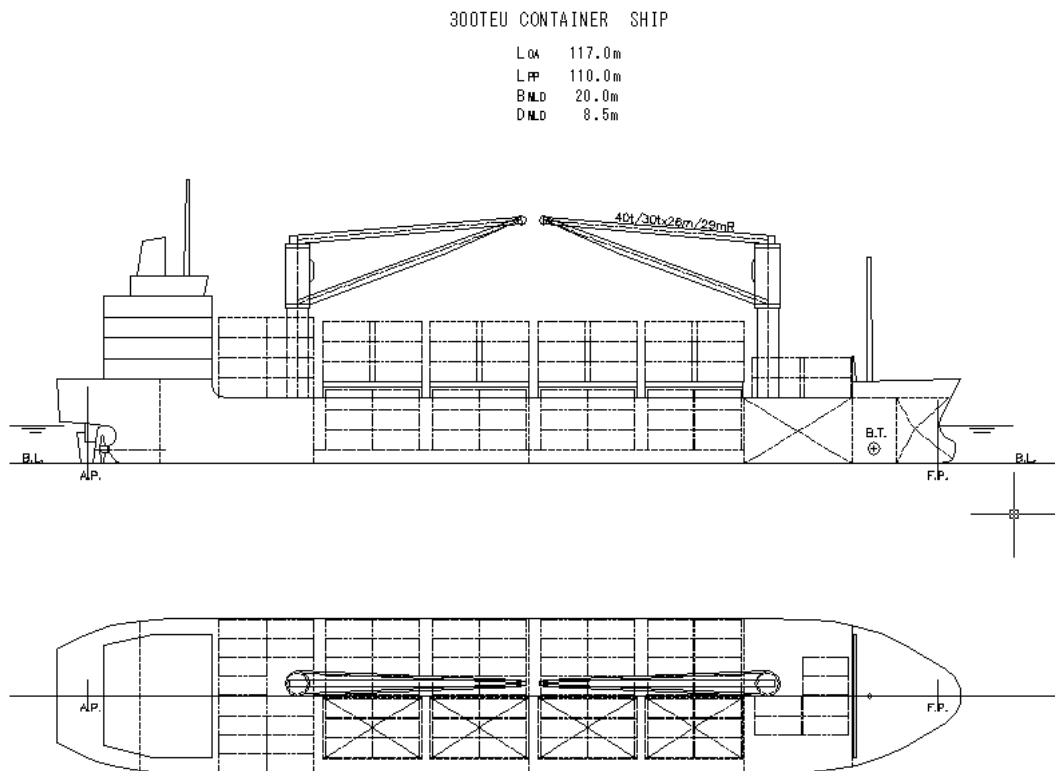
(2) Design Procedure & Result

In order to satisfy the basic requirements above, the vessel was designed in the same manner as the 700TEU container vessel. However, special consideration on ship design is essential for such large width and shallow draft vessel. Shallow draft requires large C_b . On the other hand, increasing propulsion efficiency by sharp stern form and reducing wave resistance by sharp stem form requires small C_b . Thereby vessel design needs to resolve the optimal factor of C_b by considering the trade-offs mentioned above.

In case of a vessel with large width and only three tiers loading of container on deck, it may not be necessary to load water ballast for stability at fully loaded condition. However, considering adjustment for trim and heeling of the vessel, loading of at least a certain capacity of water ballast is considered. In order to ensure enough stability for the required number of homogeneous containers loaded, a V-shaped form with large WPA is adopted.

Furthermore, two sets of crane for cargo handling are arranged at both fore and aft of deck in order to keep a wide area for container loading. Bow Thruster with 5 tons thrust is also arranged for smooth berthing and un-berthing.

Figure 3.1.2 General Arrangement of 300 TEU Container Vessel



Source: Prepared by JICA Study Team

PARTICULARS OF 300TEU CONTAINER VESSEL

1. Dimensions	
Length (over all)	abt. 117.00 m
Length (pp)	110.00 m
Breadth (mld)	20.00 m
Depth (mld)	8.50 m
Draft (mld)	5.00 m
2. Gross Tonnage (International) abt. 6,500 tons	
3. Classification Society International Classification Society	
4. Cruising Range Ocean going	
5. Container Loading Capacity (Homogeneous)	
In Hold (Full Cell Guides)	106 TEU
On Deck	(192) 256 TEU
Total	(300) 362 TEU
<Refrigerated Container (included above) 60 TEU >	
6. Deadweight	
Total Deadweight	5,150 tons
Containers	4,200 tons

7. Complement	24 Persons
8. Speed	
Normal Output of Main Engine with 15% sea margin	abt. 13 knots
9. Endurance	6,000n.m.
10. Tank Capacity	
Diesel Oil Tank	abt. 100 m ³
Fuel Oil Tanks	abt. 400 m ³
Fresh Water Tanks	abt. 150 m ³
Water Ballast Tanks	abt. 2,000 m ³
11. Main Engine	
Low-speed Diesel Engine	1 set
Max. Continuous Output (MCO)	2,240 kW
Normal Continuous Output (NCO)	2,016 kW
12. Main Generators	3 sets
Electric Output	550 kW (each)
13. Cargo Handling Equipment	
40t/30t X26m/29m Deck Cranes	2 sets
14. Bow Thruster	
5 tons thrust	1 set

(3) Comparison between 300TEU vessel and ordinary vessel

In order to examine the viability of the designed 300TEU container vessel, comparative analysis is made for the Surabaya-Banjarmasin route as a typical shallow draft and short distance route. Comparison is made between the proposed 300 TEU vessel and an ordinary vessel (described below).

Banjarmasin port is a river port and vessels are forced to wait before berthing due to the depth of the river and congestion. The draft of a typical container vessels operating at the Surabaya-Banjarmasin route is over 5 meters and vessels have to wait around 1-5 hours for high tide.

Many container vessels, currently on the route, have a capacity of 120 TEU and the like. They are Indonesian-made with a service speed of 10.5 knots and a real intake of 120TEU homogeneous cargo. Round trip voyage time averages 4 days for 508 nautical miles.

In the case of the 300TEU vessel, service speed is 13 knots and capacity is 300 TEU homogeneous cargo. Round trip time is 5 days if ship cranes are used.

Table 3.1.2 Comparison of Container Shipping Performance between Present Ship Type and Proposed Shallow-depth Ship Type on Surabaya – Banjarmasin Route

Route	Surabaya (Tg.Perak) - Banjarmasin			
Ship Type	Present Ship Type		Proposed Shallow-depth Ship Type	
Distance (NM)	268		268	
No. of TEU (homogeneous)	120		300	
Gross Tonnage	3,200 tons		6,500 tons	
Deadweight	3,250 tons		5,150 tons	
Service Speed	11.00 knots		13.00 knots	
Commissioning days	330 days		350 days	
Days per Round Trip (RT)	4 days		5 days	
Total number of RT	82.5		70	
Total No. of Container carried	19,800TEU		42,000TEU	
Load Factor	0.65	0.90	0.65	0.90
Average Freight/TEU	1.700		1.700	
Revenue (million Rp/year)	22,741	28,782	48,965	64,680
Capital Cost (million Rp)	4,440		11,522	
Fixed Operation Cost (million Rp)	5,942	5,942	6,458	6,458
Port, Cargo & FO Cost (million Rp)	10,395	10,890	19,681	20,050
Container per diem (million Rp)	2,916	2,916	7,290	7,290
Total Cost / vessel/year (million Rp)	23,693	24,188	44,951	45,320
Profit/Loss per Year (million Rp)	(-)952	4,594	4,014	19,360
Revenue/Cost	0.960	1.190	1.089	1.427

Source: Prepared by JICA Study Team

Simulated performance indices of each vessel are shown in Table 3.1.2. The 300TEU container vessel can carry 2.1 times more container volume, and profit per year is 4.2 times more in case of a load factor of 0.9 compared to the ordinary vessel. And, Revenue/Cost, ratio of the 300TEU container vessel is 20% higher than the ordinary vessel.

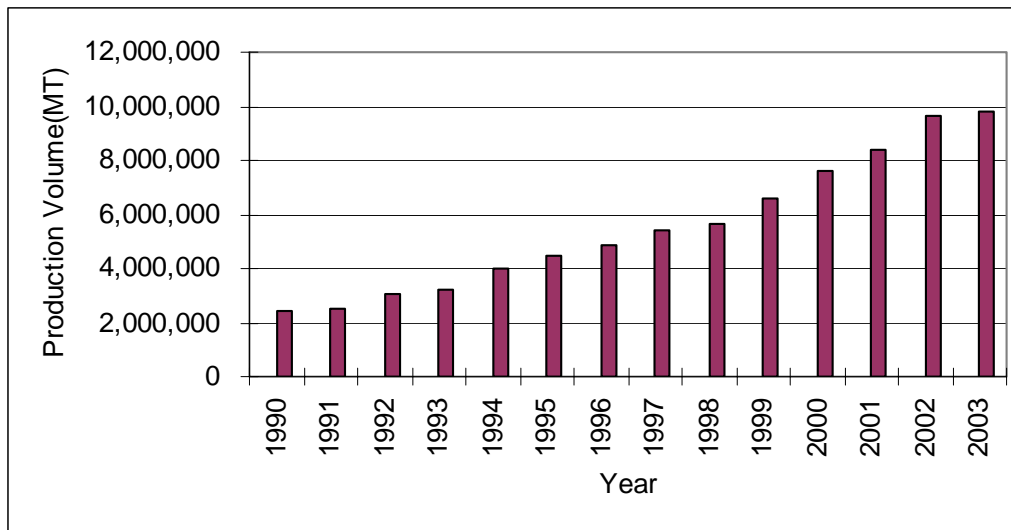
In recent years the route between Surabaya and Banjarmasin has sustained a load factor of around 0.80 to 0.90. However, as shown in the above table, profit/loss becomes negative if either load factor is lower (such as 0.65) or capital cost becomes higher. Under the current situation where the prices at the second-hand vessel market is unfavorable for buyers, a second hand vessel with small capacity but high acquisition cost may not be feasible for this route.

3.1.3 Vessels to Transport CPO

Crude palm oil (CPO) is a key commodity in Indonesia. The production scale is about 8.2 million tons in 2002 and 9.8 million tons in 2004 (estimated), and more than half of the total production is for export.

Around 85% of the total production comes from Sumatra (Palembang, Jambi, Riau, Medan, Bangka, Belitung), and 10% from Kalimantan (Pontianak, Sampit, and others). Domestic sea transportation demand is about 2.5 million tons in 2002 and is projected to increase by 60 % during the next 5 year-period.

Figure 3.1.3 CPO Production



Source: Direktorat Jenderal Bina Produksi Perkebunan

(1) Current CPO shipping

Four refinery plants are located at Sumatra (Palembang, Medan) and at Java (Jakarta and Surabaya). Almost all CPO from Kalimantan is carried to Sumatra and Java by barge and tug or CPO tanker. In Indonesia, there are around ten (10) shipping companies that own more than 3 CPO tankers and another ten (10) companies are engaged in CPO shipping by barge and tugboat.

Domestic CPO tanker can carry CPO only from seaports to refinery plants as CPO tankers cannot enter river ports except Palembang. CPO operation shows tramper service in nature. Current domestic CPO tankers are second-hand tankers ranging from 1,200DWT to 2,600DWT which were originally chemical tankers or oil tankers. According to CPO tanker operators, a suitable size of domestic CPO tanker at present is more than 2,300DWT but less than 4,000DWT. Depending on service area, the commission days of a CPO tanker is around 250-300 days per year.

In case of barge & tug, CPO is carried from river ports to refinery plants located in Java and Sumatra Islands where Belawan and Palembang are exporting ports. Barge and tug can enter rivers easily but it takes much time due to its slow speed of 3-4 knots in nominal conditions and low of 1-2 knots under certain circumstances. In addition to this, when operating along the narrow, snaky and shallow rivers, high maneuverability is required for safety navigation. But barge towed by tugboat system is fundamentally difficult to maneuver. Accordingly, the current barge & tug transportation system seem to be inefficient because of very low speed, small loading capacity and weak maneuverability.

Current CPO barges found in Indonesia were built by domestic shipbuilders with the following typical dimensions;

(I) Large size

Length : about 70.0 m

Breadth	: 17.5 m
Draft	: 4.9 m
Cargo deadweight	: 4,800 tons
GRT	: 1,600 tons
Construction	: Single Bottom
Heating system	: not installed

(II) Medium size

Length	: about 60.0 m
Breadth	: 17.0 m
Draft	: 4.8 m
Cargo Deadweight	: 3,800 tons
GRT	: 1,200 tons
Construction	: Single Bottom
Heating system	: not installed

In order to increase productivity and operation safety in CPO transport, and on the increasing demands of CPO by river and sea transportation, the shift from barge and tugboat system to Palm Oil Tankers with appropriate design is necessary.

The advantage of Palm Oil Tankers in comparison with the current barge and tugboat system are:

- Higher speed;
- Maximum 5,000 deadweight tons at 3.5 meter shallow draft;
- High maneuverability by twin shaft and propeller; and
- Heating system

(2) Basic Requirements

- Maximum draft : 3.5 meters
- Ship speed : 7 knots
- Deadweight : more than 3,000DWT
- High Maneuverability

(3) Design Procedure & Result

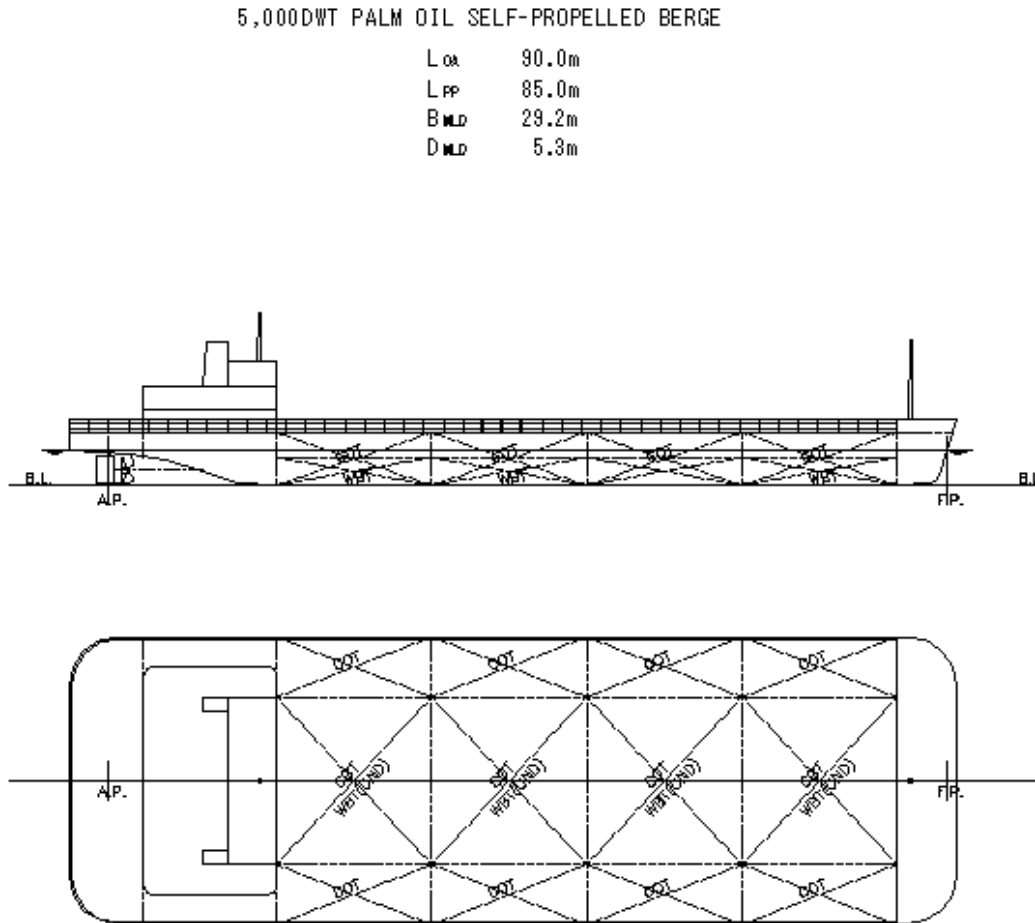
The Study adopts spoon bow form and straight buttock flow form where Midship Coefficient (C_m) is smaller than normal barge form. These forms reduce ship resistance and save fuel oil consumption with smaller main engines. Since spoon bow form is smooth and round similar to barge form, it will also contribute to reducing construction cost. Box type tank form is suitable for the small specific gravity of palm oil. Taking account of the sagging moment, two (2) longitudinal bulkheads are arranged for longitudinal strength.

In case of the current barge, water ballast is loaded into palm oil tanks for stability for the return trip after discharge of palm oil at destination port, and the insides of the palm oil tank is cleaned by fresh water before charging palm oil. However, the designed vessel has bottom and side water ballast tank for stability and CPO tank is segregated to preserve the quality of CPO.

As to the heating system for preserving CPO quality, the current barges do not have heating system installed and CPO quality is maintained during short navigation trips in a stable temperature. However, in order to keep its high quality, installation of heating system is recommended.

Finally, the designed CPO tanker is able to satisfy the above basic requirements with a cargo deadweight of 5,000 DWT at full load, design draft of 3.5 meters and normal service speed of 7 knots including a 15% sea margin.

Figure 3.1.4 General Arrangement of CPO Tanker



Source: Prepared by JICA Study Team

(4) Particulars of CPO Tanker

PARTICULARS OF CRUDE PALM OIL TANKER

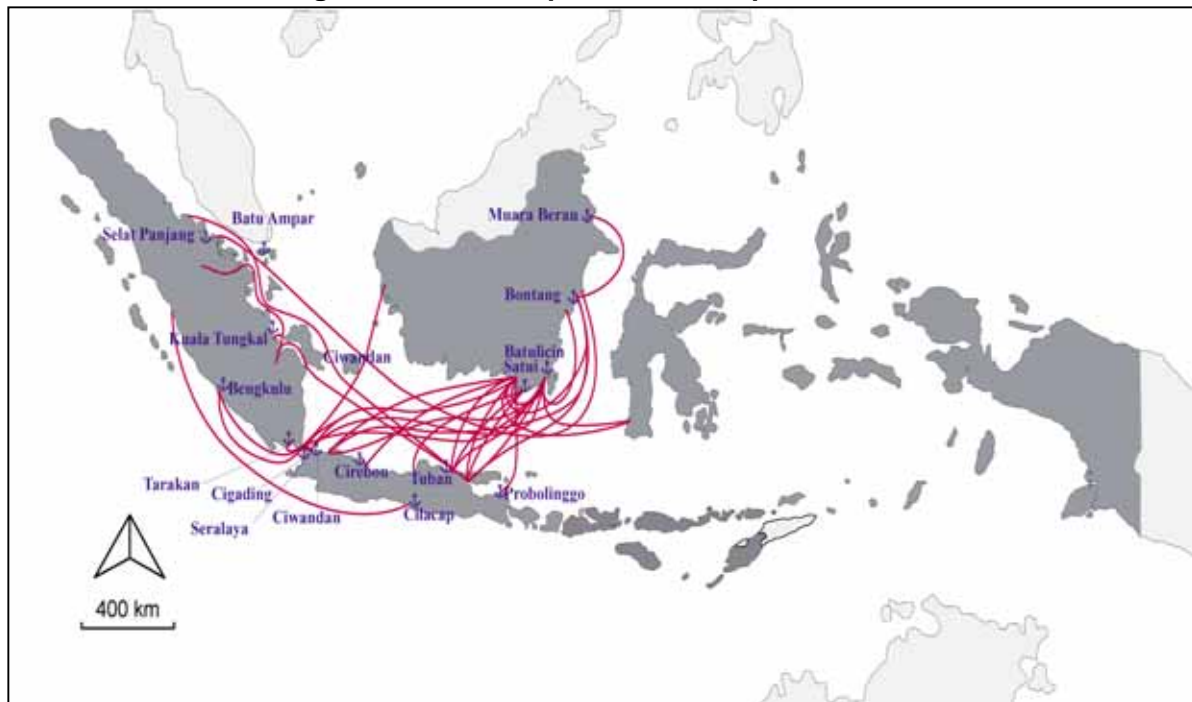
1. Dimensions		
Length (over all)		abt.90.00 m
Length (pp)		85.00 m
Breadth (mld)		29.20 m
Depth (mld)		5.30 m
Draught (mld)		3.50 m
2. Gross Tonnage (International)		abt.3,500 tons
3. Deadweight		
Total Deadweight		5,200 tons
Cargo Deadweight (Crude palm Oil)		5,000 tons
4. Complement		20 Persons
5. Speed		
(Normal Output of Main Engine with 15% sea margin)		abt.7 knots
6. Endurance		4,000 n.m.
7. Capacity		
Diesel Oil Tanks		abt. 6,500 m ³
Fuel Oil Tanks		abt. 250 m ³
Fresh Water Tanks		abt. 50 m ³
Water Ballast Tanks		abt.3,000 m ³
8. Main Engine etc.		
Twin Screw & Twin Rudder		
Medium-speed Diesel Engine		2 sets
Max. Output		760 kW
Nor. Output		646 kW
9. Main Generators		
Electric Output		120 kW (each)
10. Special Equipment		
De-Oxidizing System (CO ₂ Gas Supply System)		1 set
Palm Oil Heating System		
Boiler		1 set
Evaporating Capacity		3,600 kg/h
Heating Coils		1set

3.1.4 Coal Carrier

In 2002, domestic coal production reached about 100,000,000 MT, 90% of which were produced in Kalimantan. STRAMINDO-I predicted a rapid increase of coal volume for domestic transportation.

Coal mining sites are located in Kalimantan and Sumatra Islands. The transportation systems from these mining sites are mainly by barge towed by tugboat for short and medium distance and by bulk carrier for long distance. Due to intricate boundaries with the neighboring countries in Indonesia, tugboat and barge system is widely used not only in domestic markets but also to neighboring countries for export.

Figure 3.1.5 OD Map of Coal Transportation



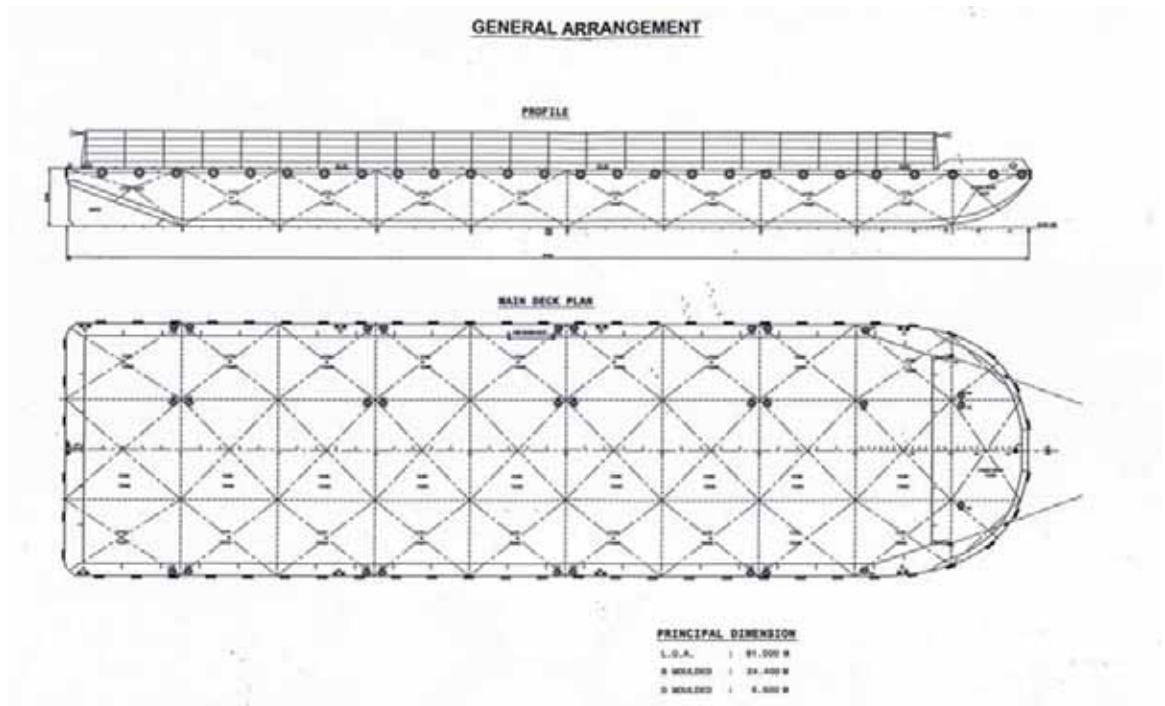
Source: STRAMINDO

To meet the rapid and increasing demand of coal transportation, building of barge and tugboats are urgently needed. Standard barge and tugboat transportation system using a package consisting of two (2) barges and one (1) tugboat has been established for coal transport. In terms of cost and efficiency, this system is deemed adequate at this moment. Through the operational experience of shipping companies, barge and tugboat design for coal has been more or less standardized and established.

Typical standard barge is the so called “300FT Unmanned Flat Top Barge” and its dimensions is as follows;

- Length (overall) : 91.5 m
- Breadth (mld) : 24.4 m
- Depth (mld) : 5.5 m
- Deadweight : 8,500DWT
- Tugboat : 2,000-2,600 PS

Figure 3.1.6 General Arrangement of Coal Carrying Barge



Source: IPERINDO

As reported by STRAMINDO I, operation by barge towed by a tugboat in the river and across the sea is very dangerous, especially in shallow and snaky rivers where grounded barges and collisions with other vessels are often reported.

For appropriate design of coal carrying vessel, further study for coal carrying systems such as self-propelled coal carrying barge system can be considered as an alternative for both river and sea operation.

Currently operating barges and tugboats are a mixture of Indonesian flagged and chartered from foreign countries operated by Indonesian shipping companies and/or foreign shipping companies respectively. It is necessary to consider a greater role of Indonesian flagged fleets and domestic shipping companies when coal carrier projects, i.e., additional and/or replacement of barges and tugs are assigned on Indonesian waters, are undertaken.

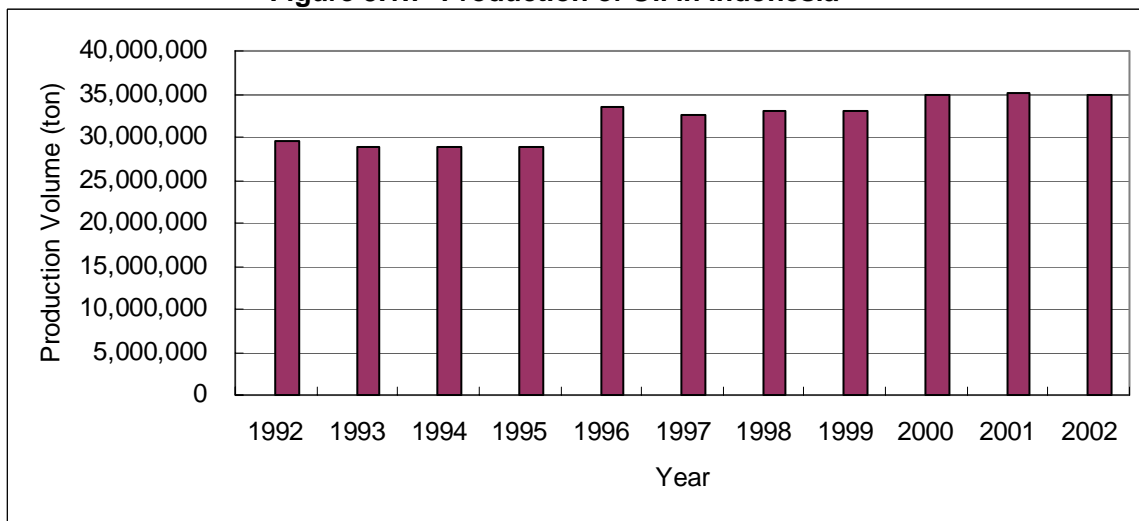
3.1.5 Petroleum Tankers

(1) Current Conditions

Oil production in Indonesia shows stable performance in recent years. A bulk of shipping traffic in Indonesia is also petroleum. The products are exported and domestically distributed. In the case of domestic shipping, petroleum traffic was 83 million tons, accounting for 55%.

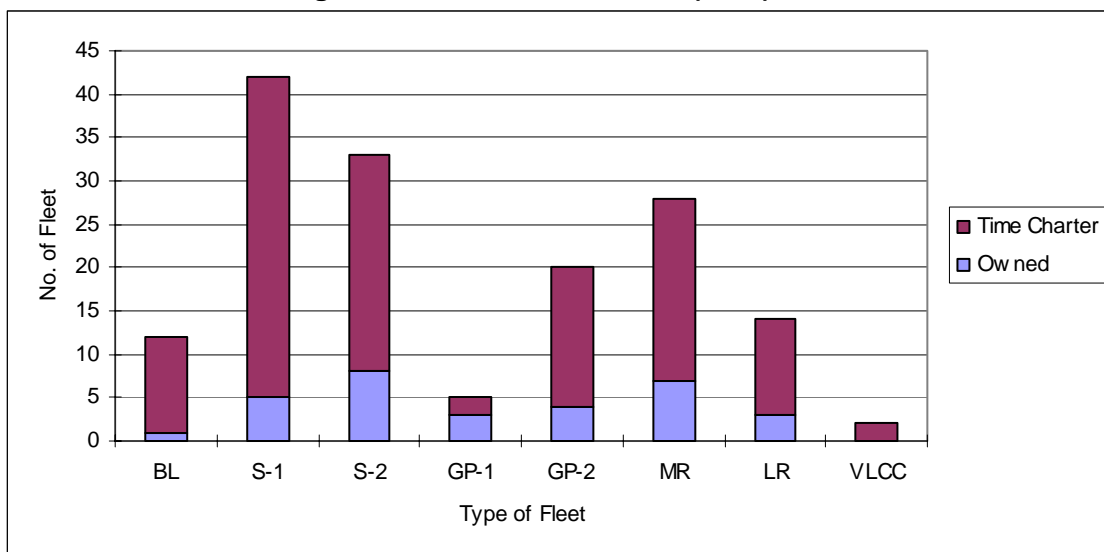
However, a large proportion of the vessels transporting petroleum are mainly time-chartered foreign flag vessels, even though it has been the policy of the Indonesian government to be self-sufficient in domestic shipping and has targeted to increase the share of Indonesian flagged vessels.

Figure 3.1.7 Production of Oil in Indonesia



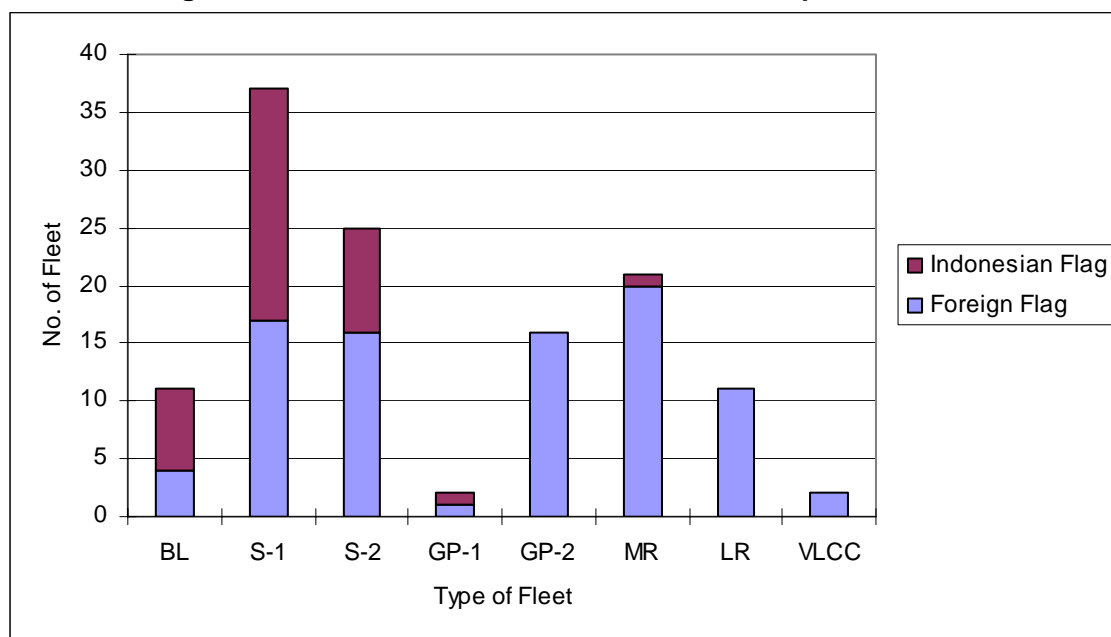
Source: Directorate General of Oil & Gas

Figure 3.1.8 Pertamina Fleets (2004)



Source: PERTAMINA

Figure 3.1.9 Pertamina Time Charter Fleets Composition



Source: PERTAMINA

There is an incessant demand for the transportation of oil; however, it has been difficult to procure suitable tankers in the second-hand market. Due to the condition of operation area and route, there are some limitations for shallow draft especially for tankers up to MR type. Special designs for small tankers operating in Indonesia are badly needed.

Considering this limitations, Pertamina Shipping Department established their own standard design suitable for their operation in Indonesia. In another sense, Pertamina's standard design is not the optimal design for tankers being operated in the international market. As indicated in the table below, since optimally designed tankers have deeper maximum fully loaded designed draft than Pertamina's standard design, tankers are forced to operate at drafts less than their designed full loaded draft due to the limited water depth. It means that these tankers are not able to carry their full load capacity.

Table 3.1.3 Comparison of the Salient Features

Type	Pertamina's Standard Ships			Available Ships in 2nd hand market
	DWT	Loa	Draft Max.	Draft range
Bulk Lighter (BL)	1500	65	3.0 - 4.5	3.0-5.0
Small-1 (S-I)	3500	90	5	5.0-6.0
Small-2 (S-II)	6500	105	6	6.0-7.0
General Purpose-1 (GP-I)	15000	165	7	7.0-10.0
General Purpose-2 (GP-II)	17500	165	7	
Medium Range (MR)	30,000-35,000	180	9.0-11.0	10.0-12.0
Large Range (LR)	85,000-100,000	240	12.5	12.0-14.0
Very Large Crude Oil Carrier (VLCC)	260,000-300,000	330	21.5	-

Source: PERTAMINA

(2) Tanker Fleet Development

Under increasingly tight competition, Pertamina made the effort by developing a business strategy in terms of its operation, financial and marketing strategies to increase its performance, enhance customer satisfaction and improve its competitiveness. Within the strategy, Pertamina Shipping Department puts the following targets up to the year 2006:

- Total number of own ships – 49 units
- Capacity of own ships – 1,500,000 tons
- Total new investment until year 2006 – US\$570,000,000.-
- Effective load factor – 90%
- Sales – Rp 2,435 Billion
- Operation Expense (Voyage Cost) – Rp 1,321 Billion
- Profit – Rp820 Billion
- Return on Investment – 14.4%
- Market segment of Fuel/Non-Fuel transportation – 70%

Although Pertamina Shipping Department intends to build new vessels according to the program, however in actuality, its schedule is delayed and will have to continue to rely on time chartered tankers.

One approach to address the vessel flag and vessel suitability issue is to procure the vessel domestically through local private investment and enter into time-charter arrangements with Pertamina.

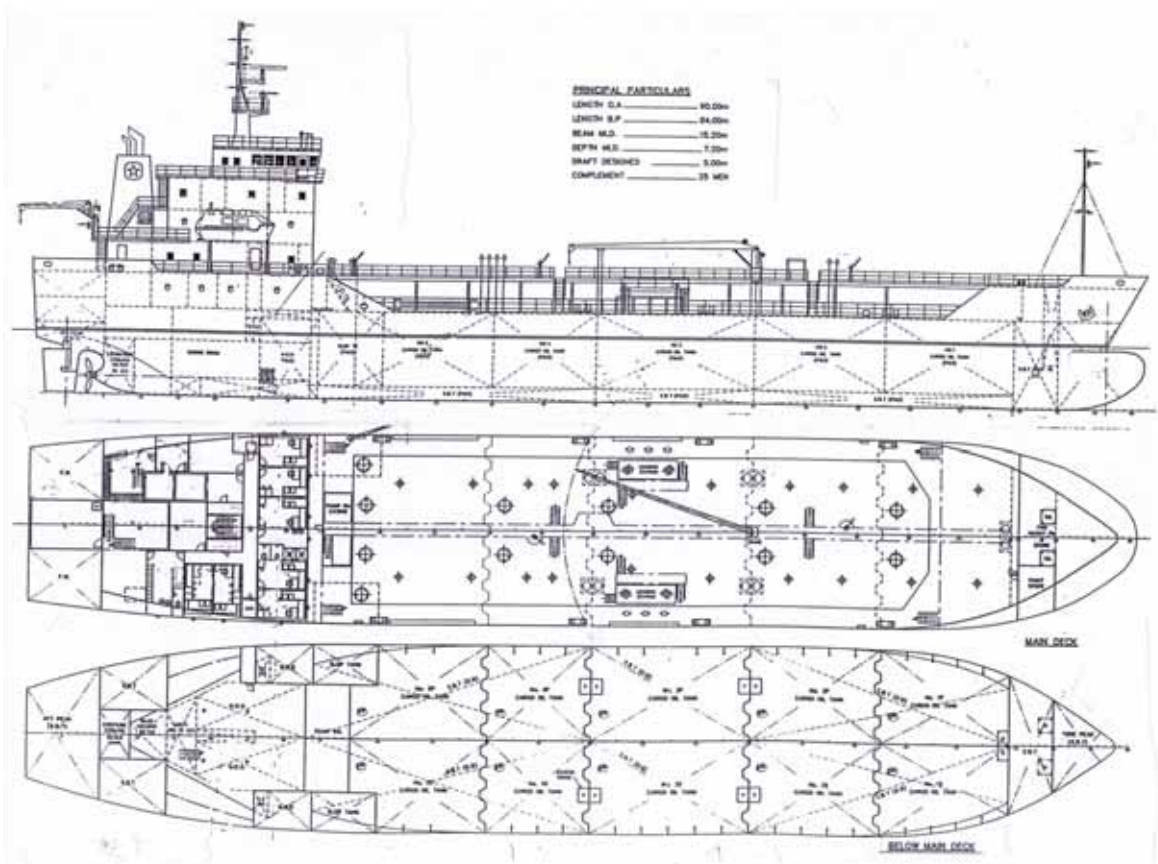
In case of time charter of tankers from the National Oil Company, Pertamina and other small and medium shipping companies, who do not have firm credit lines with banks, have difficulty in procuring new tankers as well as younger second-hand tankers due to stringent collateral requirements. In order to improve safety, efficiency and productivity of tanker operations as well as to increase national flagged tankers, public ship finance on the acquisition of newly built tankers and/or younger second-hand tankers for small and medium shipping companies should be considered.

(3) Typical 3,500DWT Oil Tanker design of Pertamina

The Study analyzes the typical 3,500DWT Tanker designed by Pertamina. Pertamina has started to build 3,500DWT Oil Tanker in 1982 at Indonesian shipyards and continues to build 3,500DWT Oil Tanker as a standard type of Pertamina including in the Long Term Time Charter (LTTC) program. The design is being improved from time to time in accordance with newly issued international rules and regulations and the latest developments in equipment and system.

Basic requirement for this vessel is 3,500DWT with a fully loaded maximum draft of 5.0 meters and with double bottom construction. One 3,500DWT Oil Tanker is being constructed at an Indonesian shipyard ordered by Pertamina for about US\$8million using its own finance.

Figure 3.1.10 General Arrangement of 3,500DWT Oil Tanker for Pertamina



Source: PERTAMINA

PRINCIPAL PARTICULARS OF 3,500DWT OIL TANKER

1. Dimensions	
Length (over all)	Max. 90.00 m
Length (pp)	84.50 m
Breadth (mld)	15.00 m
Depth (mld)	Max 7.40 m
Draught (mld)	Max 5.00 m
2. Classification Society	
International Classification Society	
3. Tank Capacity	
Cargo Tank Capacity (98% Full incl. Slop Tank)	Abt. 4,700 m ³
Slop Tank Capacity	Abt. 170 m ³
Fuel Oil Tank Capacity (MDO) (98% Full)	Abt. 170 m ³
Fresh Water Tank Capacity	Abt. 170 m ³
4. Deadweight at designed draft	3,500 tons
5. Complement	25 Persons

6.Speed	
Max. Speed at Sea Trial (MCO of Main Engine)	Abt. 11.7 knots
Service Speed (Normal Output of Main Engine with 15% sea margin)	Abt. 16.0 knots
7.Endurance	5,500 n.m
8.Main Engine	
Medium or Low-speed Diesel Engine	1 set
Max. Output	2,200 PS
Nor. Output	1,870 PS
9.Rules & Regulations	
-Rule & Regulation of Classification Society	
-Government Rules & Regulations	
-International Load Line Convention,1966 & Amendment,1983	
-SOLAS,1974 and its protocol and amendment	
-International Telecommunication Convention, 1973 and Radio Regulation, 1974 (Edition of 1976) and those Amendment of 1979	
-Convention on the International Regulations for Preventing Collision at sea 1972, including IMO Resolution A-464	
-International Convention for Tonnage measurement of Ship, 1969 with Amendment of IMO A493 and A496	
-International Convention for the Prevention of Pollution from the ships, 1973, including 1978 Protocol and the latest IMO's amendment Regulation F, relating there to with the following Annexes including 1992 amendment Annex I, IV, V (consolidated edition 2001)	
-IMO MEPC 52(32)	
-IMO Regulation A272 (VII)"Recommendations on safe access to and working in large tanks	
-O.C.I.M.F standard for manifold and single point mooring, Ship to Ship transfer	
-ILO Convention concerning Crew Accommodation onboard Ship No.92	
-Noise levels on Board Ship, IMO Resolution A468(XII)	

3.1.6 Off-shore Vessels

In relation to the oil industry, off-shore vessels such as supply boats are assuming an important role in support of the oil industry and are consecutively in-demand in Indonesia. However, almost all large-sized supply boats operating in Indonesia are foreign flagged. In order to support the national oil industry, domestic off-shore shipping companies need to be developed to plug economic leakages. There are many types of supply boats according to their roles and purposes in support of oil industry; thus, the design of supply boats is very sophisticated. Indonesian shipyards have the opportunity to build these high value added vessels if they are capable of building them.

Photo 3.1.1 Anchor Handling Tug Supply Boat



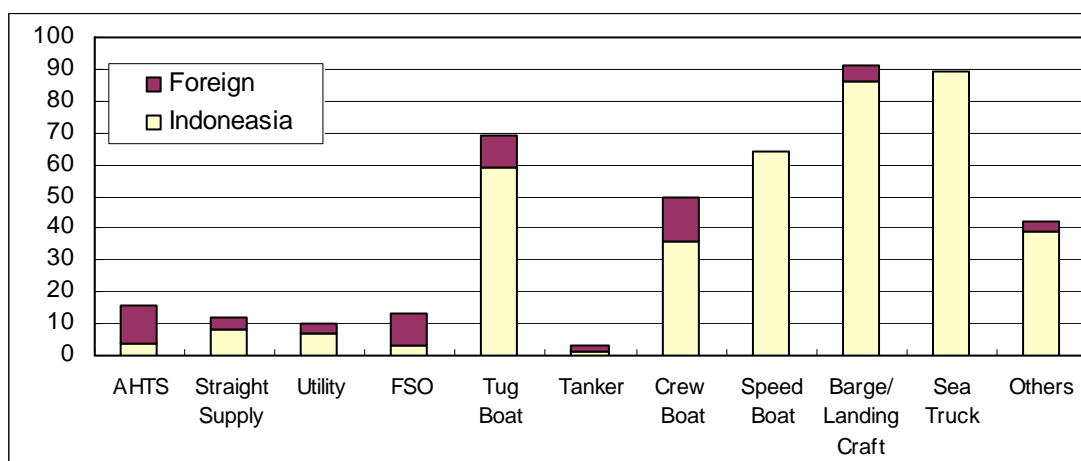
Source: Tidewater Publicity

(1) Current off-shore related vessels in Indonesia

According to BP MIGAS data, there are 498 vessels operating in Indonesian water in support of the oil and gas industry. Among the 498 vessels, there are sixteen (16) anchor handling tug supply boats (AHTS), twelve (12) straight supply boats and ten (10) utility boats. Of these thirty eight (38) vessels, half of them are foreign flagged vessels.

These vessels are operated under time-charter contract and its chartering period is as short as two (2) months to 2 years, and its charter rate is dependent on the international market, mainly in Singapore.

Figure 3.1.11 No. of Vessels Operating for Oil and Gas Industry in Indonesia



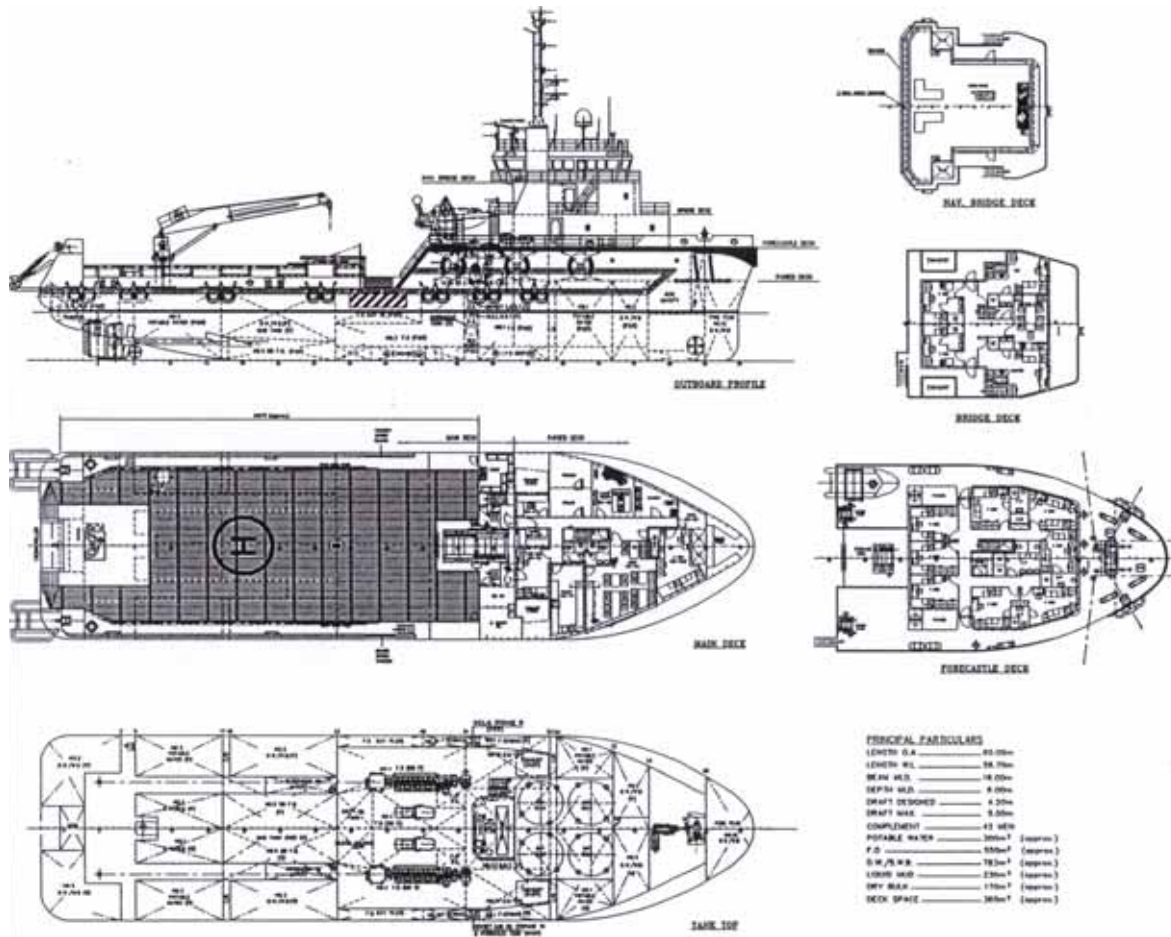
	AHTS	Straight Supply	Utility	FSO	Tug Boat	Tanker	Crew Boat	Speed Boat	Barge/Landing Craft	Sea Truck	Others	Total
Indonesia	4	8	7	3	59	1	36	64	86	89	39	396
Foreign	12	4	3	10	10	2	14	0	5	0	3	63

Source: BP MIGAS, 2004

(2) Anchor handling tug supply boat

Anchor handling tug supply boat (AHTS) ranges from 4,000PS to 8,000PS and a length of 50-70 meters. The design of anchor handling tug supply boat is determined based on its purpose, operating system and operating field. These working vessels are custom-made vessels. Thus, it is very difficult to standardize the design of this type of vessel.

Figure 3.1.12 General Arrangement of Typical Anchor Handling Tug Supply Boat



Source: INSA

Principal Particulars of Anchor Handling Tug Supply Boat

1. Dimensions		
Length (over all)		60.00 m
Length (pp)		58.70 m
Breadth (mld)		16.00 m
Depth (mld)		6.00 m
Draft (mld)		5.00 m
2. Gross Tonnage (International)		abt. 1,700 tons
3. Classification Society	International Classification Society	
4. Tank Capacity		
Fuel Oil Tank		550 m ³
Fresh Water Tank		300 m ³
Drill Water Tank		780 m ³
Mud Tank		230 m ³
Base Oil Tank		200 m ³
Bulk Cement		6,000 cubic feet
5. Deadweight		Approx. 1,800 tons
6. Speed		
Maximum Cruising Speed		abt. 14 knots
Economical Cruising Speed		abt. 12 knots
Bollard Pull		70 ton
7. Main Engine		
Medium Speed Diesel Engine		2 sets
Max. Output		3000PS x 2
8. Main Generators		
Electric Output		350kW x 2
		99kW x 1
		72kW x 1
Shaft Generator		450kW x 2 sets
9. Equipment		
-Anchor handling/Tow Winch		
-Shark Jaws		
-Guide Pin		
-Stern Roller		
-Crane		
-Tugger Winch		
-Dynamic Positioning System		
-Fire Fighting System (FiFi-I Class)		
-Bow Thruster		
-Stern Thruster		

3.2 Vessel Reconstruction and Improvement

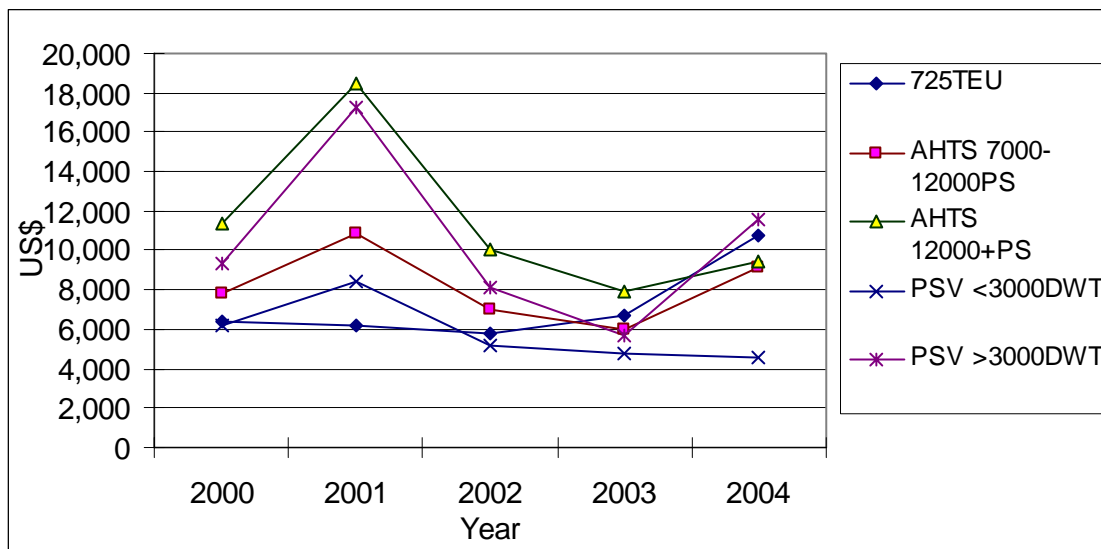
3.2.1 Reconstruction of Existing Idle Vessels

National shipping companies and shipyards have some experiences in converting or reconstructing existing vessels to different types of vessels. Fluctuation in the shipping market causes uncertainty in the prices for new shipbuilding, second hand vessels and chartering rate. To meet the market demand of the vessels, reconstruction of existing vessels is one of the effective method.

Fig.3.2.1 shows the tendency of charter rate of 725TEU container vessel, anchor handling tug supply and platform supply vessel in the international market.

Crude oil prices started to rise over US\$20 in the end of 2000 and off-shore oil exploration accelerated in the world. On the other hand, off-shore vessels such as anchor handling tug and platform supply vessel were in need of replacement at that time. The shortage in number of required off-shore vessel such as large sized multi-functional vessels for the international off-shore market affected the chartering rate.

Figure 3.2.1 Charter Rate (2000-2004)



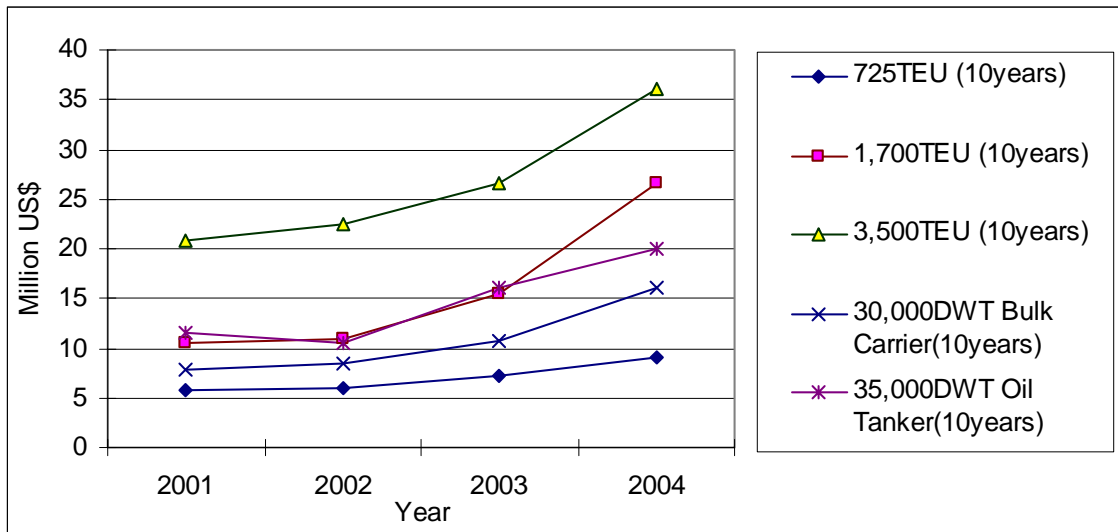
Source: Clarkson

With the steady economic development in Asian countries as well as Europe and United States, the freight volume is increasing and the special procurement demand in China pushes the demand on newly constructed vessels. In parallel, since single hull tanker was scheduled to be phased out by IMO, deployment of newly built vessels are urgently demanded to face the increasing demand of sea transport. As a result, a large number of tankers and bulk carriers has been ordered and constructed with high-level construction price due to large demand and high material price of steel.

Furthermore, large demand on new construction brings about the full booking of shipyards and building slips. This is because ship owners who have the willingness to build new vessels are undecided to order for a new construction while continuing the

operation of the old vessels. Therefore, the current situation of the second-hand vessels' market becomes the seller's market. The shortage of number of vessels against the demand in the international market, and the second-hand vessel price as well as chartering rate has also been increasing accordingly (refer to Fig.3.2.2). Moreover, the Chinese ship owner can purchase the second hand vessels from the market at a high price, but other ship owners cannot afford.

Figure 3.2.2 Second Hand Ship Price



Source: Clarkson

3.2.2 Upgrade of Young Second Hand Vessels

It is envisaged that procurement of younger second-hand vessels in the global market will be an attractive fleet development method among Indonesian ship owners. Their attractiveness is primarily attributed to reasonable costs. However, it is inevitable that young second-hand vessels be adjusted to suit international standards of safety and environments and modified for the usage of Indonesian seafarers such as placing Indonesian language panels on onboard equipments at local shipyards. To enjoy the advantage of second-hand vessels, translating bahasa manuals or educating seafarers with an international language are essential.

The government should supervise these adjustments and modifications at the shipyard, particularly in the installation of more decks, cabins and hull space since these modifications may worsen vessel seaworthiness.

3.3 Shipbuilding Industry

(1) Industry Development Policy

Taking into account the archipelagic geography of the country, the Indonesian Government has prioritized the development of shipbuilding industry and has created a favorable business climate through a series of deregulations. In order to develop the shipbuilding industry, the following measures are taken:

- Utilization program: National shipyards are promoted through the projects of the Government and State Owned Companies
- Sub-contracting development program: National shipbuilding industry has promoted local contents.
- Ship design center program: Improvement of designing and other engineering capability
- Develop “Indonesia Incorporated”: To promote joint-venture projects among shipbuilders, with focus on maintaining quality, cost efficiency, and on-time delivery of services.
- Domestic product promotion: To advocate local governments as the era of regional autonomy in regard to sea transportation service, sea waters control, inter-islands transportation, and others.
- Investment promotion program: To develop strategic partnership between Indonesian and foreign investors.

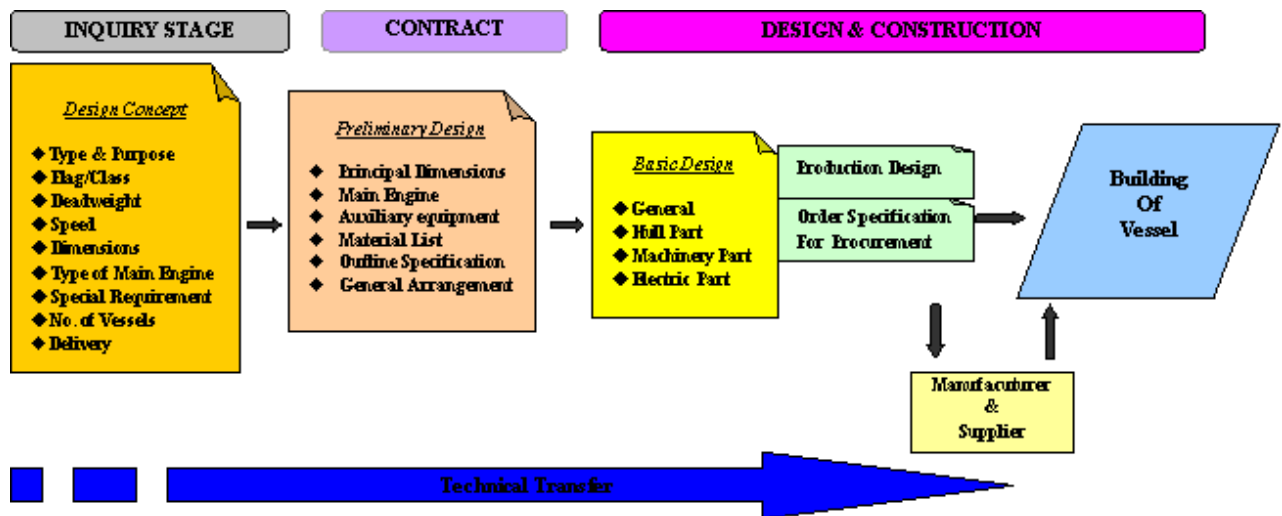
Indonesian shipbuilders have been rather focused on small and medium sized domestic vessels. Their capabilities are not competitive in the international market in terms of quality and delivery period. Related industries for shipbuilding such as manufacturing of main components and equipment have not been fully developed and its local content ratio is low. Therefore, shipbuilding industry mainly relies on imported materials and equipment. To improve shipping in Indonesia, development of shipbuilding industry is urgently needed in accordance with national shipbuilding industry development policies.

(2) Technology Transfer

Indonesian shipbuilders have a lot of experience in constructing newly designed vessels in cooperation with advanced foreign shipyards on a project basis. However, technology transfer was not the primary purpose. It is absolutely essential to implement a consecutive and long-term technology transfer program to improve the capability of Indonesian shipbuilders.

For building appropriate and newly designed vessels, the most important factor is to confirm design concept and basic design in advance. It will become a decisive influence to the performance of vessels to be built. The ship design center program proposed in the current shipbuilding industry development policy should be implemented along with adequate technology transfer programs.

Figure 3.3.1 Flow of Ship Design to Construction



Source: Prepared by JICA Study Team

(3) Package Deal

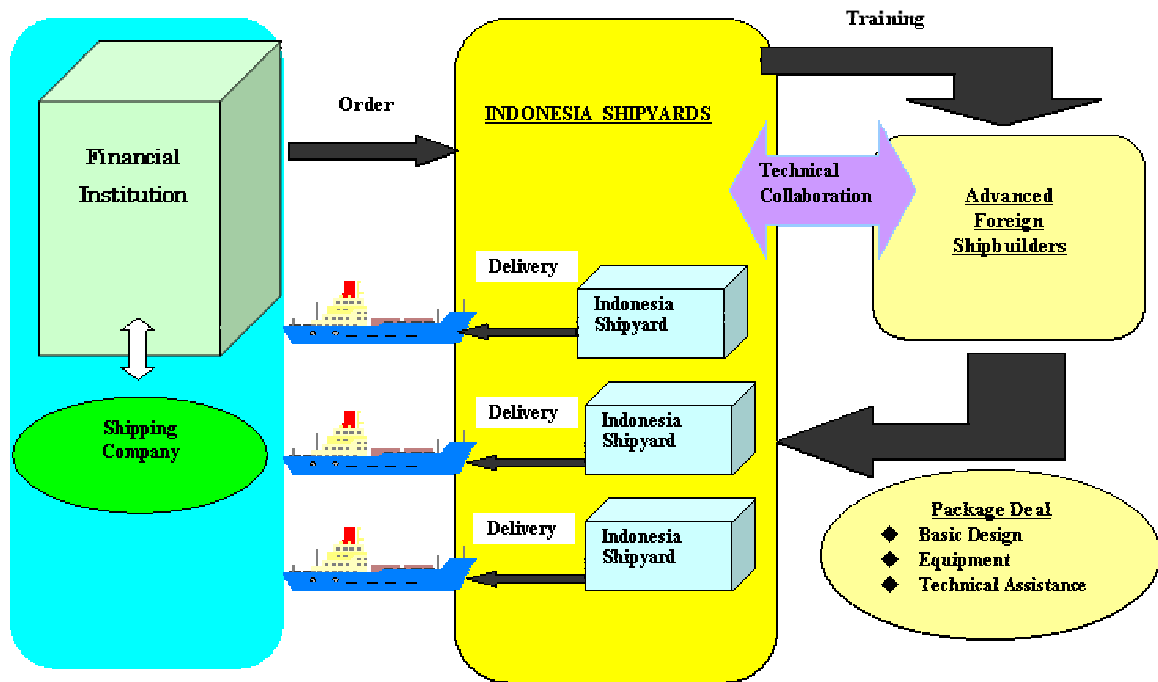
One of the important factors in keeping with construction schedules and ultimately delivery schedule is the procurement management of materials, components and equipment for shipbuilding. On-time delivery is highly appreciated.

Under the present situation, Indonesian shipbuilders, in many cases, do not have a choice but use imported raw materials, components and equipment for new shipbuilding. In addition, it is quite difficult to continuously get the latest technical and commercial information from manufacturers due to a small demand for new construction in Indonesia. A package deal method under a cooperative construction scheme is recommended for the following reasons.

- To enable exact order and delivery based on accurate design and engineering by advanced foreign shipbuilder;
- To take easy countermeasures for addition and change order using advanced foreign shipbuilder's business relationship and network;
- To reduce cash flow projection and onerous task in terms of procurement contract; and
- To reduce costs for transportation and insurance by the scale of economy.

Particularly, the package deal method can benefit domestic shipbuilders when the contract includes technical assistance, basic drawings, and raw materials list for smooth procurement.

Figure 3.3.2 Package Deal Model



Source: Prepared by JICA Study Team

(4) Standardized Shipbuilding Works

A serial construction of sister ships with standardized ship design would benefit both shipping companies and shipbuilders in terms of (1) cost reduction by serial construction, (2) standardization of operation system, (3) standardization of maintenance, (4) common utilization of component and spare parts and (5) improvement of shipbuilder's capability.

In order to prepare standardized ship design, partnership between shipping companies and shipbuilders is indispensable. Shipbuilders would be able to develop the best suitable design in accordance with the requirements of the shipping company in terms of technical and commercial performance. Once completion of a prototype vessel and performance examination is conducted, continuing modification works for further improvement can be made to build a next one, leading to the development of a competitive fleet.

3.4 Ship-management Company

3.4.1 Background

Despite its importance for the people and national economy, the shipping industry and related maritime industry, like shipbuilding have remained underdeveloped. In fact, many very old ships are being operated and insufficient ship maintenance has been provided, which have led to the growing number of maritime accidents and the increasing threats to marine environments. Current situation of domestic shipping companies and shipyards are further elaborated below:

Shipping companies: *Shipping companies are forced to contend with small-scale managements, old aged vessels, poor maintenance and substandard vessels.*

Indonesian inter-island shipping is mainly composed of small scale shipping companies. Among 974 member shipping companies of INSA, 830 (85%) operate 1 to 5 vessels. Small scale shipping companies tend to skimp on ship maintenance and cannot afford to modernize ship-management system. As a result, fleet maintenance is poor.

Indonesian inter-island shipping is also composed of old aged vessels. When the Study looked into the age distribution of Indonesian Fleet by BKI 2003, the total number of vessels is 7,160, and average age is 20 years, which means many vessels exceed 21years old.

STRAMINDO-I conducted an on-board survey of the 42 randomly chosen vessels. Most of the surveyed vessels showed poor maintenance, 50% had no maintenance planning and 80% had no test and drill experiences.

JBIC-TSL can be utilized to renew and refurbish substandard vessels. Careful renewing works and employment of ship-management system after restoration could lead to better fleets.

Shipyards: *Shipyards are forced to contend with long docking time and lack of up-to date facilities and equipments.*

Shipyards are suffering from two kinds of inefficiencies on repair works. First are the inefficiencies of dock work management. Second are the inefficiencies due to lack of up-to date facilities and equipments.

The result of the year 2003 total repair records of ten (10) major shipyards shows that the typical docking time is 20 to 45 days, which are abnormally high when compared to world standards that range from only 10 days to 2 weeks.

The inefficiencies due to bad dock work management cannot be improved by employment of up-to date facilities and equipments only. There is a need of a comprehensive improvement in process management. Once the process management is improved, the coordination with ship-management system in shipping companies will inevitably lead to more efficient repair works. Thus, shipyards require good ship-management system for good repair works.

Having considered these problems and constraints, improvement of shipyard facility and establishment of ship-management company as well as vessel procurement, refurbishment and repair are vital to overall and sustainable development of the domestic shipping industry.

3.4.2 Setting Up of a Qualified Ship-management Company

(1) Necessity

There exist a necessity to introduce well-equipped and experienced ship-management company to meet the following requirements:

- (i) Necessity to employ effective ship-management systems by small scale shipping companies as those SMEs are in general, financially weak and have poor

management capabilities.

A specialized and capable ship-management system can take care of the needs of many small-scale shipping companies and solve their difficulties.

(ii) Necessity to introduce efficient ships (New buildings, repair and refurbishing)

Technical capabilities of the ship-management company, in consultation with demands from shipping companies, will reduce the depreciation of ships and enhance durability, and eventually reduce capital cost of ship owners.

(iii) Necessity to pursue scale merits to reduce insurance cost and other maintenance costs, and integrated control by superintendents, and coordination with shipyards

A well-equipped ship-management company can lower insurance premium rate and streamline claim settlements. The integrated maintenance control by dedicated superintendents will promote the coordination with shipyard works, and shipyards can enjoy stable dock works.

(iv) Necessity for effective investments and avoidance of investments risks

An experienced ship-management company can assist shipping companies' decision-making on investment through technical assistance and be able to contribute in mitigating investments risks.

For this purpose, the prospective JBIC TSL could be utilized effectively as a policy-based finance by increasing investments in the industry and contribute in solving problems and constraints facing the industry.

(2) Establishment

Major beneficiaries of the ship-management company are assumed to be as follows:

(i) Shipping companies and shipyards

Shipping companies especially small scale ones, can enjoy high standard of ship-management, lower premium insurance rate and easy claim settlements.

Shipyards can enjoy higher level of ship repair and new shipbuilding, which will lead to stable management.

(ii) Banks, lease companies, and insurance companies

Banks and lease companies can decrease investment risks, procurement risks and higher level of asset monitoring.

All of these beneficiaries should be encouraged to participate as stakeholders in establishing a ship-management company.

(3) Functions and Type of Ownership

People have different understanding about ship-management and ship-management company. To the extreme, some people assume a big scale ship-management company who control the total asset of one whole shipping company including:

- Human resource management;
- Technical management;

- Procurement management; and
- Accounting management.

On the other hand, others assume a small-scale ship-management company which takes only maintenance works of contracted ships.

For the sake of clarity, the function of ship-management company can be divided into three categories:

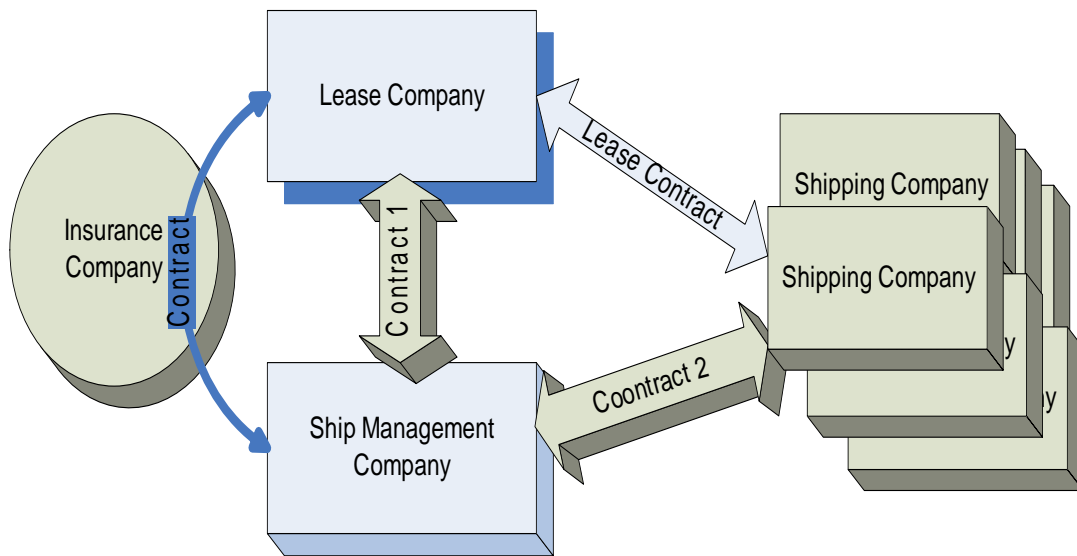
- Maintenance, including docking maintenance in shipyards and on board maintenance by ship's crew;
- Manning; and
- Insurance.

As a minimum requirement, the ship-management company should be capable of good maintenance of vessels, and in this regard, the company should possess a high level of ship-management capabilities based on ISM-Code and ISO9000 and professional skills to maintain ships in order at all times. Well-organized ship-management manual and well experienced superintendents' capabilities will play a vital role. The superintendents and their team will take care of docking maintenance and onboard maintenance based on their ship-management manual. They will investigate onboard maintenance by interaction with the ships' crew, and prepare precise dock orders for docking maintenance. Both onboard maintenance and docking maintenance should be based on their ship-management manual.

They will also take care of insurance (Hull-Machinery insurance and PI insurance) including insurance claims. It should be to the concurrence of both shipping company and ship-management company whether the crews are to be employed by shipping company or by ship-management company. If the shipping company requests that the crews of the ship are to be controlled by the shipping company, and the ship-management company agrees, the manning function should be taken over by the shipping company. The ship-management company may reject the request because of the low ship maintenance capabilities of crew.

In accordance with the following two types of finance, ship-management companies contracts with the financier and shipping company accordingly. For Type 1, the lease company owns the ships; and for Type 2, the shipping companies own the ship through finances from banks.

Figure 3.4.1 Type1: Lease - Financed Ship

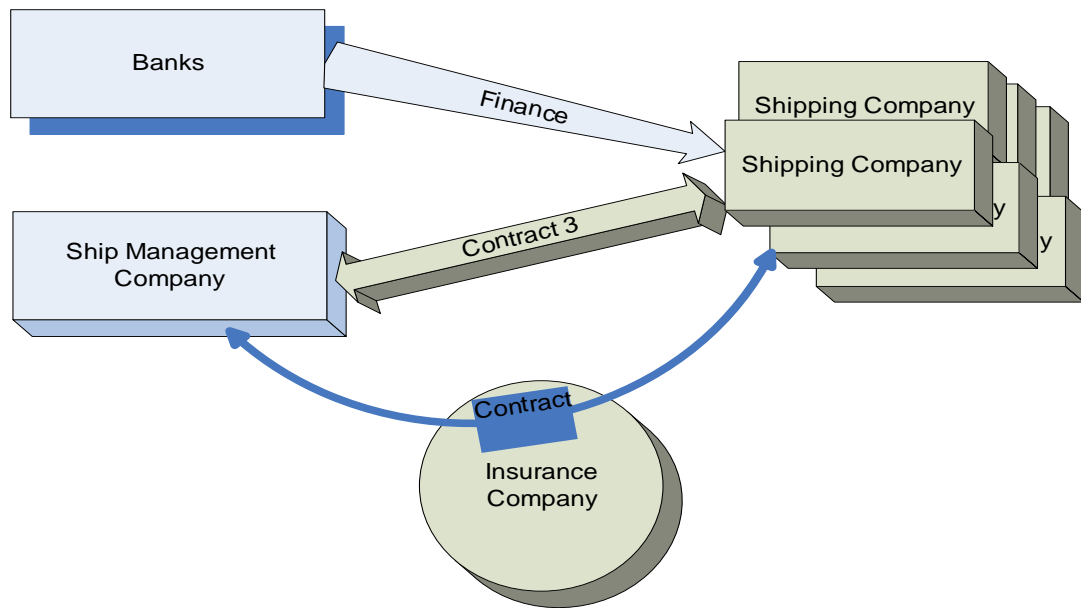


Source: Prepared by JICA Study Team

For Type 1:

- (1) The lease company (owner of the ship) will request the shipping companies (the lessee), especially small and medium-sized companies that do not have sufficient ship maintenance capability, to utilize the ship-management company to preserve the quality of the ships leased by the lease company. (In the lease contract, the lessee bears the responsibility of proper maintenance.) At the same time, the lease company as the owner of the ships will have a contract with the ship-management company to take care of insurance (Contract 1). If the shipping company (the lessee) is big-sized and/or acknowledged by the lease company to have their own proper maintenance capability, the shipping company may choose the ship-management company.
- (2) Shipping companies will have a contract with the ship-management company on an individual ship basis (Contract 2) for proper maintenance. The contents of the contract will be different for each individual shipping company depending on their intentions; especially, whether to include manning or not. If the shipping company requests that the crew of the ship be controlled by the shipping company, and the ship-management company agrees, the manning function should be taken over by the shipping company.
- (3) Regarding insurance on the ship, the ship-management company is expected to work as the agent for the lease company for both insurance contracting process and insurance claim settlement process.

Figure 3.4.2 Type 2: Bank – Financed Ship



Source: Prepared by JICA Study Team

For Type 2:

- (1) The banks as creditor will request shipping companies, especially small and medium-sized companies that do not have sufficient ship maintenance capability, to utilize the ship-management company to preserve the quality of ships financed by the banks. The banks will require shipping companies to have proper insurance as their mortgage requirements. If the shipping company (the borrower) is big-sized and/or acknowledged by the bank to have their own proper maintenance capability, the shipping company may choose the ship-management company.
- (2) Shipping companies will have a contract with the ship-management company on an individual ship basis (Contract 3) for proper maintenance. The contents of the contract will be different for each individual shipping company depending on their intentions, especially, whether to include manning or not. If a shipping company requests that the crew of the ship be controlled by the shipping company, and the ship-management company agrees, the manning function should be taken over by the shipping company.
- (3) Regarding insurance on the ship, the ship-management company is expected to work as the agent for the shipping companies for both insurance contracting process and insurance claim settlement process.

CHAPTER 4 ECONOMIC AND FINANCIAL EVALUATION

4.1 Implementation Schedule and Methodology

The public ship finance stated in Chapter 2 is regarded in this chapter as one project and will be evaluated from both economic and financial viewpoints. However, the project has not been defined clearly enough as yet to be evaluated. At the present stage, it will be somewhat misleading and even risky to discuss the financial scheme regarding the loan amount and terms in detail when neither JBIC loan nor the Indonesian Government finance has committed to the project.

It should be noted that the conditions and assumptions on the public ship finance presented in this section is purely for analytical purposes and not representative of any official commitment. As they are set in a plausible and expectable manner, however, they will serve as a good reference for implementation.

4.1.1 Scope and Approach

(1) Project Structure

As stated in Chapter 2, the main source of the public ship finance would be from ODA loan, presumably a JBIC loan, which would be lent to an Apex Financial Institution (AFI) in foreign currency through MOF/GOI. The AFI would lend the money together with its own fund, as sub-loans in Rupiah, to end borrowers (ship-leasing agencies, shipping companies, shipyards, port-service providers and ship management companies), directly to ship-leasing agencies and directly or indirectly to others via Participating Financial Institutions (PFIs). In this scheme, the foreign exchange risk will be borne by AFI and other business risks will be taken by either AFI or PFIs, the financial institution which makes sub-loan appraisal and selection.

(2) Loan Amount

According to the STRAMINDO masterplan, necessary investment for the increase and renewal of the Indonesian fleet will amount up to Rp. 54,600 billion during 2004 to 2014 and Rp. 75,400 billion during 2015 to 2024, as shown in Table 4.1.1.

Table 4.1.1 Vessel Fleet to be Procured

(Unit: Billion Rupiah)

Period	2004 - 2014	2015 - 2024	Total
Cargo Vessel	44,300	69,300	113,600
Passenger Vessel	10,300	6,100	16,400
Total	54,600	75,400	130,000

Source: STRAMINDO Masterplan, 2004, JICA Study Team

On the other hand, JBIC TSL scheme will mobilize fund within five years after L/A. Only the mobilized fund can be revolved during the project period, say, 30 years. If the agreement of JBIC TSL for Indonesia domestic shipping amounts to 30 billion yen and the all fund is mobilized with adequate counterpart domestic fund, the public ship finance project will be realized with an approximate Rp 3,222 billion equivalent shipping and

related sub-loans and leasing projects for a five-year period in the late 2000s.¹ The public ship finance project will be able to meet approximately 12% of the fleet investment demand during the same period.² Since the lending share of 12% is substantial but not dominant compared to the overall investment demand, it seems reasonable as the first JBIC TSL for domestic shipping.

It may be difficult for an end borrower to be fully financed for a ship purchase by the public ship financing scheme, thus, the end borrower has to prepare its own fund or look for another local loan. By referring to a similar two-step loan in the Philippines, the maximum lending amount by the public ship finance is assumed at 80% of the ship price. Thus, total ship finance will be 1.3 times of ODA loan in Rupiah by including local finance and ignoring own funds. Analysis of two cases of the ship finance packages of 37.6 billion yen (Rp. 3,222 billion) and 18.5 billion yen (Rp 1,585 billion), is shown in Table 4.1.2.

The former (Case 1) intends to meet about 12% of the overall fleet development plan within the initial five years with a counterpart domestic fund. The latter (Case 2) intends to form a more practical case, taking into account the limited experience of handling JBIC two-step-loan and applications of many other ODA projects, limited sources in Indonesia and aims to avoid excessive risks and intends to invest on reliable projects.

Table 4.1.2 Total Finance by Public and Local Ship Finance

(Billion Yen) Investment Sector	Reference	Case 1 (Foreign/Local)	Case 2 Foreign/ Local)
(a) Remodeling and rehabilitation of idle fleet	Av. 5 years repayment, 4 times revolving, Remodeling cost at 50,000Yen/DWT	10.0 / 2.5	6.0 / 1.5
(b) Introduction of best fitted vessels to inter-island liner shipping	Av. 15 years repayment, 2 times revolving, Construction cost at 200,000Yen/DWT By package deal with foreign builder	13.0 / 3.3	6.0 / 1.5
(c) Fostering the tertiary shipping to meet the social needs	Av. 15 years repayment, 2 times revolving, Construction cost at 150,000Yen/DWT	4.2 / 1.8	1.6 / 0.5
Consulting Fee	7% of foreign component in (a) + (b) + (c)	1.9 / 0	1.0 / 0
Contingency	3% of foreign component in (a)~(d)	0.9 / 0	0.4 / 0
Total Project Cost		30.0 / 7.6	15.0 / 3.5

Source: JICA Study Team

Note: US\$1.00 is equivalent to JY105, Rp. 9,000 as of October, 2004.

Foreign Fund – JBIC TSL

Local Fund – End-borrower's own fund or another local loan

The repayment period of the ODA loan is 30 years while that of a loan to end users is shorter at 5 to 7 years and 20 years at the longest. Generally speaking, acquisition of second-hand ship requires a shorter financing term and that of newly constructed ship

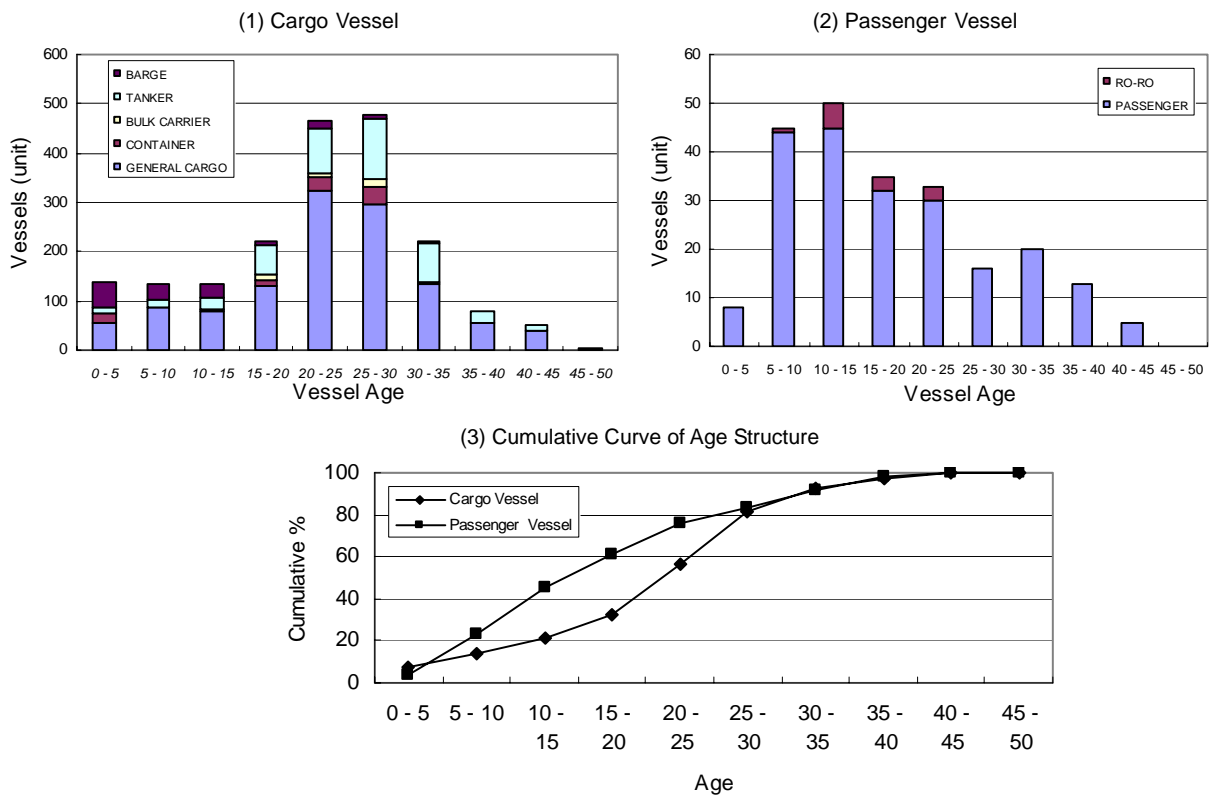
¹ Refer to Table 2.2.2, page 2-10 in the report

² Possible lending amount by the Public Ship Finance for the first 5 years (Rp 3,222 bil.) / Overall investment demand in domestic fleet for the same 5 years (Rp 54,600 bil./2) = 11.8 (%)

requires a longer term. Taking into account the Indonesian shipowners' preference towards economic second-hand ships, the fund of the ship finance can be expected to revolve at least three times during the ODA repayment period. Three times of the said amount is Rp. 9.6 trillion and Rp. 4.7 trillion, respectively, which corresponds to over 20% and 10% of the total necessary investment in 2004 to 2014, shown in Table 4.1.1.

Figure 4.1.1 shows the age distribution of current Indonesian fleet, about 20% of both cargo vessels and passenger vessels are older than 30 years. Accordingly, the said fund for ship finance implies a possibility to renew all of such old vessels.

Figure 4.1.1 Age Structure of Indonesian Fleet in 2002



Source: JICA Study Team

4.1.2 Fund Raising and Implementation Schedule

Table 4.1.3 illustrates an expected schedule for starting the public ship finance by applying a JBIC loan. Every possible ODA project to be implemented through Japanese economic cooperation is discussed and has to be agreed upon at the Japan – Indonesia Annual Meeting usually held in April.

After the meeting, JBIC will start fact finding studies for the long-listed projects, through the Special Assistance for Project Formation (SAPROF). During this study, Indonesian Government should prepare the implementation scheme and organization. Depending on the result, both countries will meet again for the selection of the short-listed projects. And then, the Indonesian Government will make a final selection of the JBIC loan projects of the year and both countries sign the loan agreement (L/A).

After signing the L/A, the Indonesian Government will start to select the project consultant and it will usually take 10 to 12 months. Thus, it will take about two to three years since entry to the Bluebook before the project on ship finance could commence.

Considering the urgent need of ship finance in Indonesia, three years may be too long. In order to shorten this, every effort by both sides (JBIC and the Indonesian Government) will be needed. The period of SAPROF or preparation for implementation scheme could be possibly shortened by using the information from the STRAMINDO Report. Also, selection of the project consultant and preparation of the necessary bidding documents can be done in a shorter period.

Table 4.1.3 Implementation Schedule of Two Step Loan

(1) Most Likely Case

Work Item	2005												2006												2007												2008												
	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12				
1 Preparation of Long List (Blue Book)	▲																																																
2 G-G Annual Meeting on Long List	▲																																																
3 Fact Findings by JBIC																																																	
4 Preparation of Implementation Scheme																																																	
5 G-G Meeting for short Listing																																																	
6 Appraisal and commitment by JBIC																																																	
7 Concluding by Indonesian Government																																																	
8 Loan Agreement (L/A)																																																	
9 Effectuation of L/A																																																	
10 Selection of Project Consultant																																																	
11 Commencement of Ship Finance																																																	
12 Technical Cooperation																																																	

(2) Shortest Case

Work Item	2005												2006												2007																								
	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12																
1 Preparation of Long List (Blue Book)	▲																																																
2 G-G Annual Meeting on Long List	▲																																																
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9 Selection of Project Consultant																																																	
10 Commencement of Ship Finance																																																	
11 Technical Cooperation																																																	

Source: JICA Study Team

4.1.3 Terms of Loan

For the ship finance, interest rate of the loan is a key factor. The JBIC loan to Indonesia is most favorable with a low interest rate of 1.3% per annum. According to certain information sources, GOI/MOF/BI will charge 0.50% as sub-loan commission. Thus, the cost of raising the fund is 1.80% in Japanese Yen basis to the AFI (Table 4.1.4).

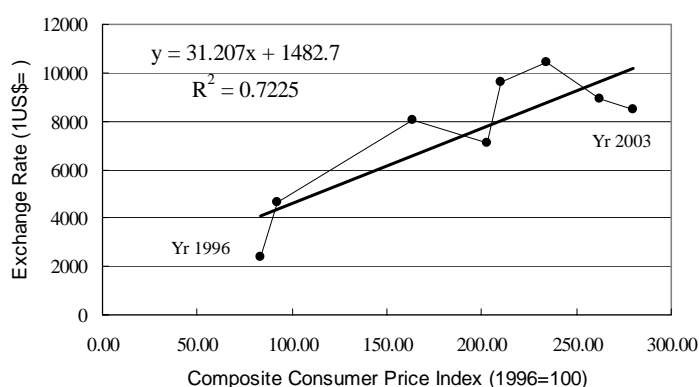
The AFI has to take the exchange risk which is very difficult to foresee in the long term. Indonesia's experience during the Asian financial crisis resulted in the collapse of its banking system and left the Rupiah drastically weakened against the US dollar since 1996 by 3.65 times or 20% per annum. Since 1998, the exchange rate became rather stable although there was a drop in 2000 and 2001. Average fall in exchange rate during 1998 to 2003 is only 1.4% per annum.

Table 4.1.4 Assumed Interest Rate of Public Ship Finance

Financing Process		Currency	Interest Rate	
			%	Cumulative %
JBIC Loan		Yen	1.30	1.30
GOI / MOF (Sub-loan Commission)		Yen	0.50	1.80
Apex Financial Intermediary(AFI)	Commission	Rupiah	1.20	3.00
	Exchange Risk	Rupiah	5.50	8.50
Participating Financial Institute (PFI)	Commission	Rupiah	2.00	10.50
	Business Risk	Rupiah	1.50	12.00
Interest on End User		Rupiah	12.00	

Source: JICA Study Team

Figure 4.1.2 Exchange Rate and Consumer Price Index



Source: Prepared by JICA Study Team

As Figure 4.1.2 shows, exchange rate has close relation to consumer price index (CPI). Since 1998, annual average inflation rate is 7.8%. Based on recent trends, it is assumed here that future inflation rate is 7.0% in Indonesia and 1.5% in Japan and as a result, Rupiah will become weaker by 5.5% per annum against the Japanese Yen. Assuming AFI's sub-loan commission (remuneration and operating cost) is 1.35%, AFI's spread is 6.85% based in Rupiah.

PFI will take other risks with a spread of 3.5%, assuming 2.0% for commission and 1.5% for credit risk. Accordingly, the interest rate charged on end borrowers is 12% with Rupiah as basis. If a ship leasing agent borrows directly from AFI, the rate will be 8.5% plus 1.5% for credit risk, that is, 10.0%. Practically, the rate should be carefully monitored and revised.

Repayment of the JBIC loan is for 30 years with 5 year grace period and Rupiah loan will be negotiable but is assumed for analytical purpose, to be repaid in 7 years without grace period.

4.1.4 Ship Price, Lease Price and Operating Cost

(1) Vessel Price

The STRAMINDO Masterplan estimated vessel price based on various information sources, as shown in Table 4.1.5. In Indonesia, the value added tax (VAT) and import duties are exempted for ship import, ship building and ship purchase. However, locally procured materials include 15% VAT then economic cost of ship price is estimated by multiplying 0.94 to convert to financial price, assuming that material cost is about 60% of ship price and two-thirds of the materials are locally procured.

Table 4.1.5 Price of New and Secondhand Vessels

Ship Type	Size (DWT/GT)	Vessel Price(1000 US\$)			
		Financial Cost		Economic Cost	
		New	Secondhand	New	Secondhand
Conventional (DWT)	0 - 1000	1,700	700	1,590	650
	1000 - 2000	3,400	1,400	3,190	1,310
	2000 - 4000	5,700	2,300	5,350	2,160
	4000 - 8000	8,700	3,500	8,170	3,290
	8000 - Over	16,100	6,400	15,130	6,010
Container (DWT)	0 - 4000	7,000	2,800	6,580	2,630
	4000 - 8000	10,300	4,100	9,680	3,850
	8000 - 12000	19,300	7,700	18,140	7,230
	12000 - 18000	27,100	10,800	25,470	10,150
	18000 - Over	33,600	13,400	31,580	12,590
Bulkier (DWT)	1000 - 4000	2,200	900	2,060	840
	4000 - 8000	4,200	1,700	3,940	1,590
	8000 - 15000	7,800	3,100	7,330	2,910
	15000 - Over	14,200	5,700	13,340	5,350
Barge (DWT)	5000 - 10000	1,600	600	1,500	560
	10000 - 15000	2,400	1,000	2,250	940
	15000 - Over	3,100	1,200	2,910	1,120
Tanker (DWT)	0 - 1000	2,200	900	2,060	840
	1000 - 4000	9,700	3,900	9,110	3,660
	4000 - 8000	14,200	5,700	13,340	5,350
	8000 - 15000	24,100	9,600	22,650	9,020
	15000 - 25000	32,300	12,900	30,360	12,120
	25000 - 35000	38,800	15,500	36,470	14,570
Passengre (GT)	35000 - Over	43,000	17,200	40,420	16,160
	1000 - 4000	2,200	900	2,060	840
	4000 - 8000	16,800	6,700	15,790	6,290
	8000 - 12000	19,300	7,700	18,140	7,230
Passenger Ro-Ro (GT)	12000 - Over	33,600	13,400	31,580	12,590
	0 - 4000	23,900	9,600	22,460	9,020
	4000 - Over	26,700	10,700	25,090	10,050

(Source) STRAMIND Masterplan, March 2004, JICA Study Team

(2) Lease Price

With several assumptions, monthly payment for lease with purchase option (hire - purchase) is estimated based on the ship price.

$$P_m = (I * (1 + I)^N / ((1 + I)^N - 1) + I_n + C_{oh}) * C_s + C_m$$

- Where: P_m : Monthly Payment for lease with purchase option
 I : Monthly interest rate
 N : Lease period in month
 I_n : Monthly Insurance Cost
 C_{oh} : Overhead cost inclusive of profit of ship lease agency
 C_s : Ship Price
 C_m : Monthly ship management cost

Insurance cost includes only a hull and machinery insurance which is paid by the ship owner and a protection and indemnity insurance which is paid by lessee. The former is 1.2% of ship price and the latter is US\$1.5 to 15.0 per gross-ton, depending on ship age (US\$ 6.0 to 7.0 for 10 years old ship). Annual overhead cost is assumed at 2% of ship price and monthly ship management cost at US\$ 1,000.

(3) Ship Operating Cost

Ship operating costs were studied in STRAMINDO through a questionnaire survey of shipping companies and are summarized as shown in Table 4.1.6.

Table 4.1.6 Ship Operating Cost in Indonesia

Cost	Ship Type	DWT/GT	Fixed Cost Mill.Rp/Yr	Distance Cost Mill.Rp/mile	Handling Cost Mill. Rp	Call Cost Mill.Rp./call
Financial Cost	Container	5000	12,900	0.04	0.120 /TEU	3.56
		10000	14,500	0.06	0.120 /TEU	5.08
	Conventional	3000	9,000	0.04	0.002 /TEU	2.15
		10000	14,000	0.07	0.002 /TEU	6.16
	Bulkier	10000	10,800	0.04	0.002 /TEU	5.08
		20000	25,200	0.12	0.002 /TEU	7.50
	Tanker	5000	16,000	0.07	0.004 /TEU	1.25
		30000	34,000	0.08	0.004 /TEU	4.15
Passenger	5000	17,580	0.05	0.024 /pax	0.93	
	10000	31,600	0.11	0.024 /pax	2.74	
Economic Cost	Container	5000	10,320	0.036	0.108 /TEU	3.20
		10000	11,600	0.054	0.108 /TEU	4.57
	Conventional	3000	7,020	0.036	0.002 /TEU	1.94
		10000	10,920	0.063	0.002 /TEU	5.54
	Bulkier	10000	8,964	0.036	0.002 /TEU	4.57
		20000	20,916	0.108	0.002 /TEU	6.75
	Tanker	5000	12,800	0.063	0.004 /TEU	1.13
		30000	27,200	0.072	0.004 /TEU	3.74
Passenger	5000	15,822	0.045	0.022 /pax	0.84	
	10000	28,440	0.099	0.022 /pax	2.47	

Source: STRAMINDO Masterplan, Main Text vol.2, P14-11

4.2 Economic Evaluation

To evaluate the public ship finance project, more detailed information is needed on ships to be financed as to type, size and age, ship usage, routes, port conditions, etc. However, such information is hardly foreseen at this stage. In this chapter, the project is evaluated from the economic viewpoint: (1) by distributing the fund proportionally to the required amounts by type and size of ships estimated in STRAMINDO Masterplan and assuming the proposed rerouting plan (4.2.1) and (2) by selecting a specific ship type and routes to be operated on. (4.2.2)

4.2.1 Overall Economic Evaluation

By following the evaluation method taken in STRAMINDO Masterplan, the public ship finance project was economically evaluated. Economic benefits measured in the Masterplan were the following.

- Savings in cargo transportation cost by promoting containerization and introducing younger and larger ships
- Savings in passenger shipping cost by rearranging passenger shipping network and allocating better sized ships
- Savings in passenger travel time by the same reason above
- Savings in ship maintenance cost and reduction of marine accidents by improving ship management system

Method and assumptions for measuring each benefit are stated in Chapter 14 of the STRAMINDO Masterplan report, Volume 2. Hereunder, the resultant output of application to the ship finance project is described, together with a brief explanation on the methodology. Details should be referred to the said report.

(1) Investment to Fleet

The economic benefits were estimated through “with-and-without” comparison. Here, “without” case and “with” case are defined as follows:

“Without” case: The current conditions of ships and shipping services will continue without significant investment, assuming that the number of container fleet will be kept unchanged in the future and then, only conventional general cargo vessels will be increased whenever additional vessels are required due to the future demand growth.

“With case”: Some projects and recommendations of STRAMINDO masterplan are implemented by using the public ship finance scheme.

The assumed amount of the ship finance fund is Rp. 3,222 billion in Case 1 and Rp. 1,585 billion in Case 2 (see Table 4.1.2). If the amount is fully utilized for 30 years which is the repayment period of the ODA loan, the fund revolves 4.8 times with a proper safety allowance (see next section). Then, a sum of Rp. 15,523 billion and Rp. 7,638 billion will be invested to fleet improvement and expansion during 2008 – 2038. On the other hand, in “without” case, minimal investment is required to improve the fleet age according to the

target scenario, of which cost is less than the investment amount of “with” case. The difference between them is regarded as the economic cost of the project in question (Table 4.2.1). Applying the same composition (%) as the ship procurement plan of STRAMINDO Masterplan, fund allocation among ship type becomes as shown in Table 4.2.2.

In addition to this, STRAMINDO Masterplan counted expansion cost for dockyard in “with” case and added it to the economic cost. This cost was ignored here, because the fleet procured with the public ship finance was a part of total fleet required in the future.

Table 4.2.1 Economic Cost of Ship Finance Project

(Billion Rupiah)

Case	Case Period	2008 - 2017	2018 - 2027	2028 - 2038	Total
Case 1	“without” case	5,615	3,517	1,039	10,171
	“with” case	7,974	5,997	1,550	15,521
	Economic Cost	2,359	2430	511	5,300
Case 2	“without” case	2,762	1,730	512	5,004
	“with” case	3,923	2,950	763	7,636
	Economic Cost	1,160	1,220	251	2,631

Source: JICA Study Team

Table 4.2.2 Ship Procurement with and without Public Ship Finance

(Billion Rupiah)

Ship Type	“Without” Case			“With” Case		
	Billion Rp.		%	Billion Rp.		%
	Case 1	Case 2		Case 1	Case 2	
Conventional	6,319.6	3,109.3	59.9	5,438.8	2,676.0	35.0
Container	298.8	147.0	2.8	3,224.6	1,586.6	20.8
Bulker	178.4	87.8	1.7	308.6	151.8	2.0
Barge	92.4	45.5	0.9	235.2	115.7	1.5
Tanker	2,136.1	1,051.0	20.3	4,371.3	2,150.7	28.2
Passenger Ship	1,519.6	747.6	14.4	1,944.8	956.8	12.5
Total	10,545.1	5,188.4	100.0	15,523.6	7,637.9	100.0

Source: STRAMINDO Masterplan, 2004, JICA

(2) Economic Benefit

Through the public ship finance scheme, STRAMINDO masterplan will take a first step toward its realization and the scheme will play a dominant role for fleet renewal and expansion in 30 years. Then, economic benefit will be a part of the benefit analyzed in the Masterplan. Taking the same procedure as of the Masterplan, economic benefit was estimated as shown in Table 4.2.3.

Main source of the benefit is savings in cargo transport cost which consists of fixed operating cost, fuel cost, cargo handling cost and port call cost. All of these cost become lower in “with” case, due to containerization as well as introduction of younger and larger ships. This cost reduction (economic benefit) accounts for approximately 20% of the total transport cost.

Table 4.2.3 Economic Benefit of Public Ship Finance**(1) Case 1**

(Billion Rupiah)

Cargo Transport Cost	"Without" Case			"With" Case			Economic Benefit		
	2008	2018	2028	2008	2018	2028	2008	2018	2028
Cargo Transport Cost	84.8	2,120.3	2,161.5	68.3	1,705.8	1,769.3	16.6	414.5	392.1
Passenger Transport Cost	21.0	330.6	272.9	17.1	269.2	222.2	3.9	61.4	50.7
Marine Accident Cost	69.0	145.4	155.6	68.5	140.1	150.2	0.5	5.3	5.5
Total	174.8	2,596.4	2,590.0	153.8	2,115.2	2,141.7	21.0	481.2	448.3

(2) Case 2

(Billion Rupiah)

Cargo Transport Cost	"Without" Case			"With" Case			Economic Benefit		
	2008	2018	2028	2008	2018	2028	2008	2018	2028
Cargo Transport Cost	41.7	1,043.2	1,063.5	33.6	839.3	870.5	8.2	203.9	192.9
Passenger Transport Cost	10.4	162.7	134.3	8.4	132.5	109.3	1.9	30.2	24.9
Marine Accident Cost	33.9	71.6	76.6	33.7	68.9	73.9	0.2	2.6	2.7
Total	86.0	1,277.5	1,274.3	75.7	1,040.7	1,053.8	10.3	236.8	220.6

(Source) JICA Study Team

(3) Cost Benefit Analysis

By comparing the economic cost with benefit, indicators for project evaluation were estimated. Project life is assumed to be 30 years starting in 2008, which correspond to the repayment period assumed for ODA loan. As investment on ships continues through the period, most procured ships have residual values even at the last year of analysis. In order to calculate the residual value in the year 2037, the residual value of a ship is assumed to be the same as its book value under the conditions of 15 year depreciation with 10% scrap value.

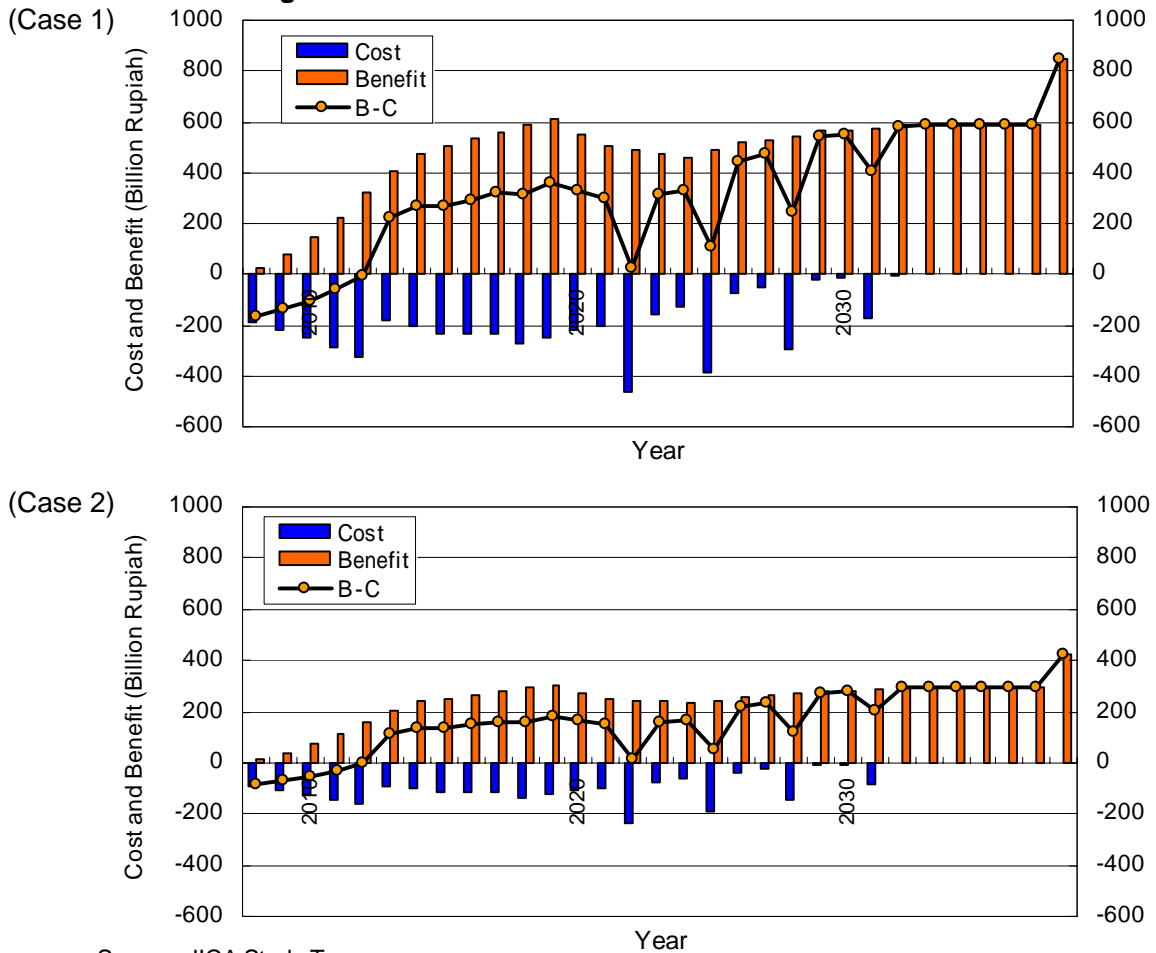
Economic IRR was estimated at 28.4% for both cases 1 and 2, much higher than 12%, the economic discount rate in Indonesia, thus the public ship finance project is judged highly feasible. Under 12% discount rate, NPVs are Rp.262.2 billion under case 1 and Rp.129.9 billion under case 2 and B/C ratio is 1.13 for both cases, which indicates that the project is also feasible. However, these values are not so as high as EIRR.

Table 4.2.4 Evaluation Indicators

Indicators	Unit	Case 1	Case 2
Economic Internal Rate of Return (EIRR)	%	28.4	28.4
Net Present Value (NPV)	Billion Rp.	262.2	129.9
Cost Benefit Ratio (B/C)	-	1.13	1.13

Source: JICA Study Team

Figure 4.2.1 Cash Flow of Economic Cost and Benefit



Source: JICA Study Team

The project requires investment not only at the initial stage but through the project life in parallel with benefit accruing. Figure 4.2.1 shows the flow of costs and benefit for both cases. As seen in the figure, the net benefit (B – C) is negative during the start off years . Under such kind of cost – benefit flow, the IRR tends to become very high, compared to other evaluation indicators.

Table 4.2.5 shows the result of sensitivity analysis for both cases by changing cost and benefit. Shaded figures of IRR indicate the feasible area. Even if the cost rises up by 60% as estimated, IRR is feasible at the threshold level of 12% and, if the benefit falls down by 38% from the estimated, IRR drops down to 12%, If both cost and benefit changed by 20% unfavorably, IRR will be 13.7% and the project is still feasible. Thus, the feasibility of the project is very robust.

Table 4.2.5 Economic IRR by Changing Cost and Benefit of Case 1 and 2
(IRR: %)

Case of cost up and benefit down		Cost up (%)			
		Base	20	40	60
Benefit down (%)	Base	28.4	20.9	15.7	12.0
	20	19.4	13.7	9.8	7.1
	30	15.1	10.3	7.1	4.9
	40	11.0	7.1	4.6	2.7

Source: JICA Study Team

4.2.2 Economic Evaluation of Proposed Container Ship

In Chapter 3, two types of new container vessels (300TEU vessel and 700TEU vessel) are recommended as suitable container vessels for Indonesian sea and ports. They are evaluated in this section from the economic viewpoint in the context of three major container routes as follows:

- Tg. Perak – Makassar introducing 700 TEU container ship
- Tg. Priok – Pontianak introducing 300 TEU container ship
- Tg. Perak –Banjarmasin introducing 300 TEU container ship

(1) Demand and Current Service

The three selected routes have traffic volume as shown in table 4.2.6.

Table 4.2.6 Container Traffic on Three Routes

Route	Direction	2002	2014	2024
Tg. Perak – Makassar	Tg. Perak - Makassar	797,223	2,077,342	3,383,787
	Makassar – Tg. Perak	792,543	2,109,117	3,449,848
	Total	1,589,765	4,186,459	6,833,634
Tg. Priok – Pontianak	Tg. Priok - Pontianak	472,354	1,469,555	2,628,327
	Pontianak – Tg. Priok	225,787	616,720	1,455,599
	Total	697,787	2,086,275	408,393
Tg. Perak – Banjarmasin	Tg. Perak - Banjarmasin	561,199	1,134,524	1,751,999
	Banjarmasin – Tg. Perak	635,893	1,353,985	2,032,146
	Total	1,197,091	2,488,509	3,784,145

Note: * in MT/yr

* Use 14MT/TEU conversion factor (inclusive of empty containers)

Source: JICA Study Team

Currently it is roughly estimated that about an equivalent of 4 to 5 vessels are operating full-time at the routes. Actually there are more vessels operating the routes, but some are not dedicated to the routes. Refer to Table 4.2.7.

Table 4.2.7 Existing Vessels Serving Selected Routes

Route	Vessels	Age (yrs)	Capacity/Size	Speed (knots)	Draft (m)
Tg. Perak – Makassar	Vessel 1	16	4,584 DWT		
	Vessel 2	18	5,225 DWT		
	Vessel 3	19	5,823 DWT		
	Vessel 4	21	5,449 DWT		
	Vessel 5	27	7,931 DWT		
	Average	20.2	5802.4DWT		
Tg. Priok – Pontianak	Vessel 1	33	182 TEU	-	6.64
	Vessel 2	24	258 TEU	12.5	5.25
	Vessel 3	23	200 TEU	10.7	6.60
	Vessel 4	24	294 TEU	-	6.80
	Average	26	234 TEU	11.6	6.3
Tg. Perak – Banjarmasin	Vessel 1	8	200 TEU	11	5.40
	Vessel 2	8	200 TEU	11	5.40
	Vessel 3	9	200 TEU	11	5.40
	Vessel 4	9	200 TEU	11	5.40
	Vessel 5	9	200 TEU	10	5.40
	Average	8.6	200 TEU	10.8	5.40

Note: Vessels used are almost identical

Source: JICA Study Team

(2) Proposed Vessels

Several issues have been identified concerning Tg. Perak – Makassar route. The key issue is the relatively small -sized vessels operating the route despite the high amount of traffic and high capacity of both Tg. Perak and Makassar ports to receive large vessels. There is therefore a potential to increase the size of vessels to take advantage of economies of scale. Unfortunately, it is difficult to acquire larger vessels from the second-hand market. It is proposed that a new vessel will be introduced at the route - through new shipbuilding. The new vessel is much larger and will have a higher speed.

In case of the Tg.Priok-Pontianak route, the key issue is the limited depth of only 5 meters at Pontianak port. Thus, vessels have to wait long at anchorage to wait for the tide to rise to be able to enter the port. Usage of smaller vessels would inevitably have to contend with lower carrying capacity. Thus, it is proposed that a new vessel will be introduced at the Tg. Priok-Pontinanak Route. The new vessel is larger, having lower draft (resulting in lower waiting time for tide) and will have a slightly higher speed.

In the Tg. Perak-Banjarmasin route, the Banjarmasin Port with its limited depth of only 5 meters has the same issue as the Pontianak Port. As a result, vessels have to wait for the tide resulting in an extra 0.25 days waiting time (roughly estimated). It is proposed that a new vessel will be introduced at the route. The new vessel is much larger, having lower draft (resulting in lower waiting time for tide) and will have slightly higher speed.

Comparison of representative existing vessel (EV) and the proposed vessel (PV) is presented in Table 4.2.8.

Table 4.2.8 Comparison of Existing Vessels and Proposed Vessels

	Tg. Perak - Makassar		Tg. Priok - Pontianak		Tg. Perak - Banjarmasin	
	EV	PV	EV	PV	EV	PV
Capacity (Laden) in TEU	400 (320)	(700)	250 (200)	362 (300)	200 (160)	362 (300)
Cruising Speed (knots)	11.0	16.0	11.0	13.0	11.0	13.0
Draft (m)		8.0	6.0	5.0	5.4	5.0
Waiting for high tide to enter	-	-	0.5	0.0	0.25	0.0
Commissionable days	350	355	350	355	350	355
Purchase Price, new (mill. Rp)	71,754	155,242	60,194	100,987	57,300	100,987
Fixed operation cost (mill. Rp/yr)	4,906	6,028	4,742	5,258	4,742	5,258
Time operation cost (mill. Rp/day)						
- while anchored	0.18	0.37	0.15	0.18	0.14	0.18
- while on voyage	20.34	40.68	16.27	20.34	15.25	20.34
Cargo operation cost (mill. Rp/TEU)	0.12	0.12	0.12	0.12	0.12	0.12
Call operation cost (mill. Rp/call)	6.0	9.0	6.0	6.0	5.4	6.0

Source: JICA Study Team

It is assumed that the introduction of the new vessel will be based on the following policy target:

Table 4.2.9 Target Policy for New Vessel Introduction

Year	DO-NOTHING CASE		STRAMINDO CASE	
	EV	PV	EV	PV
2002	100%	0%	100%	0%
2014	100%	0%	50%	50%
2024	100%	0%	0%	100%

Note: % = (number of units of corresponding vessel type)/(total vessels including all types)
 Source: JICA Study Team

It is further assumed that there are two scenarios in terms of availability of second-hand vessels in the market. The first scenario is that the second-hand market has already dried up and that there is no more EV-type second-hand vessel available in the market. As a result, all procured EV are brand new. The second scenario is that the second-hand market could still come up with enough EV-type vessels to be able to supply the needs of the route (taken to be 10 years old when procured). On the other hand, since PV-type vessels are custom made, all procured vessels are brand new for both scenarios.

(3) Fleet Simulation Results:

The following table illustrates the fleet requirement under each case scenario.

Table 4.2.10 Fleet Requirement

Route	Year	DO-NOTHING CASE			STRAMINDO CASE		
		EV	PV	Total	EV	PV	Total
Tg. Perak – Makassar	2002	5	0	5	5	0	5
	2014	13	0	13	4	4	8
	2024	22	0	22	0	9	9
Tg. Priok – Pontianak	2002	4	0	4	4	0	4
	2014	12	0	12	5	5	10
	2024	22	0	22	0	15	15
Tg. Perak – Banjarmasin	2002	5	0	5	5	0	5
	2014	11	0	11	4	4	9
	2024	16	0	16	0	11	11

Note: in units of vessels

Source: JICA Study Team

The following two tables illustrate the estimated operation cost and operation cost efficiency under each case.

Table 4.2.11 Total Operation Cost

Case		DO-NOTHING CASE			STRAMINDO CASE		
Route	Year	EV	PV	Total	EV	PV	Total
Total Operating Cost in mill. Rp (economic terms)							
Tg. Perak – Makassar	2002	54,929	0	54,929	54,929	0	54,929
	2014	145,233	0	145,233	43,064	79,661	122,726
	2024	237,514	0	237,514	0	185,131	185,131
Tg. Priok – Pontianak	2002	37,851	0	37,851	37,851	0	37,851
	2014	117,810	0	117,810	47,692	57,462	105,154
	2024	210,639	0	210,639	0	172,499	172,499
Tg. Perak – Banjarmasin	2002	46,114	0	46,114	46,114	0	46,114
	2014	98,130	0	98,130	40,073	48,229	88,301
	2024	147,287	0	147,287	0	122,209	122,209
Operation Cost Efficiency in mill. Rp/TEU (economic terms)							
Tg. Perak – Makassar	2002	0.48	n/a	0.48	0.48	n/a	0.48
	2014	0.49	n/a	0.49	0.49	0.38	0.41
	2024	0.49	n/a	0.49	n/a	0.38	0.38
Tg. Priok – Pontianak	2002	0.76	n/a	0.76	0.76	n/a	0.76
	2014	0.79	n/a	0.79	0.79	0.65	0.71
	2024	0.72	n/a	0.72	n/a	0.59	0.59
Tg. Perak – Banjarmasin	2002	0.54	n/a	0.54	0.54	n/a	0.54
	2014	0.55	n/a	0.55	0.55	0.46	0.50
	2024	0.54	n/a	0.54	n/a	0.45	0.45

Source: JICA Study Team

In the course of the study period of 2008~2027, vessels can be scrapped, purchased or re-assigned. Re-assigned vessels are vessels which are displaced by another vessel and are made to serve other routes. It is assumed that the service life of vessels is 30 years and a 5% scrap value.

Table 4.2.12 Vessel Procurement Summary

Route		DO-NOTHING CASE			STRAMINDO CASE		
		EV	PV	Total	EV	PV	Total
Using Brand New EV-type Vessels							
Tg. Perak – Makassar	Scrapped	5	0	5	4	0	4
	Purchased	22	0	22	3	9	12
	Re-assigned	0	0	0	4	0	4
Tg. Priok – Pontianak	Scrapped	4	0	4	4	0	4
	Purchased	22	0	22	5	15	20
	Re-assigned	0	0	0	5	0	5
Tg. Perak – Banjarmasin	Scrapped	5	0	5	0	0	0
	Purchased	14	0	14	0	11	11
	Re-assigned	0	0	0	5	0	5
Using Second-Hand EV-type Vessels							
Tg. Perak – Makassar	Scrapped	7	0	7	4	0	4
	Purchased	23	0	23	3	9	12
	Re-assigned	0	0	0	4	0	4
Tg. Priok – Pontianak	Scrapped	6	0	6	4	0	4
	Purchased	23	0	23	5	15	20
	Re-assigned	0	0	0	5	0	5
Tg. Perak – Banjarmasin	Scrapped	6	0	6	0	0	0
	Purchased	15	0	15	0	11	11
	Re-assigned	0	0	0	5	0	0

Source: JICA Study Team

(4) Economic Analysis Results:

Assuming a discount rate of 12%, the net present value at year 2005 was calculated to show the economic benefit (i.e. savings) accruing by introducing new container ships specially designed for Indonesian domestic shipping. Differences of the two cost streams for Do-nothing case and STRAMINDO case resulted in all negative figures, that is, STRAMINDO case always requires less cost than Do-nothing case, and thus EIRR was not defined.

By comparing net present value of the total cost (capital cost and operating cost); the STRAMINDO case is more advantageous than the Do-nothing case in all of the three routes, by 20% to 30%.

Table 4.2.13 Net Present Value of Total Cost under Two Cases

Route		Net Present Value of Total Cost			
		Do-Nothing	STRAMINDO	Savings	% improved
Using Brand New EV-type Vessels					
Tg. Perak – Makassar	Capital	737,705	453,647	284,058	38.5%
	Operation	1,222,934	993,141	229,793	18.8%
	Total	1,960,640	1,446,788	513,851	26.2%
Tg. Priok – Pontianak	Capital	647,244	496,596	150,648	23.3%
	Operation	957,730	822,577	135,153	14.1%
	Total	1,604,974	1,319,173	285,801	17.8%
Tg. Perak – Banjarmasin	Capital	325,478	193,253	132,225	40.6%
	Operation	897,984	704,756	193,228	21.5%
	Total	1,223,462	898,008	325,454	26.6%
Using Second-Hand EV-type Vessels					
Tg. Perak – Makassar	Capital	523,836	420,255	103,581	19.8%
	Operation	1,222,934	993,141	229,793	18.8%
	Total	1,746,770	1,413,396	333,374	19.1%
Tg. Priok – Pontianak	Capital	459,642	459,021	621	0.1%
	Operation	957,730	822,577	135,153	14.1%
	Total	1,417,372	1,281,598	135,774	9.6%
Tg. Perak – Banjarmasin	Capital	231,779	193,253	38,526	16.6%
	Operation	897,984	704,756	193,228	21.5%
	Total	1,129,763	898,008	231,755	20.5%

Note: Capital is equal to the purchase cost less the residual values of scrapped vessels, re-assigned vessels and operational vessels at the end of the Study Period.

Source: JICA Study Team

Under the current set of assumptions, it appears that the viability of the STRAMINDO plan is robust under the availability or non-availability of second-hand 160 TEU vessels - more significantly so, when it is assumed that all vessels in the future would have to be procured as newly-built vessels. Since it is projected that 160 TEU container vessels will increasingly be more difficult to find in the second-hand market, it can be deemed that the STRAMINDO scheme is worthwhile to pursue.

4.3 Financial Analysis

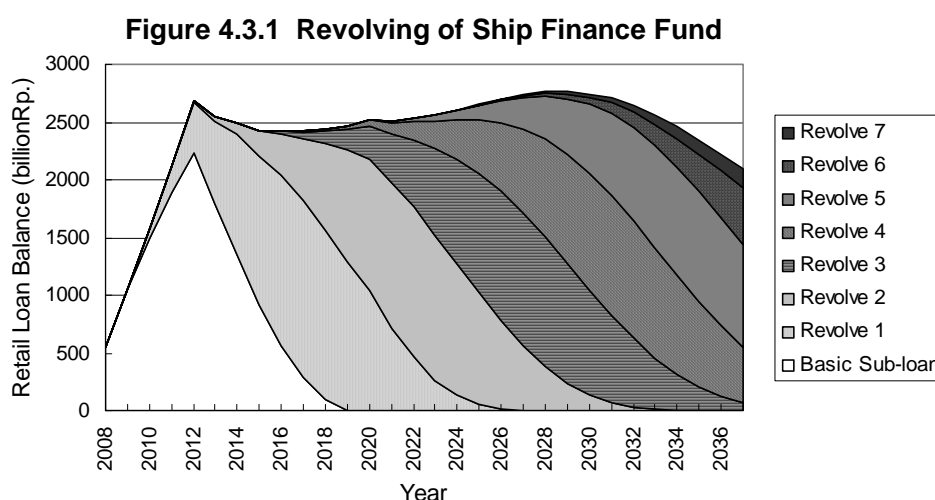
Financial analysis of a project is conducted to examine profitability throughout the project life. To do this, the standpoint of the analysis has to be clarified, in other words, profitability for whom? In this section, three main player's standpoints are taken up; namely: (1) Apex Financial Institution (2) Ship Leasing Company, and (3) Shipping Company.

4.3.1 Apex Financial Institution

Apex Financial Institution is the executing agency of the public ship finance project and one or two state owned financial agencies will be designated. According to an opinion of MOF personnel, the institution shall take the exchange risk, which is one key factor to lead the project to success. The analysis will focus on the impact of the change in foreign currency exchange rate on the institution's profitability.

Assumptions for the analysis are as follows:

- As fund for the ship finance, only ODA loan of Rp 2,570 billion (30 billion yen) is considered, in order to make the influence of the exchange rate clear and local portion is treated as a supplement to finance a temporary deficit.
- As assumed in section 4.1, the source cost to AFI is 1.80% in Japanese yen, inclusive of MOF's spread of 0.50% and repayment is 30 years with a 5 year of grace period.
- AFI finances PFIs or direct to ship leasing companies at 8.5% interest, of which 1.20% is commission and 5.5% is for exchange risk. Repayment period is average 7 years with no grace period.
- Repaid amount will be immediately refinanced to other borrowers to use the fund effectively. A simulation result shows that the fund can revolve about five times in 30 years (Figure 4.3.1).



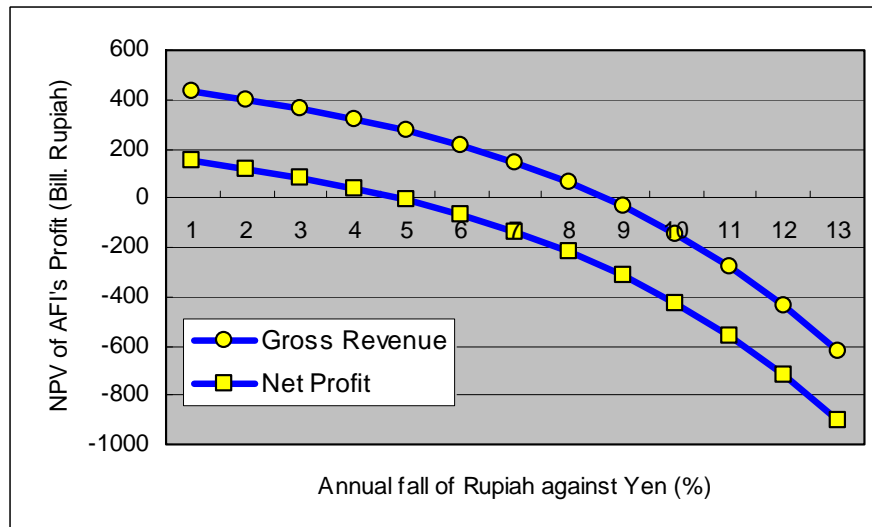
Source: JICA Study Team

- The financing service starts at the beginning of 2008 and within five years, all the funds is lend out for the first round, with a uniform amount annually.

In the cash flow analysis, annual profit accruing in AFI is converted into the base year (2008) price and then, further discounted by 12% per annum in order to express it in year 2008 values. Total amount for 30 years is the net present value of the ship finance project to AFI. Figure 4.3.2 illustrates the relationship between AFI's NPV and annual falling rate of the Rupiah against the Japanese Yen.

As the analysis assumes an exchange risk at 5.5% of annual fall of the Rupiah against the Japanese Yen, AFI can earn about Rp 283 billion under Case 1 and Rp. 139 billion under Case 2, at 2008 value as financing charges and commission, if the exchange rate of Rupiah to Yen changes as assumed. If the change is more moderate, AFI can enjoy a larger profit. On the contrary, however, the profit becomes smaller and becomes zero at 10.5%. (Figure 4.3.2) It is only recently that Rupiah became stable and although the Government has declared to keep a currency stabilization policy, Rupiah has not so far experienced a long-term stable period. The figure shows that AFI will lose a huge amount of Rp 623 billion, if the annual average rate of Rupiah drop is 15%.

Figure 4.3.2 AFI's NPV and Annual Fall Rate of Rupiah against Yen

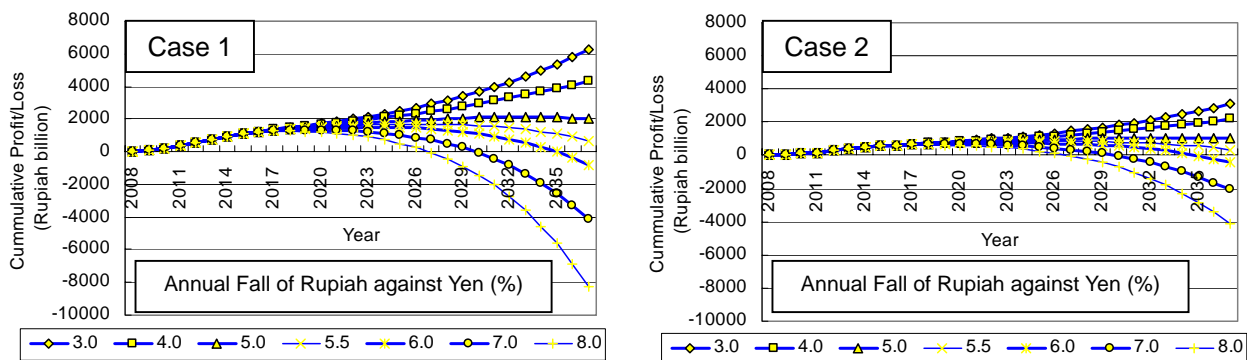


Source: JICA Study Team

Foreign exchange risk is not such a kind of risk that an institution can control. Therefore, if the Indonesian Government wants to control politically the interest rate of ship finance to keep it lower than that of a commercial loan, the Government should shoulder part of the risk. For example, by subsidies to fill the loss due to the exchange rate exceeding a certain threshold. In any case, AFI should be a well-experienced institution engaged in broad financial businesses which can hedge against a foreign exchange risk.

Figure 4.3.3 shows changes of the cumulative profit/loss of AFI under various rates of Rupiah's value change. No significant difference is observed until 2018 but after that, the profit/loss will take significantly different trends. If the Rupiah keeps a 5% rate of loss against the Japanese Yen, AFI will get no profit and no loss after 2028, with cumulative profit of Rp 2,000 billion including management cost. If the exchange rate changes more moderately than 5%, the profit becomes high, for example, exceeding Rp 4,000 billion at 4.0% in 2038. In such a case, the public ship finance scheme can be sustainable by itself after repaying the entire ODA loan.

Figure 4.3.3 Trend of Cumulative Profit/Loss under Various Changes of Exchange Rate



Source: JICA Study Team

4.3.2 Ship Financing to Ship Leasing Business

Ship leasing business seems not so risky as long as a ship owner procures a ship without using a foreign loan and payment default by lessees because financial risks are already incorporated at the lease charge setting.

According to the lease charge formula stated in 4.1.4, monthly charge is calculated in terms of percentages of a ship price as shown in Table 4.3.1. The coefficient in the table is inclusive of insurance cost on the hull and machinery of 1.2% per annum and overhead and profit of 2.0% per annum. If a ship leasing company can get a loan for a ship purchase directly from AFI at 8.5%, the wholesale loan rate, then the company can lease out at a lower charge, for example, by 13% (2.3012/2.6402) in case of a 5 year lease, if the interest rate of ordinary commercial loan is 16%, likewise, 21% lower for 10 year lease and 30% lower for 20 year lease. This will bring about a significant impact on the domestic maritime transportation industry. Table 4.3.2 presents monthly lease charge by type of ships shown in Table 4.1.5, with 8.5% interest rate.

Table 4.3.1 Coefficient of Monthly Lease Charge to Ship Price

(% of Ship Price)

		Lease Period (Year)			
		5	10	15	20
Annual Interest Rate (%)	8.5	2.3012	1.4877	1.2310	1.1127
	10	2.3682	1.5624	1.3130	1.2013
	12	2.4582	1.6641	1.4256	1.3232
	14	2.5489	1.7680	1.5414	1.4487
	16	2.6402	1.8739	1.6597	1.5765
	18	2.7320	1.9815	1.7800	1.7061
	20	2.8242	2.0904	1.9018	1.8366

(Source) JICA Study Team

Table 4.3.2 Monthly Lease Charge by Ship Type

(US\$1,000)

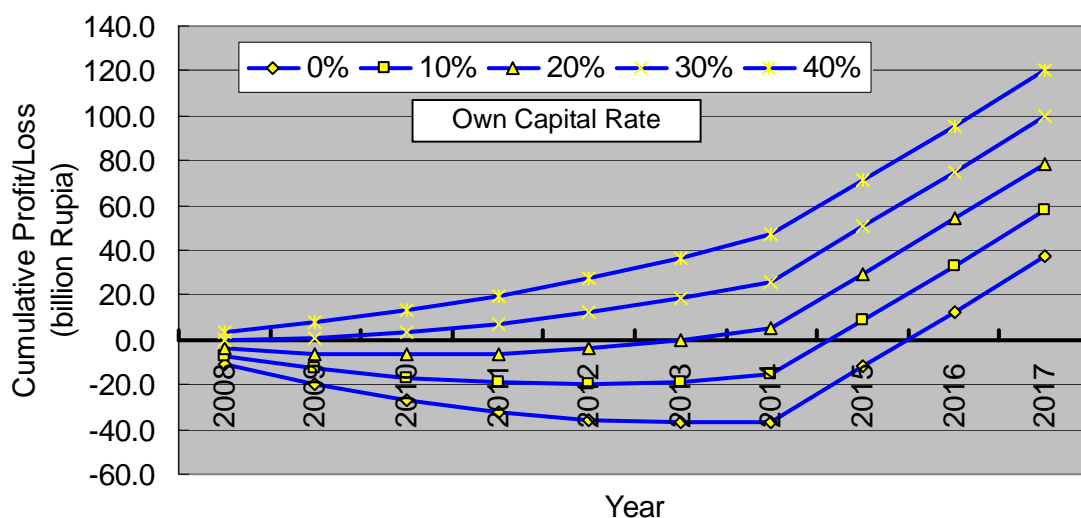
Ship Type	Size (DWT/GT)	New Vessel Price (1000 US\$)	Monthly Lease Charge		
			5 Years	10 Years	20 Years
Conventional (DWT)	0 - 1000	1,700	39.1	25.3	18.9
	1000 - 2000	3,400	78.2	50.6	37.8
	2000 - 4000	5,700	131.2	84.8	63.4
	4000 - 8000	8,700	200.2	129.4	96.8
	8000 - Over	16,100	370.5	239.5	179.1
Container (DWT)	0 - 4000	7,000	161.1	104.1	77.9
	4000 - 8000	10,300	237.0	153.2	114.6
	8000 - 12000	19,300	444.1	287.1	214.7
	12000 - 18000	27,100	623.6	403.2	301.5
	18000 - Over	33,600	773.2	499.9	373.9
Bulkier (DWT)	1000 - 4000	2,200	50.6	32.7	24.5
	4000 - 8000	4,200	96.6	62.5	46.7
	8000 - 15000	7,800	179.5	116.0	86.8
	15000 - Over	14,200	326.8	211.3	158.0
Barge (DWT)	5000 - 10000	1,600	36.8	23.8	17.8
	10000 - 15000	2,400	55.2	35.7	26.7
	15000 - Over	3,100	71.3	46.1	34.5
Tanker (DWT)	0 - 1000	2,200	50.6	32.7	24.5
	1000 - 4000	9,700	223.2	144.3	107.9
	4000 - 8000	14,200	326.8	211.3	158.0
	8000 - 15000	24,100	554.6	358.5	268.1
	15000 - 25000	32,300	743.3	480.5	359.4
	25000 - 35000	38,800	892.8	577.2	431.7
	35000 - Over	43,000	989.5	639.7	478.4
Passenger (GT)	1000 - 4000	2,200	50.6	32.7	24.5
	4000 - 8000	16,800	386.6	249.9	186.9
	8000 - 12000	19,300	444.1	287.1	214.7
	12000 - Over	33,600	773.2	499.9	373.9
Passenger Ro-Ro (GT)	0 - 4000	23,900	550.0	355.6	265.9
	4000 - Over	26,700	614.4	397.2	297.1

(Source) STRAMIND Masterplan, March 2004, JICA Study Team

As for ship leasing business, there is a cash flow risk, which is caused by the difference of loan repayment contract and lease contract (hire and purchase contract). An analysis focusing on this risk was made using a 700 TEU container ship recommended in Chapter 3. The terms of the loan for ship purchase is 8.5% interest with 7 year repayment period without grace period. On the other hand, lease contract is for 10 years and at the end, the ship is sold to the lessee at a negligible price.

Ship price is estimated at Rp 155.2 billion and then can be leased at Rp 2,310 million a month, assuming the same interest rate as that of wholesale loan offered by AFI. Figure 4.3.4 illustrates the cumulative profit/loss of the leasing company under various own capital ratio. If there is no own capital, annual profit is negative for six years out of ten years. Although the cumulative profit will turn positive in the later years, the company loses in this project, taking into account the interest payment of short-term commercial loan. In order to gain a profit, at least 20% of own capital is needed. If the lease period becomes longer, cash flow will improve.

Figure 4.3.4 Cumulative Profit/Loss of Ship Leasing Company



Source: JICA Study Team

4.3.3 Container Vessel Financial Analysis

There are two financial assumptions considered. First is based on commercial banking terms, while the second is policy -based loan, intended to promote the proposed vessel.

Analysis is undertaken on the three container vessel case studies presented earlier on the following routes: (1) Tg. Perak – Makassar; (2) Tg. Priok – Pontianak; and (3) Tg. Perak – Banjarmasin.

Table 4.3.3 Terms of Loans for Financial Analysis on Shipping Business

	Commercial Loan	Policy-Based Loan
Interest rate	16%	12%
Repayment period	5 years	10 years
Grace period	none	1 year

Common assumptions are as follows:

- 1) Equity: 30% Loan 70%
- 2) Tariff rate reduced in real terms in line with improvement of operating cost per TEU.
- 3) Tariff rate is 1.50 mill. Rp/TEU (2004)
- 4) Inflation rate is 6.5% p.a. which is applied to all costs and tariff
- 5) Sales tax is 1.2% of revenues and income tax is 35%
- 6) Straight line depreciation with 5% salvage value and service life of 30 years
- 7) Short term interest rate at 10% p.a.
- 8) Ship to be procured on 2005 and operated from 2008.
- 9) Cargo only 70% of potential cargo on the 1st year, increasing to 100% by 2013.

(1) Tg. Perak – Makassar Container Route Improvement Case Study

The results of the financial analysis are summarized below.

Table 4.3.4 Financial Indicators under Commercial Banking Terms

	EV (2 nd Hand)	EV (new)	PV (new)
FIRR	28.2%	21.6%	34.7%
ROE	17.3%	8.9%	27.9%
DSCR (1st year)	77%	53%	105%
DSCR (min)	54%	30%	73%
FBR (1st year)	190%	190%	243%
FBR (5th year)	240%	240%	307%
FBR (10th year)	234%	234%	299%

Source: JICA Study Team

Table 4.3.5 Financial Indicators under Policy Based Lending Terms

	EV (2 nd Hand)	EV (new)	PV (new)
FIRR	28.2%	21.6%	34.7%
ROE	33.8%	18.0%	48.1%
DSCR (1st year)	197%	134%	267%
DSCR (min)	110%	76%	132%
FBR (1st year)	190%	190%	243%
FBR (5th year)	240%	240%	307%
FBR (10th year)	234%	234%	299%

Source: JICA Study Team

(2) Tg. Priok – Pontianak Container Route Improvement Case Study

The results of the financial analysis are summarized below.

Table 4.3.6 Financial Indicators under Commercial Banking Terms

	EV (2 nd Hand)	EV (new)	PV
FIRR	27.9%	18.4%	26.0%
ROE	16.4%	4.5%	14.6%
DSCR (1st year)	69%	38%	66%
DSCR (min)	51%	22%	42%
FBR (1st year)	163%	163%	205%
FBR (5th year)	211%	211%	264%
FBR (10th year)	210%	210%	263%

Source: JICA Study Team

Table 4.3.7 Financial Indicators under Policy Based Lending Terms

	EV (2 nd Hand)	EV (new)	PV
FIRR	27.9%	18.4%	26.0%
ROE	32.1%	10.9%	27.0%
DSCR (1st year)	176%	96%	169%
DSCR (min)	101%	54%	94%
FBR (1st year)	163%	163%	205%
FBR (5th year)	211%	211%	264%
FBR (10th year)	210%	210%	263%

Source: JICA Study Team

(3) Tg. Perak – Banjarmasin Container Route Improvement Case Study

The results of the financial analysis are summarized below.

Table 4.3.8 Financial Indicators under Commercial Banking Terms

	EV (2nd Hand)	EV (new)	PV
FIRR	23.7%	18.6%	23.7%
ROE	9.6%	4.6%	11.5%
DSCR (1st year)	55%	38%	58%
DSCR (min)	38%	22%	35%
FBR (1st year)	161%	161%	193%
FBR (5th year)	208%	208%	250%
FBR (10th year)	207%	207%	248%

Source: JICA Study Team

Table 4.3.9 Financial Indicators under Policy Based Lending Terms

	EV (2nd Hand)	EV (new)	PV
FIRR	23.7%	18.6%	23.7%
ROE	22.9%	11.1%	22.1%
DSCR (1st year)	141%	96%	147%
DSCR (min)	83%	55%	83%
FBR (1st year)	161%	161%	193%
FBR (5th year)	208%	208%	250%
FBR (10th year)	207%	207%	248%

Source: JICA Study Team

(4) Conclusion

According to the result of analyses above, every evaluation indicator shows very high profitability. Among others, 700 TEU container vessels can expect high performance, compared to conventional vessels.

However, it should be noted that the above FIRRs are nominal ones, including inflation rate of 6.5%. FIRRs in real-term are the above figures minus 6.5%, but still FIRR remains high even after deducting inflation. These favorable results are possibly affected by the current strong conditions in the maritime transportation market. Due to the shortage of second-hand vessels, freight has risen up as well as price of vessels. It may be a good time for the Indonesian maritime transportation industry and ship building industry to invest on fleet renewal and expansion. The public ship finance scheme will strongly support this and thus will be able to foster these industries.

CHAPTER 5 NEED FOR MARITIME EDUCATION

The key factor for the success of the implementation of the public ship finance scheme proposed in Chapter 2 is ship-management to keep the financed vessels properly and gain the benefit effectively. Several shipping companies in Indonesia have started to provide ship-management services internally, while many other middle or small companies do not have the capability to do so due to lack of knowledge and expertise in this field. Therefore, the ship-management education becomes a focal point which would be prerequisite in the development of Indonesian domestic shipping industry. In this chapter, the need to improve maritime education during shipping operation at both land and on-board has been identified (see Section 5.1), and adoption of ship-management and the ISM-Code outside Indonesia is reported in Section 5.2. Afterwards, development of advanced maritime education system and necessary teaching materials are conceptualized and partly developed for the personnel who are engaged in Indonesian domestic shipping.

5.1 Current Shipping Operations and Practices

Modern ship operation and management is the key issue to modernize Indonesian shipping industry. Reviewing STRAMINDO study, the following issues can be raised as matters caused by unsatisfactory manpower expertise.

- 1) Ship Operation
 - a. Low level of vessel utilization because of long cargo-waiting and berth-waiting time.
 - b. Loss of working days because of poor maintenance and long docking time.
 - c. Lack of cooperative and synergistic relationships among operators for vessel sharing at times of shortage of either cargo or vessel.
- 2) Ship Maintenance
 - a. Instruction documents are not understood nor practiced accordingly.
 - b. Spare parts are not supplied or readily available.
 - c. Navigation machines and mechanical equipment are not properly supplied.
- 3) Ship Safety and Environmental Consideration
 - a. Stability is not appropriately calculated at the time of loading and vessel operation.
 - b. Illegal disposal of waste and oil.

In addition to the study, interview and on-board survey was conducted during the STRAMINDO II study to clarify the problems of seafarers and shipping company and prioritize the urgent matters to conduct the re-education program of the seafarers effectively.

5.1.1 Shipping Company

The Study Team has conducted the interview and on-board survey to several main shipping companies to understand the existing conditions and to inspect the condition of adoption of ISM Code/ISO9000 Manuals which is recognized as the international standard for ship safety management system.

As a result, several deficiencies have been identified and the details are as follows.

- 1) The ISM Code is not applied appropriately by the shipping company and resulted in a very cumbersome system.

The shipping companies that have adopted the ISM Code, purchased the ISM Code documents mostly from foreign ship management companies. Normally, the documents should be revised to fit the actual requirements of the company who purchased them. Without the revision, the contents will not fit to the actual condition of each company's requirement and require excessively extensive work for the company both at the head office and in the ship. Also, the ISM manuals are not carried out in accordance with written procedures, thus it can be said that the safety management procedure is not fully functioning.

- 2) Several shipping companies share a structural problem where strong owner-managers and weak technical managers co-exist.

When the top management of a company is also the owner of the company, the advice of the lower technical management regarding improvement and reform is not sufficiently heard or adopted due to the disproportionately strong position of the owner-manager not to implement. In addition to this, lower level management in the field hesitates to correctly report the actual situation to the head office.

- 3) Poor diagnosis capability and insufficient instruction

Ship managers and operators lack the technical capacity to diagnose the condition of the ship from reported data, and issue suitable instructions. They can neither investigate the defects of ships from reported data to give good instructions in advance nor instruct appropriately on corrective measures. In general, the procedures of ship management of the company should be done by the Superintendents by checking and analyzing the ship's data, diagnose the problems and anticipate potential problems by giving appropriate instructions including preventive measures.

- 4) Propagation of technical knowledge is hindered.

There is also an apparent problem in the propagation of technical knowledge and it is a key factor in the overall low level of technical capacity of the sector. Technical managers are not motivated to share the data and knowledge, in particular, the training of junior technical managers. It therefore hinders the improvement in technology and knowledge of the company.

- 5) Technical succession and technical experience is interrupted.

Ship management requires hard work and advanced technical knowledge. However, due to low remuneration, retention of ship managers is difficult resulting to transfer of employees to other companies that offer a higher salary. Technical succession and

technical experience in a company is difficult to foster under a high turn over scenario.

5.1.2 Ship Operation on Board

Throughout the on-board survey, the following problems have been identified:

- 1) About 70% of the defects identified during the survey were cases that are solvable with only on-board crew's suitable corrective actions without special technical consultation.

Since the crews' technical capability is insufficient, neither abnormalities nor defects can be properly diagnosed from the ships operational data, even though unusual operation performance is apparent.

Photo 5.1.1 Examples of Non-conformities which are Solvable Only Crew's Effort



Source: JICA Study Team

- 2) On-board survey required in ISM system has not been conducted.

Under the ISM system, the safety officer and/or superintendent engineer usually carry out on-board survey to check the ship condition in accordance with the company standard checklist. However, in several shipping companies, such on-board survey is not carried out or improperly carried out resulting to failure in detecting defects and problems to be able to conduct preventive actions before the problems get worse.

- 3) The officers do not have the standard checklist/report and the completed ISM documents.

Responsible officers are neither providing the standard checklist/report nor submitting the completed documents to the company. Even if the shipping company conducted the on-board survey periodically, lack of standard formats hinders proper diagnosis

especially in analyzing data in time series and to iron out variations in the data, as well as, the quality of data is suspect. The company is supposed to be responsible in maintaining the required standard format and to carry out management system. If the reports are not implemented properly, the condition of ships could not be ascertained correctly.

- 4) Technical news/information is not shared within the company.

Important papers like technical news/information include non-conformity report, suggested corrective action, counter measures, accident/damage report, damage report, etc. are the key documents which are helpful in detecting potential damages or accidents in advance. It is specified in ISM that all accident related details and information should be disseminated to every relevant party, and to strive for taking preventive actions by comparing the ship's condition to other ships. Preventive action is recommended not only in ISM but also in ISO as the most effective measure to avoid damage and accident.

It is clarified that the problems of both the shipping companies and operation of the ships are the practical technique to manage the ship itself, and overall shipping and improvement of the company's capability is to deal with the non-conformities. Introduction and observance of ISM system can help solve the above mentioned problems. ISM system is the most required and important matter that should be introduced to the shipping companies and they should train the seafarers and superintendents to achieve a real ISM system and good ship management.

5.1.3 Recognition Gap of Education Level on Seafarers

Through the on-board survey and discussions with the stakeholders in maritime education, great differences among related parties in the basic understanding of the current education level on seafarers' education are found.

- 1) The education level of Indonesian seafarers is relatively lower than the other countries.

Compared to the Philippine situation, the education level of seafarers in Indonesia is low especially in practical operation. Looking at the international shipping employment, it was obvious that many Filipino seafarers are employed by many foreign companies while only few Indonesian seafarers were given the chance to be employed in international shipping companies.

- 2) Educational field does not recognize the gap.

Some responsible persons in Indonesian maritime education give the opinion that education to seafarers in Indonesia is adequate and sufficient. There is therefore a fundamental variation in the assessment of maritime education in the country. Continuing with the status quo will result in an increasing gap between Indonesian seafarers and seafarers from other countries in Southeast Asia. It is fundamental that the international uncompetitiveness of seafarers' educational level must be recognized so that reforms and improvements can be initiated.

- 3) The gap is the lack of capability to find and report the problems.

Even though some superintendents are well trained, many seafarers on-board are not well experienced to find and report the problems. Some of them are having a hard time

to communicate properly in reporting the causes of problems, damages or accidents despite the fact that they have graduated from a maritime university or an equivalent institution. This obviously shows that there is a gap in the technical proficiency between the superintendents and the seafarers. It is therefore necessary to develop the technical proficiency from the bottom to train the middle level seafarers.

- 4) New course for re-education of seafarers to train from practical approach is necessary.

Mostly, Indonesian seafarers have been educated well in knowledge or in theoretical approach. However, while working on-board, they are faced with various situations and they need the capability to apply their skills and knowledge to actual situations. Therefore, re-education of seafarers especially who has the experience of on-board work for several years is important and necessary to cultivate their application and practice capability.

5.2 Institutional Development to Introduce Ship-management

5.2.1 Framework Agreement

Ship-management is becoming a de facto standard of the international shipping. However there is no mutually accepted definition like a form of international convention. In practice, many large shipping lines have established their subsidiary ship-management companies such as MO Ship Management to Mitsui OSK Lines. Regional shipping associations have also introduced professional ship-management services based on standardized agreement forms. For example, the Baltic and International Maritime Council prepares a standardized agreement between ship owner and ship manager where both sides determines first ship-management services subject to contract among the following possible service areas: (Refer to Appendix 5-1)

- Crew management: crew selection, payroll and insurance arrangements, crew qualification and certificate in accordance with regulatory manning level, training, etc.
- Technical management: ship supervision, arrangement of dry dockings, repairs and spare parts, assignment of surveyors and technical consultants, development, implementation and preparation of a Safety Management System in accordance with the ISM-Code.
- Commercial management: chartering services, payment arrangement, appointment of agents and stevedores, etc.
- Insurance arrangements
- Accounting services
- Sale or purchase of the Vessel:
- Provisions: supply of food and drink
- Bunkering: supply of bunker fuel

Therefore the concept of ship-management is broad and various ship related services on behalf of the ship-owner are possibly arranged as outsourcing.

STRAMINDO has already identified three major ship-management services which may contribute to small to medium shipping companies' management capability in the Indonesian domestic shipping, i.e., technical management, insurance and crewing, particularly training and supervision of their onboard maintenance (Section 16.2, Main Text Volume 2, STRAMINDO).

5.2.2 Introduction of Ship-management Company and ISM-Code in Domestic Shipping

Although ship-management practice has spread over the world, they largely support international shipping. The ISM-Code is a set of comprehensive technical guidelines on ship operation and management, however, the domestic industry has no obligation to adopt it.

STRAMINDO considers that ship-management company and the ISM-Code are useful tools even in domestic shipping when they assign a ship of considerable tonnage for middle to long distance inter-island routes. Adversely small non-conventional vessels for near coastal voyage may take a different approach. Therefore, STRAMINDO has proposed to include "ship-management company" as one of shipping auxiliary services in the revised Shipping Law No. 21/1992 regardless of shipping dimension between international and domestic and to formulate practical training based on the ISM-Code in the domestic shipping which is deliberated in Section 5.4 of this chapter.

Japan and the Philippines also face similar domestic shipping development issues in terms of the ship-management company and the ISM-Code. Their challenges can be briefly reported as follows:

Japan: The maritime administration intends to institutionalize the ship-management company serving domestic ship-owners. It is expected of the ship-management company to contribute to reduction in shipping cost, provision of better employment and education opportunities to seafarers and ship-owners' business diversification. On the other hand, the ship-management company requests flexible employment conditions as it may endanger the present seafarers' rights by malpractice of flexible labor supply. It is necessary to revise Seafarers Job Stabilization Act to allow sending of seafarers from a ship-management company while seafarers' rights must be preserved.

Recognizant of its significant effect on safe shipping, the Japan Federation of Coastal Shipping Associations advocates the ISM-Code to its members. The Japanese shipping company can voluntarily acquire a Safety Management Certificate (SMC) through District Transport Bureau or Nippon Kaiji (NK).

Philippines: No institutional efforts have been made so far to introduce the ship-management company for domestic shipping.

On the other hand, it is noteworthy that the maritime administration has taken in the essences of the ISM-Code into domestic shipping. Since 2000, MARINA has adopted and implemented the National Safety Management (NSM) Standard for non-classed vessels in the country's domestic fleet. The NSM Standard complements the ISM code to foster enhanced maritime safety culture and environmental protection in the country. While both the ISM code and NSM standard is basically similar in concept and objectives, the NSM Standard, as formulated, differs from the ISM Code in certain

aspects. For one, the NSM Standard no longer require the development of an SMS by affected shipping companies as it is already provided to them through the NSM Manual developed by the MARINA. With the NSM Manual, the small and medium-scale operators are free from the tedious and costly process of SMS development, usually through the assistance of a hired consultant. Another difference lies in the fact that while the ISM code entails compliance with international conventions (hence the reason why only classed domestic vessels were deemed to be covered by it), the NSM Standard, which in turn cover domestic vessels not required to be classed, will be limited to comply with national rules and regulations, specifically the Philippine Merchant Marine Rules and Regulations.

The decision of the MARINA to adopt and implement both the ISM code and NSM Standard for the country's domestic shipping industry is in line with the findings that most maritime accidents here and abroad are attributed to human error, which actually impinges on the competence, training and skills of a vessel's crew. With both the ISM and NSM in place, it is expected that crew competence will be enhanced, perhaps not immediately but over the long term, as the culture of safety and environmental protection becomes ingrained among shipping practitioners. And the decision to implement them for the country's domestic vessels marks a pioneering effort for the Philippines, in so far as the region is concerned.

5.3 Assessment on Current Maritime Education

5.3.1 Current Education System in Indonesia

In general, the current education system related to maritime transport industries in Indonesia is grouped into three categories: seafarer's education, shipbuilding engineering and maritime business or port/shipping management.

(1) Seafarers education

There are 6 state seafarer education institutions and a sea communication education and training center under the Education and Training Agency of the Ministry of Communication, i.e. three colleges with bachelor course, STIP Jakarta, PIP Semarang, PIP Makassar and one upgrading school, BP3IP Jakarta and two rating schools, BPLPD Surabaya and BPLPD Barombong. Although, there are additionally 94 registered private schools, only the state-owned ones are able to produce officers and ratings of international standard.

Among them, STIP Jakarta is the oldest and the most representative seafarers' education institution in Indonesia.

STIP was founded in 1953 as a seamen training school for deck officers and marine engineers and in 1964 additional courses i.e., shipping management and marine communication were started. At present, it offers 4-year full time course including one year onboard training program in nautical studies, marine engineering studies and port/shipping management studies for senior high school graduates.

(2) Shipbuilding Engineering

The number of education institutions with shipbuilding engineering course is not so many. The prominent universities and colleges are ITS in Surabaya, Hasanuddin in Makassar,

Dharma Persada in Jakarta, Patimura in Ambon, UPN in Jakarta etc. Among others, ITS have started a bachelor course in naval architecture/shipbuilding in 1960 and started bachelor courses in marine engineering in 1982, ocean engineering in 1983, and since then it has largely contributed to the development of shipbuilding industry in Indonesia.

Similar to the automobile industry, shipbuilding is one of pyramid type engineering; wherein there are many fields of related engineering sectors such as mechanical, electrical engineering etc. Therefore, there may be many graduates of such departments among the employees in shipbuilding industries in addition to those coming from shipbuilding engineering course.

ITS is now under preparation for the inauguration of a new Department of Sea Transport within a few years.

(3) Shipping Management (Maritime Business)

Shipping management course has been recently taken up under several names such as maritime business or sea transport etc. depending on the university. The prominent universities are STMT Trisakti, University of Indonesia, STIP, UPN etc.

Among others, Trisakti has started sea transport management course for Diploma III and bachelor degree in 1991 in addition to air transport and land transport management courses. The total number of students in the sea transport course is about 800 at present. The graduates are engaged in shipping companies, port terminals and freight forwarders or stevedore companies etc.

5.3.2 Course Contents and Ship-management

The study team visited several universities such as Trisakti, ITS, Dharma Persada, etc. in order to grasp the current education program including the main contents of the lectures. The outline of those selected university is tabulated in Table 5.2.1.

The main contents of typical courses are summarized in Table 5.2.2. In addition to the basic common courses, which is not listed here, it includes many elements of ship-management such as safety management, ship maintenance/repair in general, management of shipping business and human resources, ship finance, etc. However, the lectures are carried out mostly in terms of theory or fundamental knowledge of the corresponding subjects. More practical courses on the ship-management such as a technical management inspection, daily maintenance and reporting, technical issues relating to safety and prevention of marine pollution or administrative management issues such as ship acquisition, financial cost accounting, ship-owners' liability, maritime claiming, insurance etc. seem to be insufficient in the current regular education system, though an on-the-job training at a dockyard, etc. is undertaken during the course.

Although it is not an academic institution, some attempts on practical management course have been undertaken by the technical assistances of European countries. One is named "Basic Shipping Course" by the Norway Ship Owner Association which was held for two weeks in August-September 2004 in Surabaya. The contents of the course included practical training on claiming, ship purchase, chartering, loan system, insurance, etc. The participants were about 50 professionals such as superintendents, middle officers of shipping companies and local port agents. It was terminated because of financial

constraint.

Another program is a two-day re-education (or seminar) course for shipping business, which is held twice a year and is held all over the world by BIMCO (Baltic International Consultation Organization). In 2004, there were 2 seminars in Jakarta and Bali, focusing on tanker related issues and dry cargo related issues, respectively. The course topics vary every time such as obligation of ship brokers, claiming, ship chartering, ship vending, etc. for the cases of conventional ships and tankers. The participants of the course are generally key persons of related companies such as managers, senior officers, and ship owners. The fact that there are a numbers of participants in spite of the rather expensive fee (Rp. 3.1million to Rp. 3.5 million per 2 days - seminar) implies a high market potential for practical education courses.

Table 5.3.1 Outline of Selected Universities

	STIP	Trisakti	Dharma Persada	UPN	ITS
Maritime Related Department	- Nautical Education - Marine Engineering - Shipping Management	- Maritime Transport Management	- Shipbuilding - Ship System-engineering	- Naval Architect (Shipbuilding)	- Shipbuilding - Marine Engineering - Ocean Engineering
Number of Students	About 300, 200 and 370 respectively Total: 870 students	About 800	75 each Total: 150 students	75 at Tg.Priok and 23 Total : 98 students	417, 355, 312 respectively total : 1,084 students
Number of Teaching Staff	63, 55, 30 respectively	Total 40	9 and 8 respectively	Total 25	Total 99
Facilities	Classrooms, Library, Laboratory, Navigation simulator, Full Mission Ship handling Simulator, Ship Engine Room Simulator and Real Equipment and Others.	Classrooms, Library Others	Classrooms, Library Laboratory Workshop (Bending test facilities), Others	Classrooms, Library Designing room Others	Classrooms, Library Hydro-dynamic laboratory Maneuvering test laboratory, Workshop etc.
Specialty	- Representative institution for seafarers education - Equipped with modern facilities for nautical technology	- Representative institution for shipping management education	- Representative institution for shipbuilding education - Lectures/training at dockyards at Tg.Priok	- Representative institution for shipbuilding education - Lectures/training at dockyards at Tg.Priok	- Representative institution for shipbuilding education - On the job training at shipyards and shipping company
Location	Marunda (East of Tg.Priok)	East Jakarta	East Jakarta	South Jakarta and Tg. Priok	Surabaya
Others	- Including one yr on-the job training - Training center of Mitsui O.S.K. Lines Training Center	- New building is now under construction	- Cooperation with ITS (invite lecturers from ITS)	- Marine Engineering Dept. and Sea Transport Dept. will be established - Cooperation with ITS	- MA and PhD course for naval architecture - New lectures on safety at sea and pollution, human resource management, entrepreneurship etc.

Source: Prepared by JICA Study Team

Table 5.3.2 Current Course Contents Related to Maritime Transport

Curriculum	Seafarers Education	Ship Building Engineering	Shipping Management	
Nautical Knowledge	A			
Motion and Ship Controlling	A			
Position Determination	A			
Sailing Science	A			
Electronic Sailing Science	A			
Compass & Steer System	A			
Visual Signal / Communication	A			
Polution Prevention	A			
Ship Machinery & Control System	A			
Industry Material and Chemical	A			
Main Activator Machine	A			
Control System	A			
Machinery Maintenance and Repair	A			
Diesel Motor & Gas Turbin	A			
Workshop & Maintenance Technology	A			
Sailing Safety	A			
Work Safety	A			
ISM Code	A			
Dangerous Cargo	A			
Maritime Law/Sailing Law	A			
Guard Duty	A			
Ship Building Theory	B	A		
Structural Engineering		A		
System and Equipments	B	A		
Ship Design		A		
Mechanics and Material Engineering		A		
Technology of Production		A		
Work of Line Planning		A		
Shipyards Design		A		
Reclamation and Dredging		A		
Ships Dynamics		A		
Fluid Mechanics		A		
Hydrodynamics		A		
Resistance and Propulsion		A		
Dynamics of Fluid Numeric		A		
Ship Repair	B	A	B	
Maintenance & Ships Repair	B	A		
Management Information System		A	B	
Material Management		A	B	
Repair Technique of Ship Machine	B	A		
Welding Inspection		A		
Port Industry		B	B	
Port Design		B		
Terminal Design		B		
Port Operation/Management			B	
Tariff and Taxation			B	
Warehouse and Logistics			B	
Nautical Engineering			B	
Shipping Business in general		B	A	
Maritime Economy		B	A	
Market Study			A	
Logistic Engineering			A	
Freight Forwarding Operation			A	
Contamination of sea		B	A	
Shipping Management Industry			A	
Management of Ship Agency			A	Note:
Ship Insurance			A	A: Regular
Maritime Business Regulations			A	B: Partly
Human Resource Management			A	included
Ship Finance & Ship Charter			A	

Source: Prepared by JICA Study Team

5.3.3 Available Education Programs outside the Country

As the demand on seafarers' reeducation to upgrade their capability increases, more programs and courses for both academic education and reeducation of seafarers become available particularly outside the country. IMO has developed a Technical Cooperation program which is designed to assist Governments which lack the technical knowledge and resources essential for shipping development.

(1) World Maritime University

The World Maritime University is the best example of the training for the seafarers. It was established in 1983 in Malmö, Sweden by IMO as a technical cooperation program and provides advanced training for the men and women involved in maritime administration, education and management. They have Taught Postgraduate Program in maritime affairs and Doctoral Program.

The Taught Postgraduate Program are consisted of 4 semesters; semester 1: foundation studies, semester 2: pre-specialization, semester 3: specialization and semester 4: deepen the specialization. The specialized courses are divided into 6 courses such as Maritime Safety and Environmental Protection, Marine Resource Management, Maritime Administration, Maritime Education and Training, Port Management and Shipping Management. The qualification awarded varies with the period of study: 17 months for the MSc, 12 months for the Postgraduate Diploma and 7 months for the Postgraduate Certificate. Students following the MSc program also benefit from field training all over Europe and in north America and Japan, gaining valuable insights into professional practices in the different host countries.

In Doctoral Program, they offer research degrees in Maritime Law and in International Commercial Law designed and run jointly with the University of Wales Swansea (UWS) in the United Kingdom.

Students who cannot secure funding in their home countries can be considered for one of the fellowships that are made available each year by a number of international donors.

(2) Singapore Maritime Academy

The Singapore Maritime Academy is the largest maritime academy in Asia. Its history began in 1957 when the Singapore Polytechnic took over the responsibility of navigation classes from the Sailor's Institution. It has almost 50 years experience in the field of Maritime Education and Training. Their aim is to 'provide quality maritime education and training to meet the needs of our students, industry and the nation, and to ensure that such education and training is continually improved and enhanced.'

They offer many maritime relating courses such as nautical studies, engineering courses, shipping management for full-time course and safety management and supply chain management for part time course. The shipping management course includes Diploma in Maritime transportation Management and Specialist Diploma in Ship Operations and Management as a part time course. The diploma in Maritime Transportation Management course is aiming to serve the needs of the organizations which are involved in a wide range of shipping business activities and need a pool of relevant shore-based expertise to run their businesses.

They are equipped with many useful laboratories and simulators. Through these equipment and practical training such as hands-on work, practical exercises, case studies, industrial attachment and field visits, the students can be experienced and trained well to work on actual on-board circumstances.

(3) **BIMCO's Educational Program**

BIMCO is the world's largest and most diverse private shipping organization. It has been established since 1905 to unite shipping interests and pursue the issues. Its membership spans 123 countries and includes more than 2,550 companies.

To monitor commercial and maritime developments throughout the world and to pass on accumulated expertise to members, BIMCO organizes vocational training courses and specialized seminars around the world. The courses are focusing on one broad topic on demand, seminars are addressing a wider range of topics and conferences are addressing a specific segment of the industry.

Also, they offer masterclass workshops which suit the development of existing and future decision makers who require a solid grounding in the mechanics of modern commercial practice. It is focusing on key aspects of maritime commerce: Laytime, Bills of Lading, Time Charter, Agency and Sale & Purchase.

5.4 Development of New Education Program

During STRAMINDO study, the following four (4) study areas have been proposed to the seafarers' re-education program. In addition to this, some mandatory courses and interdisciplinary courses were proposed.

- 1) Ship-management studies
- 2) Administration and legal studies
- 3) Management studies
- 4) Shipyard management studies

However, based on the actual situation as mentioned in the former section, these courses can be prioritized as to its importance and urgency as follows; 1) Ship-management, 2) Repair and Shipyard Management, 3) Shipping Business Management and 4) Administration. Since ship-management covers many fields but contains basic matters, it should be prioritized in the beginning of the new education program.

5.4.1 Introduction of a Simplified ISM Code as a Ship-management Tool

It is recommended that the application of proper ship management be independent on the nature of service, i.e. international or domestic, but rather safe ship operation management should be performed in line with the system which the company developed based on the ISM code.

ISM code is one of the international treaties that all ships more than 500 GT operating in international routes are obliged to apply since 1998. This is a similar system to ISO 9000 that is required for process and implement for quality management. Under this system, the shipping company should be audited in their Document of Compliance (DOC) annually and

the vessels should be audited for Safety Management Certificate (SMC) every 2.5 years.

The contents of the ISM code consist of various matters such as:

- Policy,
- Organization and authority,
- Document management,
- Safe operation,
- Ship's equipment maintenance,
- Emergency,
- Deficiency and corrective action,
- Internal audit,
- Training and drill, etc.

Although ISM code is obligatory in international shipping, its philosophy and discipline is universal and thereby applicable to domestic shipping as well. To ensure safety in operation and prevent environmental pollution, even domestic shipping should apply ISM code but adapted to suit to the condition of each shipping company. However, since it is difficult to apply ISM Code directly to domestic shipping, it is important to develop a basic system design which corresponds to ISM Code. Since this is a large-scale project, the Indonesian government should take the leadership to work with ship-owners.

To make an ISM code suit each shipping company and their individual situation, some sample documentations such as manuals, procedures, and check lists will help restructure the ISM Code to fit Indonesian conditions. The Indonesian Safety Management should be developed to include important and indispensable matters arranged systematically, with simple required procedures adapted to the actual condition of Indonesia. Therefore, each shipping company can adapt the procedures suited to each company based on the original code.

It is important to note, that ISM should be understandable (*vis-à-vis* readable) to every level of seafarers and superintendents.

5.4.2 Development of Course Contents

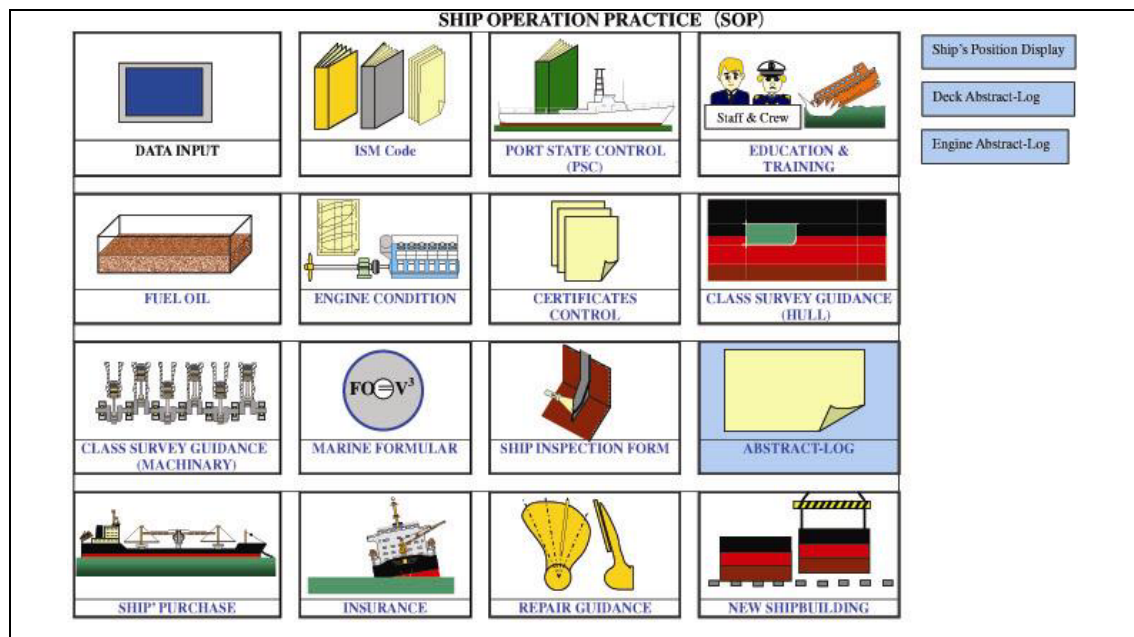
It is necessary to establish the training course wherein seafarers can receive practical training from skillful and experienced superintendents. To be effective, the basic approach should be to firstly check the level of local seafarers or superintendents, then perform on-the-job training.

In addition to this, training materials in the Indonesian language should be developed for practical training to be carried out more efficiently and effectively, such as analysis of main engine operation which requires analysis of data to diagnose the problem and to perform preventive maintenance or repair. During this study, a trial short course training was conducted in December (refer to Appendix 5.1, 5.2). For this training course, sample training material (in the form of a computer program) was developed (refer to Appendix 5.3) and it includes the following subjects:

- Data Input
- ISM Code
- Port State Control (PSC)
- Education & Training
- Fuel Oil
- Engine Condition
- Certificates Control
- Class Survey Guidance (Hull)
- Class Survey Guidance (Machinery)
- Marine Formula
- Ship Inspection Form
- AB-Log
- Ship Purchase
- Insurance
- Repair Guidance
- New Ship Building

These topics were selected and designed to focus on basic knowledge on ship-management and to train technical matters which is required for safe ship operation and management on board.

Figure 5.4.1 Top Page of the Text CD-Rom



Source: Text CD-Rom of Ship Operation Practice

Photo 5.4.1 Scenes of Short Training Course



Source: JICA Study Team

5.4.3 Creation of Appropriate Curriculum

Once the training course will be established, the curriculum will play the most important role for success. The curriculum should suit the current and various needs of ship-management. Although, ship-management has many aspects, the curriculum should be elaborated on these aspects and should be selected carefully. Specifically, it should include the abovementioned 16 subjects among others.

To develop the curriculum, it will be necessary to hold a joint committee consisting of specialists who would take an active part in the different fields, such as professors of local marine college, shipping company engineers and foreign lecturers. Each specialist's knowledge will be collaborated by others by carrying out opinion exchange even though each specialist may be biased towards their own respective field.

The detailed curriculum is reported in Chapter 6.

5.4.4 Recommendations

To conduct the training course, the participation of seafarers is indispensable. However, since most of the seafarer work on operating ships, it is difficult for them to participate in a long-term training course without any support from the shipping company which they belong to. Furthermore, the government should support the participants or shipping companies that support their seafarers' re-education with subsidy or the like. The following are some examples to support seafarers by shipping company.

1. The shipping company subsidizes the salary and tuition of the seafarers who want

to participate in the training course.

2. The participants who are dispatched by the shipping company should be subsidized the total amount of their salary, transportation expenses and tuition.
3. The participants who are dispatched by the shipping company should be contracted in advance by their shipping company so that they do not resign after a certain number of years after the training course. It's better to make an agreement under INSA or relevant institution about the issue of resignation of seafarers.
4. An educational fund should be established by relevant authorities or the relevant shipping company/companies for participants who are unemployed or resigned from a company to participate in the training course. The fund would be lent to participants who are unable to afford the training by themselves.

The certificate of the graduates should be issued by a certain authority and accorded to the graduated level. Shipping companies or the educational fund will provide sufficient monetary allowance to raise the motivation for the participation in the training course and for skill-enhancement training.

To keep the proficiency level of participants to a certain level, participants should be required to pass a certain condition such as practical experiences on-board, submit a recommendation letter from the shipping company and so on. Otherwise, if the participants have large variations of their knowledge or capability, the training course should be modified to include various program levels or class divisions to suit each participant's level.

The lecturer of the training course who trains superintendents is required to be well versed in ship-management and have a broad knowledge such as, international maritime treaties, new shipbuilding, engine out-fitting, ISM Code, ISPS, various technology of new ship and repair ship and insurance processing. Generally, the superintendents of major shipping companies are subdivided and specialized into specific fields and are not generalists, so they may not be ideal as lecturers. On the other hand, superintendents of minor shipping companies mostly manage many fields and disciplines in a company and have a wide knowledge base. The lecturer should be selected without bias towards a specific shipping company or institution. Some examples of the qualifications for the lecturer are as follows:

1. Has a boarding period of three years or more as an engineer,
2. Has an experience of three years or more as a technical superintendent engineer,
3. Has a management experience of three years or more as a foreign crew , and
4. Has ship repair experience at any shipyard in Southeast Asia.

CHAPTER 6 ADVANCED MARITIME EDUCATION PROGRAM

6.1 Background

As discussed in STRAMINDO I, the development of management-class human resources is one of the most important issues for modernizing shipping business. The necessity of professional expertise in ship-management has been recognized. Accordingly, an advanced education program with priority to ship-management course was proposed. If basing on the assumption made by STRAMINDO, a ship-management service industry with about 3,000 employees including 300 senior superintendents and 900 junior superintendents will be needed in the next two decades.

Judging from the result of an on-board survey as elaborated in chapter 5, the ships for domestic transport are not well maintained due to the lack of practical knowledge and proper checking/maintenance work. This may be common in nations with less developed ship-management system, but it is particularly remarkable in Indonesia because of the mostly second-hand vessels in operation. As a consequence, the current management system is causing the following problems:

- Decrease in operation rate of ships as a result of the lack of technical information on the current ship condition.
- Increase in machine troubles and subsequent increase of docking time as well as the increase in repair cost
- Overall decrease in ship operation performance

Ship-management is essential for preventing marine accidents, reducing repair days and cost, and extending the service life of ships. In addition, it will satisfy the requirements on ship quality from ship lending institutions. However, most of the domestic shipping companies do not have enough understanding and concern regarding ship-management system. Even if maritime casualties and accidents frequently occur, they are not sufficiently identified and explained in terms of the causes of the accidents. So, almost nothing has been learned from the past case studies.

For the purpose of improving the above situation, all level of capacity building is important, including the shift in the way of thinking of managers, refining of technical capability of responsible engineers, upgrading of the basic applied knowledge of crew, etc.

Re-education of seafarers is indispensable for improving the operation management of Indonesian domestic fleet. Education based on a practical and useful curriculum is important.

In order to discuss various factors and establish the advanced education program for ship-management, a preparatory committee consisting of DGSC, ETA, INSA, universities has been set up in the course of the study.

6.2 Proposed Education Program

6.2.1 Conceptual Framework

The lack of appropriate ship management results in poor operation and maintenance efficiency of the shipping business. In order to improve the situation, the ship-management course will be established as a post graduate education program for potential superintendents or ship managers with practical knowledge and skills required to be aware of the complexities faced in handling the various operation problems. Therefore, the participants of the course will be expected to either have sufficient educational background or basic knowledge or several years experience in maritime transport related industries.

(1) Course Preparation

The advanced education course will be established by the governments' initiative. Therefore, various forms of governmental supports, particularly institutional arrangement for organizing the committee of advanced education program, accreditation of the course certificates or preparation of teaching staffs or teaching materials will be required.

(2) Platform University

The platform university will have an active role for setting-up the actual operation of the course, particularly providing the know-how of the education business such as establishing courses, preparation of lecturers, recruit of participants (or students), PR of the course and accounting management. It is also desirable that some of the teaching staffs of the platform university are eligible to be course lecturers.

It is more desirable if it can provide the facilities required for the course. For this course, sophisticated facilities such as simulators, testing laboratory etc. will not be required, only neat classrooms and management office will be utilized.

With regards to location, Jakarta or Surabaya should be selected since most of the potential beneficiaries are working there. Jakarta will be more advantageous because many shipping and logistic companies are concentrated there and it is very accessible to the office of Education and Training Agency (ETA) of the Ministry of Communications.

(3) Location of classroom

The proposed course should be preferably held at the location easily accessible to shipping companies or maritime related industries so as to enable the participation of company staffs. Taking into account the current location of those companies, a location sufficiently close to Tg. Priok is deemed to be desirable.

(4) Teaching Staffs

The teaching staffs for the course may consist of local and foreign experts from private companies or government officials or lecturers of universities. As the number of senior superintendents in Indonesia is very limited, foreign experts will be invited and expected to bring up local teaching staffs through the implementation of the education program.

6.2.2 Course Outline

Taking into account the nature of the participants, the course period should be as short as possible. On the other hand, there is a need of a wide range of syllabi to cover the

ship-management issues. In order to correspond to the actual needs, two courses are prepared: short-term course and half-year course.

The short-term course is focused on the practical knowledge on specific topics, considering case studies for managing staff, particularly the superintendents of shipping companies. On the other hand, the half-year course intends to provide a wide range of practical knowledge on board for potential technical staff.

(1) Short term Course for Managing Staff

a. Purpose

For improving the management ability of superintendent or administrators in shipping companies, more practical knowledge on specific topics will be provided.

b. Participants

The superintendents or designated persons with at least several years' experience working in shipping companies or related industries.

By reducing the course period, participation of middle-higher class of managing staff will also be encouraged.

Course period: ranging from 2 days to 10 days

Class of about 30 participants is expected.

c. Contents

The lecture will be undertaken on the basis of ISM code focusing on a specific topic by practical approach such as:

- How to make a ship inspection
- Trouble shooting method (case study)
- Control of fuel oil and engine conditions, etc.

The actual contents will be decided by the platform university, taking into account the appraisal of the trial implementation conducted in December 2004.

d. Platform University

As a platform university, the following three universities have been selected in the preparatory committee meeting (refer to Table 6.2.1). Accordingly the short-term course will be held alternately at the three universities.

- Trisakti (Jakarta)
- STIP (Sekolah Tinggi Ilmu Pelayaran) (Jakarta)
- ITS (Institute Technology Surabaya) (Surabaya)

e. Number of Short term course

It is practical to assume short-term courses to be held 2 or 3 times a year, taking into account the professional importance of the participants in the companies.

Table 6.2.1 Comparison among Selected Universities

Criteria	STIP	Trisakti	Dharma Persada	UPN	ITS
Availability of Facilities for the Course	Excellent ⊙	Good ○	Good ○	Fair	Good ○
Reputation among people	Good ○	Good ○	Fair	Fair	Excellent ⊙
Management Capability for Education Business	Fair	Good ○	Good ○	Good ○	Fair
Possibility of Night time Class	Maybe Not existing	Possible Currently existing ○	Maybe Not existing	Possible Currently existing ○	Maybe Not existing
Specialty of Management Course	Existing ○	Existing ○	Not existing	Not existing	Not existing Now under preparation
Accessibility for Students from shipping companies	Not easily accessible by public transport	Easily accessible by public transport ○	Not easily accessible by public transport	Easily accessible by public transport to Tg. Priok campus but too small facility	Easily accessible by public transport ○
Availability of Local Lecturers in Ship-management	Available ○	Not available	Probably	Probably	Available ○
Daily Communication with ETA or DGSC	Easy ○	Easy ○	Easy ○	Easy ○	Not easy
Overall Comparative Advantages	Preferable	Preferable			Preferable (in case of Surabaya based)

Source: JICA Study Team

f. Fee

In case of BIMCO seminars on practical shipping matters which was held for 2 days each in Jakarta and Bali in August 2004, the participation fee was Rp. 3.1 million to Rp. 3.5 million per seminar depending if the participant is a BIMCO member or not.

This fee, however, seems to be too high to make the course sustainable. More reasonable fee has to be determined through a market survey.

g. Accreditation

The accreditation system is important for the course to be sustainable. The accreditation of the course will be made together by the ETA and DGSC, where the ETA will issue a recommendation for the advanced program for ship-management institution to DGSC and

DGSC will issue a certificate of approval. The certificate for the successful participants will be provided from the platform university under the supervision of DGSC.

Certificate for the course: Short-term Course for a specific topic

(2) Half-Year Course for Technical Staff

a. Purpose

To upgrade the fundamental capability of crew and shipbuilding workers, the course will provide the education on how to apply their basic knowledge related to their work from various aspects. Since the participants have working experience, a wide range of practical knowledge will be effectively absorbed by using a check list system.

b. Participants

The workers with at least one year experience in shipping company or shipbuilding industry.

Class is held at night so as to encourage the participation of company employees.

Class of about 20 participants is expected.

c. Contents

The curriculum may include, but not limited, to the following:

- ISM Code
- Good Maintenance of Vessel (Port State Control)
- Training of Crew
- Analyzing of Engine Condition
- Certificates Control
- Class Survey Guidance (hull and machinery)
- Ship Inspection
- Ship Purchase
- Insurance
- Repair Guidance etc.
- New ship building

d. Platform University

As a platform university for half-year course, two universities have been selected in the preparatory committee meeting. Hence, the course will be held at Jakarta and Surabaya by using the same teaching materials, since both cities have good accessibility nationwide and many shipping companies have their head or branch office there, but for companies located in the eastern regions, Surabaya is more preferable.

- STIP (Sekolah Tinggi Ilmu Pelayaran) (Jakarta)
- ITS (Institute Technology Surabaya) (Surabaya)

e. Accreditation

The accreditation of the course will be made together by the ETA and DGSC, where the ETA will issue a recommendation for the advanced program for ship-management

institution to DGSC and DGSC will issue a certificate of approval. The certificate for the successful participants will be provided from the platform university under the supervision of DGSC.

Certificate for the graduates: Ship-management Half-Year Course

(3) Implementation Scheme

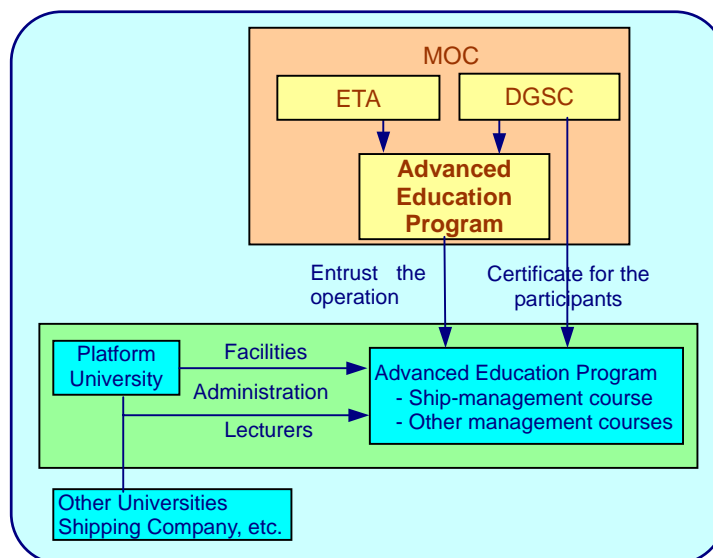
For the advanced education of ship-management, ETA is considered to be responsible for implementing the program. As the executive institution, most desirable universities have been selected based on the comparative analysis of the given conditions of candidate universities such as specialization, location advantages, etc. The education program will be operated as a joint project between ETA, DGSC and the platform universities.

The education program does not need to prepare special training equipments and facilities, but instead of the initial investment for the equipments, every platform universities shall provide their equipment and facilities for the best use of their available ones and it requires well-prepared teaching materials and lecturers who have deep knowledge and experiences in ship managements. A sample of educational software has already been prepared by the JICA Study Team.

ETA will prepare the teaching materials with possible external resources, while the platform university will provide the facilities and administration services including preparation of course contents, recruitment of participants and preparation of teaching staffs under the supervision of ETA/DGSC.

In order to authorize the advanced education program for ship-management, the establishment of accreditation system is important. A certificate for the participants will be provided by DGSC.

Figure 6.2.1 Institutional Framework for Program Implementation



Source: JICA Study Team

The curriculum for the regular course and the corresponding lecturers are prepared as shown in Table 6.2.2. The curriculum has been proposed by considering the current

ship-management problems; particularly the lack of applicability of basic knowledge and insufficient capability to diagnose ship conditions on-board. As a result, it may not be comprehensive but rather of symptomatic treatment, therefore, it should be improved or revised step-by-step, after the implementation of the first half-year course.

Table 6.2.2 Proposed Curriculum for Regular Course

Contents	Credit	Local Lecturer	Foreign Lecturer
Shipping Business Administration Matters such as chartering, purchasing, crewing, etc.	2	X	X
Case Study on the Shipping Business	0.5	X	
Practical knowledge of ship insurance	0.5	X	
ISM Code and quality management in general	1	X	X
Basic Technical Knowledge on ship-management	1	X	
Practical ship-management work on-board	1		X
Certificates management	0.5	X	
Crew Training for Emergency (Firefighting, Rescue boat, Pollution prevention, etc.)	1	X	
Abstract of Log-book	0.5	X	
Practical knowledge of ship inspection	1		X
Check list for Port State Control (PSC)	1	X	X
Class Survey (Hull, Machinery)	0.5		X
Basic knowledge on Ship Maintenance and Repair	1	X	
Marine Formula	0.5	X	
Practical ship repair work	1		X
Practical knowledge on Fuel Oil Control	0.5	X	
Practical knowledge on Shafting system	0.5		X
Practical management and analyzing method of engine condition	1		X
Supervision of new ship-building	0.5		X
Trouble shooting method (Case Study)	0.5		X
Total	16.0	8.0	8.0

Note: X: The corresponding lecturer will be responsible for the lecture.

The half year course is assumed to consist of 16 - week lectures (16 credits).

Source: Prepared by JICA Study Team

6.2.3 Expansion Steps of Advanced Education Program

In STRAMINDO I, various management courses have been proposed for the advanced education program. As the first step, the program focuses on ship-management course. Then, the program will expand to the ship-repair and shipyard management course and shipping business management/administration course.

Before starting the ship-management course, preparatory work has to be done, namely, preparation of classrooms, textbooks, selection of teaching staff, and recruitment of participants for the course, etc.

The teaching staff may consist of local as well as foreign experts at first, but after two years, the course will be operated only by local staff except for the special dispatch required for the short-term course. This is realized by using the first two years as an OJT period of local staff. New local professors may be selected from the local lecturers or among the participants with excellent results. This system is applied to the other management courses which are scheduled after the ship-management course. By doing so, the advanced education program will contribute to the upgrading of teaching staff's capability as well as to a better communication between the teaching staff and participants.

Table 6.2.3 Course Preparation and Implementation

	2005	2006	2007	2008	2009	2010	2011
Preparation of Facilities	■						
Preparation of Textbooks	■	■					
Selection of Teaching Staff	■						
Recruitment of Participant	■	■	■	■	■	■	■
Ship-management Course		■	■	■	■	■	■
Ship-repair and Shipyard Management Course				■	■	■	■
Shipping Business Management/Administration						■	■

Source: JICA Study Team

In the case where facilities are provided by the platform university, the initial investment cost will be remarkably reduced to the purchase and renewal of some computers only.

(1) Course and Teaching Staff

As stated above, the education program will begin with ship-management course at the first step and be followed by ship-repair and shipyard at the second step and shipping business management course at the third step. Each one has a short term course for professionals and a half year course for young professionals.

The half-year course for ship-management will require one professor and two visiting lecturers and two permanent staff for administration. In addition, the short-term course will require three visiting lecturers additionally. As the half-year course will be held at the

evening session, the professors can work for the short-term course as well.

Although two universities are nominated for the short-term course, the number of foreign professors should be minimized due to the constraints from the actual availability of foreign experts. Accordingly, it was assumed in the preparatory committee meeting that if the foreign expert is limited to only one, one university (maybe ITS) will start the course only by local staff after receiving lectures from the foreign expert at the other university (maybe STIP) for a half year period by using the proposed teaching materials. Likewise, other management courses will require additional teaching staff when they start.

Table 6.2.4 Teaching Staff Planning

Course Menu		1st Stage(2 years)				2nd Stage(3rd&4th)				3rd Stage(5th&6th)				4th Stage(7th yr ~)			
		Prof	Lectr	Staff	Total	Prof	Lectr	Staff	Total	Prof	Lectr	Staff	Total	Prof	Lectr	Staff	Total
Ship-management																	
Half year course	Local		2	2	4	1	2	2	5	1	2	2	5	1	2	2	5
	Foreign	1			1				0				0				0
Short term course	Local		2		2		2		2		2		2		2		2
	Foreign		1		1		1		1		1		1		1		1
Sub-Total					8				8				8				8
Shipyards Management																	
Half year course	Local						2	1	3	1	2	1	4	1	2	1	4
	Foreign					1			1				0				0
Short term course	Local						2		2		2		2		2		2
	Foreign						1		1		1		1		1		1
Sub-Total					0				7				7				7
Shipping Business Management and Administration																	
Half year course	Local										2	1	3	1	2	1	4
	Foreign									1			1				0
Short term course	Local										2		2		2		2
	Foreign										1		1		1		1
Sub-Total					0				0				7				7
Total Teaching Staff																	
Half year course	Local	0	2	2	4	1	4	3	8	2	6	4	12	3	6	4	13
	Foreign	1	0	0	1	1	0	0	1	1	0	0	1	0	0	0	0
Short term course	Local	0	2	0	2	0	4	0	4	0	6	0	6	0	6	0	6
	Foreign	0	1	0	1	0	2	0	2	0	3	0	3	0	3	0	3
Total					8				15				22				22

Source: JICA Study Team

(2) Financial Plan

In order to check the sustainability of the education program, financial analysis is roughly made in this section.

a. Facilities and Equipments

The facilities required for the course is mainly classrooms, office and some computers and projector. No other special facilities are necessary. The construction cost for the facilities is estimated at Rp. 3,500 million.

In the case where the facilities are provided by the platform university, the initial investment cost will be remarkably reduced to the purchase and renewal of some computers only.

Table 6.2.5 Cost for Facilities and Equipments

(million Rp)

Facilities and Equipments	mil Rp	Year							
		0	1	2	3	4	5	6	
3 classrooms + office	2000	2000							
Labo + Library	1500	500		1000					
Sub-total	3500	2500	0	1000	0	0	0	0	
Machines	number		2	20				2	20
Computer	mill Rp		20	200				20	200

Source: JICA Study Team

b. Preparation Cost of Textbooks

The preparation cost of the textbooks is roughly estimated at about Rp. 2.7 billion. This does not include any revisions required in the course of implementation.

Table 6.2.6 Textbooks Production

(million Rp)

	million Rp/ month	M/M	Cost
Manager	180	3	540
Expert	180	8	1,040
Engineer	180	8	960
Travel expense	30mill Rp/trip	4 trips	120
Total			2,660

Source: JICA Study Team

c. Administration cost

Administration cost, water, electricity, communication, printing, maintenance and recruiting costs are taken into account. They are likely to increase according to the expansion of courses in the succeeding steps.

d. Salary of Staff

The wage scale of professor ranges from Rp. 3 million to Rp. 5.5 million at present. Therefore, it is assumed to be Rp. 5.5 million for the proposed program in addition to transport allowance of Rp. 1 million is provided. As for the lecturers, the current wage ranges from Rp. 30,000 to Rp. 40,000 per hour. Taking into account the specialization of the course, the wage payment is assumed to be Rp. 60,000 per hour.

The salary of administration staff is assumed as Rp. 2 to Rp. 4 million per month.

The proposed program will require foreign experts as professor and/or visiting lecturer. In case of professor, monthly salary is assumed to be Rp. 100 million and Rp. 15 million per course for visiting lecturer.

e. Revenue

The current tuition fee of the bachelor course ranges from Rp. 1 million to Rp. 8 million per semester. The fee for master or doctor courses is even higher. Then, the tuition fee for the

regular half-year course is assumed to be Rp. 8 million per semester.

In case of the practical training program by BIMCO, the fee for the two days course was Rp. 3.1 to Rp. 3.5 million. However, the fee for the short-term course in this program is set to Rp. 1 million per course taking into account affordability to participants. It is assumed that the short-term course will be held twice a year.

Total number of participants is expected to increase in accordance with the course expansion plan.

f. Profitability

Based on the above assumptions, the annual operation expenditure and revenue are calculated.

As shown in Table 6.2.7, the program will be in deficit throughout the 8 years period, even excluding the initial costs for facilities and teaching materials. This is caused by the high salary of foreign experts. This indicates that the course operation will be quite difficult in terms of financial viability if all the costs are accounted.

Table 6.2.7 Profitability of Course Operation

		Million Rp							
Expenditure/Revenue		Year							
		1	2	3	4	5	6	7	8
Administration Cost									
Water/electricity	0.3 mil Rp/person	17.4	17.4	34.5	34.5	51.6	51.6	51.6	51.6
Communication	0.5 mil Rp/person	4	4	7.5	7.5	11	11	11	11
Printing	0.4 mil Rp/person	23.2	23.2	46	46	68.8	68.8	68.8	68.8
Maintenance	0.3 mil Rp/person	17.4	17.4	34.5	34.5	51.6	51.6	51.6	51.6
Recruiting Cost	20 mil Rp/person	20	20	40	40	60	60	60	60
Miscellaneous	0.5 mil Rp/person	29	29	57.5	57.5	86	86	86	86
Sub-Total		111	111	220	220	329	329	329	329
Salary		1,419	1,419	1,644	1,644	1,869	1,869	754	754
Local		109	109	224	224	339	339	424	424
Foreign		1,310	1,310	1,420	1,420	1,530	1,530	330	330
Tax payment		228	228	272	272	315	315	133	133
Total Expenditure		1,758	1,758	2,136	2,136	2,514	2,514	1,215	1,215
Total expenditure excl. Foreign expert		229	229	488	488	746	746	857	857
Number of Course		1	1	2	2	3	3	3	3
Number of students									
Half yr course		20	20	40	40	60	60	60	60
Short term course		30	30	60	60	90	90	90	90
Total		50	50	100	100	150	150	150	150
Revenue from tuition fee									
Half yr	(8 mil Rp/semester)	320	320	640	640	960	960	960	960
Short term	(1 mil Rp/course)	60	60	120	120	180	180	180	180
Total		380	380	760	760	1140	1140	1140	1140
Balance (Revenue-Expenditure)		-1,378	-1,378	-1,376	-1,376	-1,374	-1,374	-75	-75

Note: The expenditure does not include initial investments such as facilities/equipments, textbooks, etc.

Source: JICA Study Team

Only if the salary of the foreign experts is excluded from the expenditure, i.e., the foreign experts to be assigned under a technical assistance program, the operation balance would turn out to be positive from the first operating year. In this case, the profit in the first year will be approximately Rp. 150 million. Consequently, the table indicates that the implementation committee of the education program should look for such financial resources for the foreign experts' salary.

6.3 Conclusions

- The urgent needs of the education for ship-management have been found through various shipping company surveys as well as on-board studies.
- The education program is herewith proposed to hold a short-term course for professionals and half-year course for young professionals.
- The first two years should be used as an OJT period for local teaching staff, for the purpose that the course will be able to operate without assistance of the foreign experts after the second two years.
- As the proposed program require large amount of initial investment costs, and high operation cost for foreign experts, an appropriate finance scheme has to be sought for implementability and sustainability.
- For instance, the following cost sharing should be examined:
 - 1) Facilities such as classrooms, office may be provided by the platform university with a minimum governmental charge.
 - 2) The implementation committee should request the preparation of teaching materials within the framework of technical assistance.
 - 3) The implementation committee should also request the dispatching of the foreign experts as professors or lecturers through technical assistance.
- In addition, the proposed education program requires institutional arrangements by DGSC, such as the authorization of ship-management in shipping industry, accreditation system for the institute conducting the course and certification for the successful participants.
- Curriculum of the short-term course has been tentatively proposed taking into account the current conditions of ship-management. However, the curriculum should be reviewed periodically and revised in accordance with the demands of prospective participants.
- In order to encourage the participation of young technical staff, scholarship system should be considered by selecting the applicants through a pre-entrance qualification system. Financial resources for consideration are contributions from shipping industries, the operating profit of the course, etc.
- When the advanced education program gains good reputation, the program should not be limited to Indonesian nationals. It will become a center for ASEAN excellence.

CHAPTER 7 STUDY CONCLUSIONS AND UPDATE OF STRAMINDO ACTION PLAN

This study program, STRAMINDO II, is a follow-up of the STRAMINDO study and commenced in August 2004 in order to provide further technical assistance in the implementation of the Action Plan recommended by the STRAMINDO study. Specifically, the study focuses on technical assistance in the implementation of a public ship finance scheme, and in the implementation of an advanced education program together with overall policy advice on domestic shipping development. In the course of the study, the Study Team has carried out the above tasks in collaboration with the counterpart agencies, other related governmental agencies, financial institutions, educational institutions, and shipping and shipbuilding industries.

This chapter shows the conclusions obtained from said undertakings and the updated STRAMINDO Action Plan after reviewing the corresponding activities up to March 2005, clarifying any important differences and identifying tasks towards 2009.

7.1 Study Conclusions

A. Shipping Policy Development

Shipping policy in Indonesia is now in the midst of a structural change. It has been demonstrated by active policy debates even within the study. It is understood that the focal area is the way to address national shipping capabilities. The shipping industry has continuously requested the Government to resort to the use of policy initiatives. It can be observed that other industrial sectors have gradually shared the view with the shipping industry. The study suggested that the policy on increasing national shipping capabilities which naturally support the supplier's side be implemented in accordance with other policy directions such as enjoying better shipping service from the user's side and increasing social awareness on safety, environment, and security. It has introduced many practices in other countries and applicable policy tools under current shipping environments internationally and domestically. At the end, the study has proposed a desirable policy package to be implemented in Indonesia.

The recommendations in this regard are as follows:

- A national shipping policy is to be formulated and implemented for the benefit of all, where it must be necessary to involve users (shippers, cargo owners and passengers) and other stakeholders. It is desirable to spell out a national shipping policy as a high-level government document.
- Policy tools to strengthen national shipping capabilities can be broadly divided into four: (1) establishment of shipping company and registration of ship, (2) market access control represented by cabotage, (3) beneficial fiscal regimes, and (4) shipping revitalization measures. It is recommended that the Government design a policy package in selecting tools and supervise its effectiveness from time to time in terms of national shipping capabilities, and add or change some of policy tools when necessary.

- Under the current situation of Indonesia's domestic shipping, beneficial fiscal regimes, particularly public ship finance, should be prioritized within a policy package. Public ship finance can give opportunities to domestic shipping companies who can access stable and long-term domestic fund. It can promote investment in Indonesian flagged vessels and reduce dependency on foreign flagged vessels. It may also trigger the switch of modernizing shipping business management.

B. Public Ship Finance Scheme

The study has concluded two things. First, there are widely spread needs to tap public ship finance among domestic shipping companies. The second is that a public ship finance scheme through JBIC's two-step-loan (TSL) is applicable in the country based on the existing institutional framework of public development finance and other donors' practices despite Indonesia's lack of experience in JBIC TSL scheme. The study expected a high economic return from the proposed public ship finance scheme, i.e., EIRR-28.4% while it enable borrowers to enjoy sufficient profits to invest more in competitive vessels in their business cycles. It is noted that consensus building has progressed and thus the public ship finance project is given top priority among candidate projects under DGSC in Infrastructure Development Program 2005-2009 compiled by MOC.

The recommendations to swiftly and effectively implement the project are as follows:

- An implementation program covering implementation scheme, implementing body, schedule, investment plan, project budget, engineering services and so on shall be prepared immediately for necessary coordination meetings such as Bappenas, other governmental agencies and likely JBIC.
- As preparatory works, core organizations of the proposed implementation scheme shall be established among key players such as a Project Management Unit and an Apex Financial Intermediary. Key players may include MOC, MOF, MOI, Bappenas, some of state-owned financial institutions.
- Under the proposed project, domestic vessels shall be built by means of adequate method based on suitable ship design and the study output will be considered for reference. The proposed lending scheme shall work properly for other targets such as reconstruction of existing vessels, renewal of young second-hand vessels, facility modernization and expansion at shipyards, port logistics providers and ship-management companies.
- In order to avoid unnecessary ship asset devaluation, sufficient ship-management shall be provided to the financed vessels. Taking account of limited satisfactory practices in Indonesia, it is suggested that an adequate system of ship-management services for the project be framed within the project's engineering service including coverage, degree, organization and payment.

C. Advanced Maritime Education Program

Based on site surveys, the study confirmed that ship-management services were not provided adequately and the number of competent superintendent is limited. The way to educate ship-management in the country has been examined and sample teaching materials have been prepared accordingly. The study proved that there are sharp interests among domestic shipping operators and learning effect is significant as the result of organizing a short training course by the study team. Meanwhile, an education program have been mapped out in collaboration with DGSC, ETA and the educational institutions currently opening shipping related courses. This program consists of half-year course and short-term course while STIP and Trisakti in Jakarta and ITS in Surabaya are designated as platform universities.

The recommendations in implementing the proposed advanced maritime education program starting from ship-management are as follows:

- Experienced foreign lecturers from the prevailing ship-management field shall be invited for a certain period (e.g., two year) as OJT for local teaching staff.
- Original teaching materials suitable for Indonesian shipping conditions shall be continuously developed based on the output of the study.
- The pamphlet and website prepared in the study shall be used to advocate the importance of ship-management education and to advertise the proposed training program.
- For sustainable program operation, the designated platform universities shall fulfill their tasks such as local lecturers, education facilities and secretariat works while external assistance such as JICA resources shall be utilized in some necessary areas such as dispatch of foreign lecturers and teaching material preparation.
- DGSC and ETA shall be responsible in clarifying necessary skills and experiences, as a professional superintendent, and make accreditation for those satisfactory persons. Further, the maritime administration shall foster ship-management services and their business entities to provide sufficient job opportunities to those accredited.

7.2 Update of STRAMINDO Action Plan

A. High-level Documents

Firstly, the STRAMINDO Master Plan proposed to produce two high-level documents to guide shipping policy and administration, so-called, "New National Shipping Policy" and "New RENSTRA for Sea Communication 2005-2009".

In 2004, the debate on new national shipping policy has progressed with the focal point on the, so-called, "Presidential Instruction on Shipping Industry Empowerment". Eventually it was issued on 28 March 2005 receiving number 5 of the presidential instructions in 2005.

Since the Megawati administration did not order government agencies to prepare their next five-year plans, no such mid-term development plans including a national development plan was produced. However, the new Yudhoyono administration instructed

them to compile a five-year infrastructure investment plan. In response to it, DGSC prepared the new infrastructure development plan for the period 2005-2009.

B. Action Plan Components

Implementation progress can be updated and further tasks can be identified in the matrix of each Action Plan component and timeframe as follows: (refer to Table 7.1)

(1) Improvement of Shipping Investment Environments

Action Plan: Institutionalization of Ship Mortgage/Hypothec and Arrest of Ship between 2004 and 2005

Update: Ship Mortgage Act was drafted. MOC is currently examining the operationalization of arrest of ship. It is anticipated that the act will be enacted together with the issuance of the presidential instruction.

Task: If the rule and regulation of ship mortgage regime would be ready in 2005, it will have to swiftly come into implementation nationwide. Dissemination of such rule and regulations, and preparation of operation manual in ship transaction on contract paper and arrest of ship at port will have to be prepared. Further external assistance will be applicable such as JICA's collaboration with DGSC in the case of ISPS-Code.

(2) Strategic ODA Loan Package for Indonesian Inter-island Shipping Development

Action Plan: Resumption and expansion of OOF relating vessels and its equipment in 2004

Update: OOF business was resumed but no vessel transaction has so far been reported.

Action Plan: Conduct of F/S on ODA Loan Package in 2005

Update: This study undertook further detailed analysis.

Task: Using the output, DGSC will prepare and submit the implementation program of the proposed ODA ship loan project by March 2005 to Bappenas.

Action Plan: Request of ODA arrangement and preparation of implementation body such as SMHC in 2006

Update: The project has not been requested from the Japanese government. SMHC has not been established.

Task: It is possible to request the project in 2005. In this connection, it is also necessary to start preparing major players in the scheme such as PMU (Project Management Unit), Apex Bank and SMHC (Ship Management and Holding Company) in 2005.

(3) Most Suitable Vessels on Regular Inter-island Routes

Action Plan: Preparation of Detailed Design in 2005

Update: The Study made some representative ship designs not only for regular inter-island routes but also for other uses.

Task: Continuation of ship design works for further appreciation among INSA, PERINDO, and others and for fruitful implementation of the project.

(4) Introduction of Ship-management Company

Action Plan: Inclusion of “ship-management company” in the revised Shipping Law in 2004

Update: Shipping Law (1992/No.21) has not been revised and thus no inclusion of “ship-management company” so far. It is reported that INSA is not adversarial to this inclusion matter nowadays. The House of Representatives nominates 55 bills including the revision of Shipping Law under deliberation in 2005.

Task: After the revised law takes effect, the legal term of “ship-management company” should be disseminated by way of company license, business guidelines and superintendent certificate.

(5) Advanced education in shipping industry

Action Plan: Preparatory works in 2004

Update: The study made necessary preparation for implementation such as course setting, selection of platform universities, and production of sample teaching materials.

Task: The ship-management expert course (half-year and short-term) will commence among the designated platform universities.

(6) Maritime Administration Database Center

Action Plan: Networking with DGSC and shipping company, better usage of database in 2004-05

Update: DGSC made efforts to increase computer units and better usage of database but no network with shipping companies has been built.

Task: DGSC will facilitate to become an electronic government in extending IT networks to the shipping industries and others.

(7) Daily monitoring system for subsidized operation

Action Plan: System development and installation on the existing pioneer fleet in 2004

Update: It was done successfully by mobilizing state budget.

Task: The system will serve the tertiary shipping fleets which will provide socially indispensable but less commercial services to be supported and monitored by the central as well as local governments. The system will also be upgraded when technical innovation is necessary.

Table 7.1.1 STRAMINDO Action Plan (Updated)

Component	2004 (Actual)	2005	2006	2007 ~ 2009
(1) Improvement of Shipping Investment Environments	<ul style="list-style-type: none"> Preparation of Presidential Instruction Drafting of Ship Mortgage Law 	<ul style="list-style-type: none"> Development of ship mortgage enforcement system, e.g., arrest of ship 	<ul style="list-style-type: none"> Further institutionalization such as shipowner/ carrier's responsibility and liability 	
(2) Strategic ODA Loan Package for Domestic Shipping Development	<ul style="list-style-type: none"> Prioritization of the ODA ship finance project in the 5-year Infrastructure Development Plan Conduct of F/S by STRAMINDO II 	<ul style="list-style-type: none"> Application of the ODA ship finance project to JBIC Organizational set-up of the EA consisting of PMU and AFI Preparation of SMHC 	<ul style="list-style-type: none"> Establishment of SMHC and appointment of PFIs Formulation of operation guidelines 	<ul style="list-style-type: none"> Operationalization of the ODA ship finance project
(3) Most Suitable Vessels on Inter-Island Routes	<ul style="list-style-type: none"> Continuation of ship design works for container ships and self-propelled barges 	<ul style="list-style-type: none"> Designing of other ship types Preparation of ship detail design 	<ul style="list-style-type: none"> PR for the model ships Continuation of detail design 	<ul style="list-style-type: none"> Construction of the model ships Vessel construction by other sources
(4) Introduction of Ship-management Company	<ul style="list-style-type: none"> Preparation of revised Shipping Law where ship-management company is designated 	<ul style="list-style-type: none"> Preparation of company license, guidelines and superintendents certificate 		<ul style="list-style-type: none"> Provision of ship-management service to support the ODA ship finance and non-ODA financed vessels
(5) Advanced Education in Shipping Industry	<ul style="list-style-type: none"> Preparation of ship-management expert course by STRAMINDO II 	<ul style="list-style-type: none"> Opening of ship-management expert course (half-year, short-term) 		<ul style="list-style-type: none"> Enrichment and upgrade of Advanced maritime Education Program
(6) Maritime Administration Database Center	<ul style="list-style-type: none"> Installation of more computers with no link with shipping companies 	<ul style="list-style-type: none"> Facilitation of electronic government at DGSC and expansion of network to shipping industry 		<ul style="list-style-type: none"> Phase 2: Network expansion with other agencies
(7) Daily Monitoring System for Subsidized Operation	<ul style="list-style-type: none"> Completion of system installation on existing Pioneer vessels 	<ul style="list-style-type: none"> Gradual system expansion 		<ul style="list-style-type: none"> System expansion and renewal to serve Tertiary Shipping Fleet

Source: JICA Study Team

Appendix 1-1

**PRESIDENTIAL INSTRUCTION REPUBLIC OF INDONESIA (INPRES)
NUMBER 5 YEAR 2005
ON
THE EMPOWERMENT OF THE NATIONAL SHIPPING INDUSTRY**

THE PRESIDENT OF THE REPUBLIC OF INDONESIA,

In order to optimize the execution of policy on empowerment of national shipping industry herewith instructs:

- To : 1. State Minister-Coordinator for Economic Affairs;
2. State Minister for National Development Planning/Head of Bappenas;
3. Minister of Finance;
4. Minister of Communication;
5. Minister of Home Affair;
6. Minister of Industry;
7. Minister of Trade;
8. Minister of Forestry;
9. Minister of National Education;
10. Minister of Energy and Mineral Resourced;
11. Minister of Fisheries and Sea Affair;
12. State Minister for State owned Enterprises;
13. State Minister of Cooperation and Small and Medium Enterprise;
14. Governors/Regents/Mayors throughout Indonesia.

For :

Firstly : Implement cabotage policy as consequently, formulating a policy, and taking the necessary steps according to their respective duties, functions and authorities for empowering the national shipping industry, as follows:

1. Trade

- a. Domestic inter-island cargoes, as soon as possible after the issuance of the INPRES, shall be carried by Indonesian flag vessel and operated by national shipping company.
- b. Procurement and/or transport cost of import cargo financed by national/regional government budget shall be carried by national shipping company vessel by heeding to regulations regarding providing of government goods/services.
- c. Encouraging long-term contract of transport partnership between cargo owner and national shipping company.

2. Finance

- a. Taxation

- 1) Re-arrange the execution procedure of existing various policies to provide facilities for national shipping and shipbuilding industries in conformity with existing taxation;
- 2) To complete taxation policies, support the growth and the improvement of national shipping and shipbuilding industries, provide incentive to the owner of export cargo carried by Indonesian flag vessel and operated by national shipping company.
- 3) Apply strictly the penalty to national shipping and shipbuilding industries that have received incentives, but do investment outside their core business.

b. Financial Institution

- 1) Encourage national banks to play actively in funding the national shipping industry.
- 2) Improve non-bank financial institutions for the funding of the national shipping industry.
- 3) Improve funding schemes to support national fleet development.

c. Insurance

- 1) Every vessels owned and/or operated by national shipping company, and/or second hand/newly build vessels planned to be purchased or to be constructed in domestic or foreign shipyard of certain type, size and age shall be insured minimally for hull & machinery.
- 2) Cargoes and passengers either carried by national shipping company operating domestically or internationally shall be insured.
- 3) Establish policies which support national shipping insurance company in accordance with standards of international shipping insurance.

3. Transportation

a. Sea Transportation

- 1) Organize national sea transport operation at the soonest after the issuance of the INPRES, thereby all domestic sea transport will be served by Indonesian flag vessels.
- 2) Re-arrange national sea transport network and give incentive to liner shipping, such as by providing berthing priority, port tariff discount and bunkering.
- 3) Re-arrange flag changing procedure from foreign flag to Indonesian flag.
- 4) Accelerate to ratify international convention on Maritime Liens and Mortgage 1993 and to complete the preparation of the draft law on Maritime Liens and Mortgage.
- 5) Accelerate to ratify international convention on Arrest of Ship and to complete the preparation of the draft law on Arrest of Ship in accordance with domestic condition.

- 6) Give support to traditional shipping improvement such as funding facilities, human resources, business management and traditional port infrastructure improvement.
- 7) Accelerate to establish an information forum for cargo and space in vessels (IRMK), so to be able to know transparently the existing capacities and cargoes.

b. Ports/Harbors

- 1) Re-arrange port operation for effective and efficient services.
- 2) Re-arrange ports for international and cross border services.
- 3) Improve port infrastructure for optimum services.
- 4) Improve port management to separate regulator and operator function, and to enable competition on service among terminals in a port and among ports.
- 5) Exempt port service charge for no port services.
- 6) Re-arrange procedure for vessel, cargo and passenger in order to improve port services.

4. Industrialization

- a. To foster the growth and development of the shipping industry including traditional shipping industry, covering big, medium and as well as small-sized enterprises and cooperation enterprises, by the way of:
 - 1) Develop centers of design, research and development for shipping industry;
 - 2) Improve standard and components of vessel;
 - 3) Improve material and component industry for shipbuilding;
 - 4) Give incentive to national shipping company that construct and/or repair the vessel in the country and/or procure vessel from out of the country by applying both-side production scheme.
- b. Construction cost for vessel financed by national/regional government budget shall be constructed in national shipbuilding industry by heeding to law and regulation on government goods/services.
- c. If the budget for ship construction as mentioned above (b) is from foreign loan, the construction of vessel striven for use of maximum local sources and transferring technology.
- d. Maintenance and repair cost for ships financed by national/regional government budget shall be conducted in national shipbuilding industry by heeding to law and regulation on government goods/services.

5. Energy and Mineral Resources

Give guarantee to provide fuel based on route and total of sailing days to national shipping company that operates Indonesian flag vessel domestically.

6. Education and Training

- a. Push local governments and private sectors to develop education and training center for seafarers with international standard (International Maritime Organization/IMO).
- b. Improve the cooperation between educational training center and user/employer, in order to produce marine personnel with international standard qualification (International Maritime Organization/IMO).

Secondly : The Coordinating Minister for Economic Affair coordinates the execution of Presidential Instruction and report periodically to the President.

Thirdly : Execute this Presidential Instruction with full of responsibility and report the result of the execution periodically to the President.

This Presidential Instruction becomes effective as of the date of issuance.

Issued in Jakarta

On the date of 28 March 2005

PRESIDENT OF THE REPUBLIC OF INDONESIA

DR. H. SUSILO BAMBANG YUDHOYONO

Appendix 2-1 Comparative Incomes Statement (December 31, 1999, 2000, 2001, 2002, 2003)

(in thousand Rp)

ASSETS	2003	2002	2001	2000	1999
Current Assets					
- Cash on Hand and Bank	17,755,790.88	50,421,830.68	109,482,300.50	24,580,093.54	34,854,669.77
- Marketable Securities	383,595,320.00	305,725,820.00	145,606,820.00	170,287,570.00	194,524,320.00
- Net Lease Investment	104,224,490.95	109,932,448.98	116,993,869.82	90,855,731.37	49,381,304.26
- Account Receivables	337,073,609.58	258,845,718.71	256,456,847.00	227,274,265.38	139,649,199.73
- Allowance for Doubtfull Receivables	(153,919,425.51)	(122,897,736.77)	(119,553,181.64)	(86,927,468.27)	(53,048,583.71)
- Other Receivables	10,095,705.84	9,636,522.17	9,815,527.76	6,235,164.73	10,058,983.48
- Advance Tax Payment	83,811.36	163,838.49	113,382.28	99,805.63	2,521,636.21
- Accrued Revenue	952,902.34	1,260,869.02	1,241,729.95	1,217,941.65	776,265.63
- Prepaid Expenses	2,139,194.55	826,396.80	281,988.89	448,897.00	408,743.01
Total Current Assets	702,001,399.99	613,915,708.08	520,439,284.56	434,072,001.04	379,126,538.38
Deferred Tax Assets	112,317,548.39	204,567,566.57	204,567,566.57		
Long Term Receivables					
- Purchase on Installment Receivables	4,388,868.30	5,937,122.03	1,740,447.62	2,525,705.52	4,007,531.92
- Rescheduled Receivables	100,881,700.43	108,831,781.96	126,375,738.68	75,674,975.96	69,210,768.07
- Net Lease Investment	613,545,075.56	701,558,890.74	872,569,834.29	883,861,379.22	740,374,807.33
- Other Long Term Receivables	-	-	-	-	-
Total Long Term Receivables	718,815,644.29	816,327,794.73	1,000,686,020.59	962,062,060.70	813,593,107.32
Leased Assets					
- Purchased Price	2,750,000.00	13,499,473.65	32,434,549.65	142,359,403.02	-
- Accumulated Depreciation	(2,750,000.00)	(5,075,829.99)	(6,994,644.34)	(30,743,981.97)	-
- Leased Vessels	-	-	-	-	184,412,502.25
	-	8,423,643.66	25,439,905.31	111,615,421.04	184,412,502.25
Fixed Assets					
- Land	2,046,085.00	2,046,085.00	2,046,085.00	1,697,285.00	1,697,285.00
- Office Building	2,260,456.50	2,178,088.99	2,040,863.99	2,040,863.99	2,040,863.99
- Transport Equipment	1,579,769.50	1,579,769.50	520,769.50	600,435.50	844,871.00
- Office Inventory	1,369,506.90	1,184,392.87	1,099,309.85	957,683.55	702,102.62
- Computer	1,429,146.67	1,159,200.42	997,510.36	779,108.66	599,522.71
- Accumulated Depreciation	(3,705,365.75)	(3,052,619.29)	(2,636,942.46)	(2,361,582.03)	(2,512,909.21)
Total Fixed Assets	4,979,598.82	5,094,917.49	4,067,596.24	3,713,794.66	3,371,736.11
Assets Under Contraction	723,307,356.97	742,297,897.23	765,044,855.80	971,159,628.27	907,577,414.26
Other Assets					
Other Lease Investment	55,680,874.88	57,811,208.30	82,002,861.44	78,191,931.66	-
Cash Guarantees	557,640.00	557,640.00	557,640.00	557,640.00	557,640.00
Participation in PT Dua satu Tiga Puluh	-	845,931.55	781,932.95	731,790.46	691,017.04
Net Lease Assets Taken Over	58,626,588.46	65,954,912.02	73,283,235.58		
Net Assets hasn't operated yet	357,262,157.24	294,031,808.35	226,076,670.88		
Total Other Assets	472,127,260.58	419,201,500.22	382,702,340.85	79,481,362.12	1,248,657.04
TOTAL ASSETS	2,733,548,809.04	2,809,829,027.98	2,902,947,569.92	2,562,104,267.83	2,289,329,955.36

(Source: PT. PANN MF)

(Note)

Net Lease Investment: Account receivables of capital goods which are leased to operators, i.e : aircraft, fishing vessels and cargo vessels.

The accounting treatment is based on Indonesian Accounting Standard Of Finance which is briefly described as follows:

- Net investment of leased assets is recorded as long-term net leased investment (total account receivables less with unearned lease income and security deposit).
- The long term net leased investment each year will be decreased by the amount of the next due time and it is reorded as short term net leased investment and belong to current asset.

Net Lease Other Investment (Other Asset Group): They are net lease of capital goods which are still in process at the court.

At the end of the year 2003 consist of net lease investment of caraka jaya vessels and hotels.

(in thousand Rp)

LIABILITIES AND STOCK HOLDER'S EQUITY	2003	2002	2001	2000	1999
Current Liabilities					
- Current Maturities of Long Term Liabilities	523,204,046.73	457,804,433.70	433,514,781.32	314,249,409.84	187,507,077.72
- Accounts Payable	-	-	-	-	9,231,446.00
- Expenses Payable	703,200,998.12	576,521,265.43	380,082,447.79	282,130,978.60	176,594,604.87
- Taxes Payable	447,815.24	419,552.76	219,706.54	285,411.76	613,509.77
- Customer's Advance Payment	3,794,264.31	4,328,228.51	3,229,123.98	6,293,997.72	2,780,378.46
- Dividend & Bonus Payable	-	-	8,230.52	8,230.52	8,230.52
- Other Debts	10,520,259.05	18,151,200.04	22,006,813.63	21,349,572.69	15,660,711.03
Total Current Liabilities	1,241,167,383.45	1,057,224,680.43	839,061,103.78	624,317,601.13	392,395,958.37
Long Term Liabilities					
- Loan from The Government of Indonesia	1,749,503,130.22	1,840,704,847.55	2,070,208,897.43	1,971,205,931.77	1,605,596,453.10
- Loan from Bapindo	3,505,150.00	4,142,450.00	4,779,750.00	5,417,050.00	6,915,350.00
- Loan from Bapindo Loka S.L.	-	-	-	-	-
- Loan from BII	-	-	-	81,557,500.00	175,828,786.81
Total Long Term Liabilities	1,753,008,280.22	1,844,847,297.55	2,074,988,647.43	2,058,180,481.77	1,788,340,589.91
Other Liabilities					
- Deferred Revenue	63,670,843.50	70,475,694.98	71,867,702.64	48,795,349.40	37,308,061.78
- Lease Guarantee	-	9,320,935.10	30,439,192.68	48,187,194.00	43,505,484.57
Total Other Liabilities	63,670,843.50	79,796,630.08	102,306,895.32	96,982,543.40	80,813,546.35
EQUITY					
Stock Capital					
- Statuary Capital	180,000,000.00	200,000,000.00	200,000,000.00	200,000,000.00	200,000,000.00
- Placed Capital	134,003,000.00	154,003,000.00	154,003,000.00	154,003,000.00	154,003,000.00
- Placed and Paid up Capital	45,997,000.00	45,997,000.00	45,997,000.00	45,997,000.00	45,997,000.00
- Government Equity	192,065,703.42	192,065,703.42	192,065,703.42	192,065,703.42	192,065,703.42
- General Reserves	60,260,462.30	60,260,462.30	60,260,462.30	60,260,462.30	57,390,400.52
- Reserves for Special Purposes	26,589,517.15	26,589,517.15	26,589,517.15	26,589,517.15	23,126,395.84
Total Equity and Reserves	324,912,682.87	324,912,682.86	324,912,682.86	324,912,682.87	318,579,499.77
Profit and Loss					
- Previous Year's Profit	(496,952,262.94)	(438,321,759.47)	(377,200,402.31)	(299,457,442.31)	(299,457,442.31)
- Current Year's Profit	(152,258,118.07)	(58,630,503.47)	(61,121,357.17)	(242,831,599.03)	8,657,803.28
	(649,210,381.01)	(496,952,262.94)	(438,321,759.48)	(542,289,041.34)	(290,799,639.04)
TOTAL LIABILITIES AND EQUITY	2,733,548,809.04	2,809,829,027.98	2,902,947,569.92	2,562,104,267.83	2,289,329,955.36

Appendix 2-2 Flow of Vessel Procurement and Leasing Operation

(NEW AND SECONDHAND) PT. (PERSERO) PANN MULTI FINANCE

Page 1

FLOW CHART	PROCESS	RESPONSIBLE
<pre> graph TD A[Application Letter] -- 3 days --> B[Pre Appraisal] B -- 2 weeks --> C[Appraisal] B -- No --> D[Rejection] C -- No --> E[Rejection] C -- Yes --> F[Pre Agreement] F -- 3 days --> G[Seeking and evaluation of the vessel] F -- New Building --> H[A] F -- Second Hand --> G G -- 1 week --> I[1] style I fill:#fff,stroke:#000,stroke-width:1px </pre>	<ol style="list-style-type: none"> 1 Application letter from candidate operator for financing a new building or second hand vessel 2 Preliminary Appraisal to get a picture of candidate operator 3 Appraisal, to get more detail about the company and the project which consist of legal aspect, technical aspect, financial aspect, management and operational aspect, and financial projection of the project 4 Preliminary agreement between PT PANN MF and candidate operator If the preliminary Agreement is a second hand vessel, then : 5 We seek and evaluate the vessel which want to buy together with candidate operator 	<p>Commercial Div</p> <p>Commercial Div</p> <p>Commercial Div</p> <p>Commercial Div</p>

(Source: PT. PANN MF)

FLOW CHART	PROCESS	RESPONSIBLE
<pre> graph TD 1{{1}} --> VS[Vessel Survey] VS -- 1 week --> NP[Negotiation of the Price and technical Condition] NP -- 2 days --> CL[Confirmation Letter] CL -- 1 day --> FC[Financing Contract] FC -- 1 day --> BSC[Buy and Sale contract] BSC -- 1 day --> 2{{2}} </pre>	<p>After we got the vessel which want to buy, then :</p> <p>6 We survey the vessel by independent surveyor</p> <p>7 After we & candidate operator agree about the vessel, then we negotiate about the price and other technical condition</p> <p>8 Signing Confirmation Letter and candidate operator fulfill all of conditions to PT PANN MF</p> <p>9 Signing the Financial Contract between PT PANN MF and candidate operator</p> <p>10 PT PANN MF as buyer signing contract with seller to buy a vessel</p>	<p>Technical Div</p> <p>2nd Hand Ship Procurement Team</p> <p>Commercial Div</p> <p>Legal&Insurance Division</p> <p>Legal&Insurance Division</p>

FLOW CHART	PROCESS	RESPONSIBLE
<pre> graph TD 2{{2}} --> IC[Insurance Coverage] B[B] --> IC IC -- "1 day" --> D[Delivery] D -- "2 days" --> M[Monitoring] M -- "until the end of contract" --> CC[Closing Contract] </pre>	<p>After PT PANN MF signed contract with seller, then :</p> <p>11 We covered the insurance of the vessel</p> <p>12 Delivery of the vessel</p> <p>13 Monitoring along the period of the contract</p> <p>14 We close the contract of the end of the period</p>	<p>Legal&Insurance Division</p> <p>Technical Div</p> <p>Commercial Div</p>

FLOW CHART	PROCESS	RESPONSIBLE
<pre> graph TD A{{A}} --> Bidder[Bidder] Bidder -- 1 week --> Eval[Evaluation Bidder] Eval -- 2 weeks --> Conf[Confirmation Letter] Conf -- 1 week --> Fin[Financing Contract] Fin -- 1 day --> New[New Building Contract] New -- 1 week --> Prog[Progress Report] Prog --> B[B] </pre>	<p>If the preliminary agreement is a new building vessel, then :</p> <p>6 We bid a new building vessel to several shipyards</p> <p>7 We make evaluation of Bidder by our internal team</p> <p>8 Signing confirmation letter & candidate operator fulfill all of conditions to PT PANN MF</p> <p>9 Signing the financial contract between PT PANN MF and candidate operator</p> <p>10 Signing a new building contract between PT PANN and shipyard</p> <p>11 Make a progress report during construction period</p>	<p>Technical Div</p> <p>New Ship Bld Procurement Team</p> <p>Commercial Div</p> <p>Legal&Insurance Division</p> <p>Legal&Insurance Division</p> <p>Technical Div</p>

Appendix 2-3 Interview Survey Form

Interview Survey on Your Financial Needs for Japanese ODA Yen Loan (TSL)

for Study on the Development of Domestic Sea Transportation and Maritime Industry
(STRAMINDO) - Follow-up Study
(For Shipping Company)

Date of Interview: ___ / ___ / 2004

(Date) (Month)

A. Company Profile and Technical Issues
--

A-1: Name of Your Company: _____

A-2: Address (HO): _____

(Branch office(s)): _____

A-3: Shareholders:

Indonesian ___%; foreign partner ___% (Nationality: _____)

A-4: Established in the year of _____

A-5: Registration: _____ (ex. Shipping Association)

_____ (ex. Registered Ports)

A-6: Number of Employees at present: _____ in total, of which

- crew:

- office staff including management:

A-7: Main Operating Lines (Name of Route)

(Liner)

(Tramper)

(Name of Route) (Carrying Capacity) (Name of Route) (Carrying Capacity)

a. _____ a'. _____

b. _____ b'. _____

c. _____ c'. _____

A-8: Amount of Operating Revenue and Volume Transported

(Operating Revenue)

(Volume Transported)

in 1999 _____ Million Rp; _____ MT/year; _____ pax/year

in 2000 _____ Million Rp; _____ MT/year; _____ pax/year

in 2001 _____ Million Rp; _____ MT/year; _____ pax/year

in 2002 _____ Million Rp; _____ MT/year; _____ pax/year

in 2003 _____ Million Rp; _____ MT/year; _____ pax/year

A-9: Breakdown of Operating Revenue

a. Passenger : _____ %

b. Cargo: _____ %

c. out of revenue from cargo transportation, breakdown (kind) of cargo:

(kind of cargo)

_____ : _____ %

_____ : _____ %

_____ : _____ %

Total Cargo : 100 %

d. Others: _____ %

e. Which line of operation has been increased and/or profitable ?

(Increased.)

Passenger Cargo Others

(Please specify: _____)

(Profitable.)

Passenger Cargo Others

(Please specify: _____)

A-10: Total Fixed Assets

- Less than 1 Billion Rp
- 1 Billion Rp to less than 2 Billion Rp
- 2 Billion Rp to less than 3 Billion Rp
- 3 Billion Rp or more

A-11: How many vessels do you own/operate currently?

a. Passenger : _____ vessels

b. Cargo: _____ vessels, of which _____ container;

_____ bulker;

_____ tanker;

_____ conventional

_____ RO-RO Ferry

A-12: How did you acquire those vessels?

(No. of Vessels

P: Passenger / C: Carro)

Outright Purchase,

(either newly built one or second-hand) P: _____ C: _____

Lease Purchase

P: _____ C: _____

- Bareboat Charter P: C:
 - Time Charter P: C:
 - Others P: C:
- (Please Specify: _____)

A-13: Do you like to acquire more ships? If yes, how many and what type of vessel do you like to acquire?

- Passenger : _____ vessels
- Cargo: _____ vessels, of which
 - container;
 - bulker;
 - tanker;
 - conventional
 - RO-RO Ferry

A-14: Source of Technical Human Resources for Ship Maintenance

- Your own company engineers
- Repair/Maintenance services by other engineering company
- Others (Please Specify: _____)

A-15: Please describe problems and constraints, if any, pertaining to shipping operation, ship maintenance, and other technical issues.

B. Use and Accessibility of Loan and Other Financial Issues

B-1: Loans from Your Banks including Lease Finance

«Current Position»

«If possible, you would apply:»

a. Loan and/or Lease Amount

- | | |
|---|--------------------------|
| <input type="checkbox"/> Less than 300 Million Rp | <input type="checkbox"/> |
| <input type="checkbox"/> 300 Million Rp to less than 500 Million Rp | <input type="checkbox"/> |
| <input type="checkbox"/> 500 Million Rp to less than 750 Million Rp | <input type="checkbox"/> |
| <input type="checkbox"/> 750 Million Rp to less than 1,000 Million Rp | <input type="checkbox"/> |
| <input type="checkbox"/> 1,000 Million Rp or more | <input type="checkbox"/> |

b. Duration of Loan

- | | |
|---|--------------------------|
| <input type="checkbox"/> Short term (up to 1 year) | <input type="checkbox"/> |
| <input type="checkbox"/> Up to 3 years | <input type="checkbox"/> |
| <input type="checkbox"/> Longer than 3 years up to 5 years | <input type="checkbox"/> |
| <input type="checkbox"/> Longer than 5 years up to 10 years | <input type="checkbox"/> |

c. Interest Rate: (Please provide both currently applied rate and the rate you want.)

Short term: ____% p.a.

Long term: ____% p.a. in ____ (year) Fixed VariableLong term: ____% p.a. in ____ (year) Fixed Variable

d. Use of Loan (Please Specify the item(s)): (For both currently operating vessel and the new vessel.)

- New acquisition
- Repair/Renovation
- Others (Please Specify: _____ ex. working fund)

B-2: Please provide the details of lease contract if entered currently:

(Type of vessel, leasing company, duration of lease contract, etc.)

B-3: Please describe difficulties or problems you have faced in borrowings from your banks, in general? Choose two (2) answers from the following:

- Insufficient mortgage or collateral to meet your loan requirement
- The complicated procedure, the requirements for documentation and long time requirement for appraisal of your application
- Lack of official credit guarantee system to complement insufficient mortgage
- Banks' passive attitude to finance small-and medium-scale enterprises

- Banks do not finance the full amount of loan requirements, for example 50 % of total requirements is a limit of the loan.
- Interest rate is too high.
- The loan size is too small.
- Nearest bank's office is still distant from your office.
- Others (Please Specify: _____)

B-4: Do you need any public assistance for maintaining and developing the company?

- Yes, very much A little Not at all

If yes, what kind of public assistance do you need most? Choose two (2) answers from the following:

- Subsidy
(Please specify the reason of subsidy you need : _____)
- Tax Incentive
(Please specify the objective of incentive you need : _____)
- Loan
- Guarantee
- Others (Please Specify: _____)

B-5: How do you evaluate public assistance in shipping and maritime industry in Indonesia?

- Completely satisfied. Fairly satisfied.
 Low level of satisfaction. Not satisfied at all.

B-6: If the government is to take more active role in shipping and maritime industry, which aspect out of the followings do you suggest necessary?

- Policy and planning issues
(Please specify : _____)
- Financial Issues
(Please specify : _____)
- Education and Training Issue
(Please Specify: _____)
- Others (Please Specify: _____)

B-7: Please describe the company's future development plan, especially operating lines/areas and ship acquisition.

B-8: Please describe problems and constraints, if any, pertaining to financial issues.

Appendix 2-4 Interview Survey Results

(1) No. of Answers

Survey Result

No. of Samples 40

A. Company Profile and Technical Issues
--

A-1. Name of Company

No. of Answer	40	Answer Ratio	100%
---------------	----	--------------	------

A-2. Address

Branch	No. of Answer	40	Answer Ratio	100%
	No. of Response*	40	Answer Ratio	100%

*: No branch cases were answered but not to be written down

A-3. Shareholders:

No. of Answer	39	Answer Ratio	98%
---------------	----	--------------	-----

A-4. Established Year

No. of Answer	38	Answer Ratio	95%
---------------	----	--------------	-----

A-5. Registration

No. of Answer	35	Answer Ratio*	88%
---------------	----	---------------	-----

*: Include not belongs any

A-6. Number of Employee

No. of Answer	40	Answer Ratio*	100%
---------------	----	---------------	------

A-7. Main Operating Lines

No. of Answer	39	Answer Ratio	98%
---------------	----	--------------	-----

A-8. Operating Revenue

Volume	No. of Answer	40	Answer Ratio	100%
	No. of Answer	N.A.	Answer Ratio	N.A.

A-9. Breakdown of Operating Revenue

No. of Answer	39	Answer Ratio	98%
---------------	----	--------------	-----

A-10. Total Fixed Assets

No. of Answer	38	Answer Ratio	95%
---------------	----	--------------	-----

A-11. Own-Vesseles

No. of Answer*	39	Answer Ratio	98%
----------------	----	--------------	-----

*: Including not own but booking space

A-12. Way of Acquisition of Vessels

No. of Answer	40	Answer Ratio	100%
---------------	----	--------------	------

A-13. Plan to buy new vessels

No. of Answer	32	Answer Ratio	80%
---------------	----	--------------	-----

A-14. Source of Human Resources for Maintenance

No. of Answer	38	Answer Ratio	95%
---------------	----	--------------	-----

A-15. Problems and Constraint

No. of Answer	38	Answer Ratio	95%
---------------	----	--------------	-----

B. Use and Accessibility of Loan and Other Financial Issues

B-1. Loan from Your banks

a. Loan amount

No.of Answer	38	Answer Ratio	95%
--------------	----	--------------	-----

b. Duration of Loan

No.of Answer	36	Answer Ratio	90%
--------------	----	--------------	-----

c. Interest Rate

No.of Answer	38	Answer Ratio	95%
--------------	----	--------------	-----

d. Use of Loan

No.of Answer	31	Answer Ratio	78%
--------------	----	--------------	-----

B-2. Contract Detail

No.of Answer*	33	Answer Ratio	83%
---------------	----	--------------	-----

*:Including "can not answer"

B-3. Difficulty of Loan

No.of Answer	38	Answer Ratio	95%
--------------	----	--------------	-----

B-4. Necessity of Public Assistance

No.of Answer	40	Answer Ratio	100%	
Reason	No.of Answer	40	Answer Ratio*	100%

*:34=Necessary is a denominator

B-5. Evaluation of Public Assistance

No.of Answer	34	Answer Ratio	85%
--------------	----	--------------	-----

B-6. More role of Government

No.of Answer	38	Answer Ratio	95%
--------------	----	--------------	-----

B-7. Future Development Plan

No.of Answer	36	Answer Ratio	90%
--------------	----	--------------	-----

B-8. Problems and constraints

No.of Answer*	35	Answer Ratio	88%
---------------	----	--------------	-----

*: Including no problems

(2) Company Data

Basic Statistics

No. of Samples 40

A. Company Profile and Technical Issues

A-2. Address

Company Location

1. Jakarta	40	100%
2. Outside Jakarta	0	0%
Total	40	100%

Number of Branch

	Local	Foreign	Total	
1.No Branch	35	0	35	88%
2. 1 Branch	2	0	2	5%
3. 2 and More	1	2	3	8%
Total	38	2	40	100%

A-3. Shareholders:

1. Full Indonesia	37	95%
2. Indonesia/Foreign	2	5%
Total	39	100%

A-4. Established Year (Operation Year)

1. More Than 20 Years	3	8%
2. 19-10 Years	1	3%
3. 9-5 Years	18	47%
4. Less than 5 Years	16	42%
Total	38	100%

A-5. Registration

1. IPERINDO	5	15%
2. INSA	22	67%
3. None	6	18%
Total	33	100%

A-6. Number of Employee

a. Crew

1. Less than 10	29	73%
2. 11-20	5	13%
3. 21 and More	6	15%
Total	40	100%

b. Management

1. Less than 10	32	80%
2. 11-20	4	10%
3. 21 and More	4	10%
Total	40	100%

c. Total

1. Less than 20	28	70%
2. 21-30	5	13%
3. 31 and More	7	18%
Total	40	100%

A-7. Main Operating Lines

To be analyzed in Detail

A-8. Operating Revenue in 2003

1. Less than 500 million Rp	7	18%
2. 501-1,000 million Rp	23	58%
3. 1,001-5,000 million Rp	5	13%
4. 5,001 million Rp and more	5	13%
Total	40	100%

A-9. Breakdown of Operating Revenue

a	Cargo	39	100%
	Passenger		Cargo
e	Profitable	0	100%
	Profitable	0	100%

A-10. Total Fixed Assets

1. Less than 100 million Rp	0	0%
2. 100 -200 million Rp	15	39%
3. 200 -300 million Rp	13	34%
4. 300 million Rp -more	10	26%
Total	38	100%

A-11. Own-Vessels

1. No (Space Booking or Lease	3	8%
2. 1-2	19	50%
3. 3-10	14	37%
4. 11-more	2	5%
Total	38	100%

A-12. Way of Acquisition of Vessels

	Cargo
1. Outright Purchase	18
2. Lease Purchase	13
3. Bareboat Charter	2
4. Time Charter	7
5. Others	5
Total	45

Multiple answer (Number of Company)

A-13 . Plan to buy new vessels

1. No	8	20%
2. 1-2	6	15%
3. 3-10	25	63%
4. 11-more	1	3%
Total	40	100%

A-14 . Source of Human Resources for Maintenance

1. No	23	61%
2. 1-2	15	39%
3. 3-10	0	0%
4	1	3%
	0	0%
Total	38	100%

A-15 . Problems and Constraint on Shipping Operation

Sample replies are provided in "Detailed Answers".

B. Use and Accessibility of Loan and Other Financial Issues

B-1. Loan from Your Banks

a.Loan amount

1. - 300 million Rp	1	3%
2. 300-500 million Rp	13	35%
3. 500-1,000 million Rp	19	51%
4. 1,001million Rp -	4	11%
Total	37	100%

b.Duration of Loan

1. Up to 1 year	1	3%
2. Up to 3 years	7	20%
3. 3-5 years	23	66%
4. 5-10 years	4	11%
Total	35	100%

c. Interest Rate

Short Term

1. 5% and low	1	6%
2. 6-7%	11	69%
3. 8-10%	4	25%
4. 10%-	0	0%
Total	16	100%

Long Term

	Less 5Yrs	5 and Up	Total	
1. 5% and low	2	0	2	6%
2. 6-7%	17	0	17	55%
3. 8-10%	2	5	7	23%
4. 10%-	2	3	6	19%
Total	23	8	32	100%
	74%	26%	100%	

d. Use of Loan

1. New Acquisition	20	47%
2. Repair/Renovation	21	49%
3. Other	2	5%
Total	43	100%

Multiple Answer

B-2. Contract Detail

Sample replies are provided in "Detailed Answers".

B-3. Difficulties for Loan

1. Insufficient mortgage	15	17%
2. Complicated Procedure	21	24%
3. Lack of Guarantee	0	0%
4. Passive Attitude	3	3%
5. Not full amount	3	3%
6. High Interest Rate	33	37%
7. Loan size small	14	16%
8. Far location from bank	0	0%
9. Others	0	0%
Total	89	100%

Multiple answer

B-4. Necessity of Public Assistance

1. Yes	27	69%
2. A Little	8	21%
3. No	4	10%
Total	39	100%

if yes for what ?

1. Subsidy	10	19%
2. Tax Incentive	1	2%
3. Loan	23	43%
4. Guarantee	18	34%
5. Others	1	2%
Total	53	100%

B-5. Evaluation of Public Assistance Indonesia

1. Satisfied	3	10%
2. Fairly Satisfies	2	6%
3. Low Level of Satisfied	21	68%
4. Not satisfied at all	5	16%
Total	31	100%

B-6. What you expect for Public Assistance Indonesia

1. Policy and Planning	23	61%
2. Financial Issues	15	39%
3. Education & Training	0	0%
4. Others	0	0%
Total	38	100%

B-7. Company's Future Development Plan

Sample replies are provided in "Detailed Answers".

B-8. Problems and Issues for Financing

Sample replies are provided in "Detailed Answers".

(3) Specific Answers on Some Questions

1. A - 15 Problems and Issues for Shipping Operation

Sample No. 1

The ability of Shipping manufacturer in Indonesia is limited, neither for building a
Secondhand ship and make new one.

Sample No. 2

Ship Maintenance: Lack of spare part

Sample No. 3

The maintenance still use from other company so the maintenance expense high.

Sample No. 4

In generally we don't have problem because our company already prepare the human
Resources that we trained.

Sample No. 5

Technically, the problem is if ship damage it will be effect to shipping schedule.
--

Sample No. 6

The expenses of shipping maintenance is high
--

Sample No. 8

Old ship, operation cost high, lack of human resources that able for new information
Technology, and also the lack of trained seaman.

Sample No. 10

Licensing

Sample No. 12

Old ship, operation cost high, lack of human resources that able for new information
Technology.

Sample No. 13

Operation cost high, licensing, and maintenance expense for old ship is high.

Sample No. 14

Licensing, and condition of old ship effect to increasing the maintenance expense.
--

Sample No. 16

The expert of ship maintenance is less.

Sample No. 17

Licensing and condition of old shipping need to often repair.

Sample No. 21

Ship already old.

Sample No. 22

Licensing and repairing subcontractor to expert from other company
--

Sample No. 24

The cost is very high and licensing

Sample No. 25

Old ship, operation cost high, lack of human resources that able for new information
Technology, and also the lack of trained seaman.

Sample No. 26

The ship already old this so its make it operational cost and maintenance cost high

Sample No. 27

The technician that able for ship maintenance is less. Limited fund.
--

Sample No. 28

Old ship, lack of trained of human resources and shipping expert.

Sample No. 30

Lack of Ship Maintenance Expert.

Ship condition already old.

Sample No. 31

Ship already old, lack of human resources that able for shipping sector.
--

Sample No. 33

Limited fund

Sample No. 34

Lack of human resources that able and trained.
--

Sample No. 35

Old ship, lack of human resources that expert and able for ship maintenance as new
--

Technology of shipping sector.

Sample No. 38

Delay of ship caused the river mouth shallow.

Sample No. 39

Docking problems because space not always ready.
--

(Human resources at harbor not capable)

2. B-2 Detail Contract Condition

Sample No. 1

Tanker / 6,600 DWT

Chemical Tanker / 3200 – 7500 DWT

Oil Tanker / 30,000 DWT

Sample No. 10

Tug & Barge

PT. Global

Minimum 6 Month

Sample No. 13

Cargo & Conventional

PT. Gensuri

1 Year

Sample No. 14

Cargo & Conventional
PT. Global
6 Month

Sample No. 16

Tankers & Conventional
PT. Global
6 Month – 1 Year

Sample No. 21

Cargo Ship

Sample No. 22

1. Cargo
2. CV. Pamengku Jagad Raya
3. 6 Month

Sample No. 24

1. Cargo / Bulk
2. PT. Global
3. 3 Month

Sample No. 25

1. Tankers, Bulkers, and conventional
2. PT. Global
3. 6 Month – 2 Years

Sample No. 26

1. Tankers
2. PT. Humpuss Sea Transportation
3. 6 Month

Sample No. 27

1. Container
2. PT. Global
3. 3 Years

Sample No. 30

1. Tag - Barga
2. Perusahaan Ayu III
3. 2 Years – 3 Years

Sample No. 36

Contract Agreement Ship Operational (Booking Space) until change the type of Container ship with capacity 206 TEUS.

Sample No. 37

Contract Agreement Ship Operational (Booking Space) until change the type of Container ship with capacity 206 TEUS.

Sample No. 38

Container Ship 150TEUS + Tanker 3000 MT
PT. Kemika Jaya
1 Years

3. B-7 Company's Future Development Plan

Sample No. 2

The planning of company development need addition, if company has well financing the ship fleet.

Sample No. 3

Procedure and security at the port in Indonesia need to be upgraded.

Sample No. 4

In order to company feel secure for the investment, the security at the sea must be upgraded.

Sample No. 5

If weather or condition of country stable and the government offered a loan to businessmen so the company will be develop quickly.

Sample No. 6

On the new cabinet, I hope that government would like to push the banking ease to give loan in order that maritime and sea transportation industry will develop.

Sample No. 7

Increase the ship fleet and number of line.

Sample No. 8

Increase the ship fleet and number of shipping line.

Sample No. 9

Increase the ship fleet and number of shipping line.

Sample No. 10

Planning: Increase the ship fleet and number of shipping line.

Sample No. 11

Increase the ship fleet and number of shipping line.

Sample No. 12

Increase the ship fleet and number of shipping line.

Sample No. 13

Increase a capital for company stabilization
Increase the ship fleet and number of shipping line.

Sample No. 14

Looking out soft loan to buy and 3 pieces second hand ship with good condition.
Addition a new shipping line.

Sample No. 15

Increase the ship fleet and number of shipping line.

Sample No. 16

Increase the ship fleet and number of shipping line.

Sample No. 17

Increase the ship fleet and

Increase number of shipping line.

Sample No. 18

Increase the ship fleet and increase number of shipping line.

Sample No. 19

Increase the ship fleet and increase number of shipping line.

Sample No. 20

Increase the ship fleet and increase number of shipping line.

Sample No. 21

1. Have a new ship and repairing the old ship

2. Increase the shipping line

Sample No. 22

1. Have a own ship and

2. Increase the shipping line

Sample No. 23

Increasing the ship fleet and area expansion.

Sample No. 24

1. Increase a number of ship

2. Increase the shipping line

Sample No. 25

Increase the shipping line and number of ship

Sample No. 26

Planning : 1. Increase the number of ship becomes 3 ships with looking out for soft loan.

2. Increase the shipping line.

Sample No. 27

Buy a new ship and increasing the shipping line operation.

Sample No. 28

Increase the shipping line and ship fleet.

Sample No. 29

Increase the shipping line in Indonesia also out of country following the increasing ship fleet.

Sample No. 30

Increase the number of ship fleet, buy new ship and widening the shipping line

Sample No. 31

Increase number of ship fleet by purchase a new ship and repairing the old ship.

Increase shipping line in Indonesia also in out of country.

Sample No. 32

Repairing the ship to optimization.

Buy a new ship to increasing the number of ship.

Increasing the shipping line.

Sample No. 33

Buy a new ship

Sample No. 34

Increase the shipping line and trip route and also increase the ship fleet.

Sample No. 35

Increase the shipping line and number of ship fleet

Sample No. 36

Market calculation must be detailed.

Ship rent if needed.

Additional fund /Loan will ease to company development, and increasing the operation line.

Sample No. 37

With additional fund (loan) the company can be develop in the future.

Sample No. 38

We want support for local company so we can develop and we can make the field of work on maritime sector.

For line Jakarta, Surabaya, Riau need to increase.

Support for national shipyard to can build a new ship and secondhand ship.

Sample No. 39

Additional line depend on requested

Additional ship \pm 4 ships (secondhand ship from Japan or others)

Sample No. 40

Planning to buy 2 ships (secondhand) to cement transport amount \pm USD 12,000,000.

4. B-8 Problems and Issues for Financing

Sample No. 3

Payment from half of customer often late, this matter effect to company cash flow.

Sample No. 5

Payment from half of customer often late. And difficult to get loan from bank.

Sample No. 6

The limited fund and weather of banking in Indonesia make it difficult to company development.

Sample No. 7

Capital to company development.

Sample No. 8

Less of capital for company development.

Sample No. 9

The limited of capital.

Sample No. 10

The limited of capital.

Sample No. 11

The limited of capital for company development.

Sample 13

The company capital less.

Sample No. 14

The company capital minus.

Sample No. 16B- 8)

Less of capital for company development.

Sample No. 17B- 8)

Less of capital for company development.

Sample No. 20

Less of capital for company development.

Sample No. 21

1. Less of capital

2. Bank Interest high

Sample No. 22

Less of capital

Sample No. 23

Less of capital for company development.

Sample No. 24

1. Less of capital

2. High Cost

3. Bank Loan Interest high

Sample No. 25

Less of capital

Sample No. 26

Less of capital so the company cannot increase income and business expand.

Sample No. 27

Limited of capital

Sample No. 30

Less of capital

Sample No. 31

Less of capital for company development.

Sample No. 32

Less of capital for company development.

Sample No. 35

Less of capital for company development.

Sample No. 36

Payment from customer delayed, so effect to company cash flow.

The problem solve if company have a loan.

Sample No. 37

Difficult for local company and foreign company to commitment for on time payment.

This problem effect to company performance both for small and medium company.

Sample No. 39

Less of capital hampered to company development.

Appendix 4-1 Details of Fleet Procurement

(1) Tg. Perak- Makassar Container Route

1) Do-Nothing Case (Using Newly Built Vessels)

		05 - 09	10 - 14	15 - 19	20 - 24	Total
EV	Operational	9	13	17	22	
	Scrapped	1	3	1	0	5
	Purchased	6	6	6	4	22
	Re-assigned	0	0	0	0	0

* Operational refer to the maximum number in operation during the period

2) Do-Nothing Case (Using Second Hand Vessels)

		05 - 09	10 - 14	15 - 19	20 - 24	Total
EV	Operational	9	13	17	22	
	Scrapped	1	3	1	2	7
	Purchased	6	6	6	5	23
	Re-assigned	0	0	0	0	0

* Operational refer to the maximum number in operation during the period

3) STRAMINDO Case (Using Newly Built Vessels)

		05 - 09	10 - 14	15 - 19	20 - 24	Total
EV	Operational	5	4	3	1	
	Scrapped	1	3	0	0	4
	Purchased	1	2	0	0	3
	Re-assigned	1	0	2	1	4
PV	Operational	2	4	6	9	
	Scrapped	0	0	0	0	0
	Purchased	2	2	3	2	9
	Re-assigned	0	0	0	0	0

* Operational refer to the maximum number in operation during the period

4) STRAMINDO Case (Using Second Hand Vessels)

		05 - 09	10 - 14	15 - 19	20 - 24	Total
EV	Operational	5	4	3	1	
	Scrapped	1	3	0	0	4
	Purchased	1	2	0	0	3
	Re-assigned	1	0	2	1	4
PV	Operational	2	4	6	9	
	Scrapped	0	0	0	0	0
	Purchased	2	2	3	2	9
	Re-assigned	0	0	0	0	0

* Operational refer to the maximum number in operation during the period

5) Details of Operation Performance Indicators (per vessel in any given year)

Item	Units	EV	PV
Voyages performed	units	39	42
Operation time while at anchor	days	208	247
Operation time while at sea	days	142	108
Voyage distance performed	nm	18,261	19,813
Laden Boxes carried Priok -> Panak	teu	22,662	53,625
Empty Boxes carried Priok -> Panak	teu	138	488

(2) Tg. Priok – Pontianak Container Route

1) Do-Nothing Case (Using Newly Built Vessels)

		05 - 09	10 - 14	15 - 19	20 - 24	Total
EV	Operational	8	12	17	22	
	Scrapped	1	3	0	0	4
	Purchased	6	7	5	4	22
	Re-assigned	0	0	0	0	0

* Operational refer to the maximum number in operation during the period

2) Do-Nothing Case (Using Second Hand Vessels)

		05 - 09	10 - 14	15 - 19	20 - 24	Total
EV	Operational	8	12	17	22	
	Scrapped	1	3	0	2	6
	Purchased	6	7	5	5	23
	Re-assigned	0	0	0	0	0

* Operational refer to the maximum number in operation during the period

3) STRAMINDO Case (Using Newly Built Vessels)

		05 - 09	10 - 14	15 - 19	20 - 24	Total
EV	Operational	4	5	4	2	
	Scrapped	1	3	0	0	4
	Purchased	1	4	0	0	5
	Re-assigned	0	1	2	2	5
PV	Operational	2	5	10	15	
	Scrapped	0	0	0	0	0
	Purchased	3	3	5	4	15
	Re-assigned	0	0	0	0	0

* Operational refer to the maximum number in operation during the period

4) STRAMINDO Case (Using Second Hand Vessels)

		05 - 09	10 - 14	15 - 19	20 - 24	Total
EV	Operational	4	5	4	2	
	Scrapped	1	3	0	0	4
	Purchased	1	4	0	0	5
	Re-assigned	0	1	2	2	5
PV	Operational	2	5	10	15	
	Scrapped	0	0	0	0	0
	Purchased	3	3	5	4	15
	Re-assigned	0	0	0	0	0

* Operational refer to the maximum number in operation during the period

5) Details of Operation Performance Indicators (per vessel in any given year)

Item	Units	EV	PV
Voyages performed	units	44	45
Operation time while at anchor	days	193	218
Operation time while at sea	days	157	137
Voyage distance performed	nm	20,225	20,543
Laden Boxes carried Priok -> Panak	teu	12,214	18,440
Empty Boxes carried Priok -> Panak	teu	4,660	6,377

(3) Tg. Perak – Banjarmasin Container Route

1) Do-Nothing Case (Using Newly Built Vessels)

		05 - 09	10 - 14	15 - 19	20 - 24	Total
EV	Operational	8	11	13	16	
	Scrapped	0	0	0	5	5
	Purchased	4	2	3	5	14
	Re-assigned	0	0	0	0	0

* Operational refer to the maximum number in operation during the period

2) Do-Nothing Case (Using Second Hand Vessels)

		05 - 09	10 - 14	15 - 19	20 - 24	Total
EV	Operational	8	11	13	16	
	Scrapped	0	0	0	6	6
	Purchased	4	2	3	6	15
	Re-assigned	0	0	0	0	0

* Operational refer to the maximum number in operation during the period

3) STRAMINDO Case (Using Newly Built Vessels)

		05 - 09	10 - 14	15 - 19	20 - 24	Total
EV	Operational	5	4	3	1	
	Scrapped	0	0	0	0	0
	Purchased	0	0	0	0	0
	Re-assigned	1	1	2	1	5
PV	Operational	2	4	7	11	
	Scrapped	0	0	0	0	0
	Purchased	2	2	4	3	11
	Re-assigned	0	0	0	0	0

* Operational refer to the maximum number in operation during the period

4) STRAMINDO Case (Using Second Hand Vessels)

		05 - 09	10 - 14	15 - 19	20 - 24	Total
EV	Operational	5	4	3	1	
	Scrapped	0	0	0	0	0
	Purchased	0	0	0	0	0
	Re-assigned	1	1	2	1	5
PV	Operational	2	4	7	11	
	Scrapped	0	0	0	0	0
	Purchased	2	2	4	3	11
	Re-assigned	0	0	0	0	0

* Operational refer to the maximum number in operation during the period

5) Details of Operation Performance Indicators (per vessel in any given year)

Item	Units	EV	PV
Voyages performed	units	61	49
Operation time while at anchor	days	207	255
Operation time while at sea	days	143	100
Voyage distance performed	nm	18,046	14,463
Laden Boxes carried Priok -> Panak	teu	16,897	24,383
Empty Boxes carried Priok -> Panak	teu	1,288	1,997

Appendix 5-1

Standard Ship Management Agreement (The Baltic and International Maritime Council)

1. Definitions

In this Agreement save where the context otherwise requires, the following words and expressions shall have the meanings hereby assigned to them.

"Owners" means the party identified in Box 2. (Refer to the attached form)

"Managers" means the party identified in Box 3. (Refer to the attached form)

"Vessel" means the vessel or vessels details of which are set out in Annex "A" attached hereto.

"Crew" means the Master, officers and ratings of the numbers, rank and nationality specified in Annex "B" attached hereto.

"Crew Support Costs" means all expenses of a general nature which are not particularly referable to any individual vessel for the time being managed by the Managers and which are incurred by the Managers for the purpose of providing an efficient and economic management service and, without prejudice to the generality of the foregoing, shall include the cost of crew standby pay, training schemes for officers and ratings, cadet training schemes, sick pay, study pay, recruitment and interviews.

"Severance Costs" means the costs which the employers are legally obliged to pay to or in respect of the Crew as a result of the early termination of any employment contract for service on the Vessel.

"Crew Insurances" means insurances against crew risks which shall include but not be limited to death, sickness, repatriation, injury, shipwreck unemployment indemnity and loss of personal effects.

"Management Services" means the services specified in sub-clauses 3.1 to 3.8 as indicated affirmatively in Boxes 5 to 12.

"ISM Code" means the International Management Code for the Safe Operation of Ships and for Pollution Prevention as adopted by the International Maritime Organization (IMO) by resolution A.741(18) or any subsequent amendment thereto.

"STCW 95" means the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, 1978, as amended in 1995 or any subsequent amendment thereto.

2. Appointment of Managers

With effect from the day and year stated in Box 4 and continuing unless and until terminated as provided herein, the Owners hereby appoint the Managers and the Managers hereby agree to act as the Managers of the Vessel.

3. Basis of Agreement

Subject to the terms and conditions herein provided, during the period of this Agreement, the

Managers shall carry out Management Services in respect of the Vessel as agents for and on behalf of the Owners. The Managers shall have authority to take such actions as they may from time to time in their absolute discretion consider to be necessary to enable them to perform this Agreement in accordance with sound ship management practice.

3.1. Crew Management

(only applicable if agreed according to Box 5)

The Managers shall provide suitably qualified Crew for the Vessel as required by the Owners in accordance with the STCW 95 requirements, provision of which includes but is not limited to the following functions:

- (i) selecting and engaging the Vessel's Crew, including payroll arrangements, pension administration, and insurances for the Crew other than those mentioned in Clause 6;
- (ii) ensuring that the applicable requirements of the law of the flag of the Vessel are satisfied in respect of manning levels, rank, qualification and certification of the Crew and employment regulations including Crew's tax, social insurance, discipline and other requirements;
- (iii) ensuring that all members of the Crew have passed a medical examination with a qualified doctor certifying that they are fit for the duties for which they are engaged and are in possession of valid medical certificates issued in accordance with appropriate flag State requirements. In the absence of applicable flag State requirements the medical certificate shall be dated not more than three months prior to the respective Crew members leaving their country of domicile and maintained for the duration of their service on board the Vessel;
- (iv) ensuring that the Crew shall have a command of the English language of a sufficient standard to enable them to perform their duties safely;
- (v) arranging transportation of the Crew, including repatriation;
- (vi) training of the Crew and supervising their efficiency;
- (vii) conducting union negotiations;
- (viii) operating the Managers' drug and alcohol policy unless otherwise agreed.

3.2. Technical Management

(only applicable if agreed according to Box 6)

The Managers shall provide technical management which includes, but is not limited to, the following functions:

- (i) provision of competent personnel to supervise the maintenance and general efficiency of the Vessel;
- (ii) arrangement and supervision of dry dockings, repairs, alterations and the upkeep of the Vessel to the standards required by the Owners provided that the Managers shall be entitled to incur the necessary expenditure to ensure that the Vessel will comply with the law of the flag of the Vessel and of the places where she trades, and all requirements and recommendations of the classification society;
- (iii) arrangement of the supply of necessary stores, spares and lubricating oil;
- (iv) appointment of surveyors and technical consultants as the Managers may consider

from time to time to be necessary;

- (v) development, implementation and maintenance of a Safety Management System (SMS) in accordance with the ISM Code (see sub-clauses 4.2 and 5.3).

3.3. Commercial Management

(only applicable if agreed according to Box 7)

The Managers shall provide the commercial operation of the Vessel, as required by the Owners, which includes, but is not limited to, the following functions:

- (i) providing chartering services in accordance with the Owners' instructions which include, but are not limited to, seeking and negotiating employment for the Vessel and the conclusion (including the execution thereof) of charter parties or other contracts relating to the employment of the Vessel. If such a contract exceeds the period stated in Box 13, consent thereto in writing shall first be obtained from the Owners.
- (ii) arranging of the proper payment to Owners or their nominees of all hire and/or freight revenues or other moneys of whatsoever nature to which Owners may be entitled arising out of the employment of or otherwise in connection with the Vessel.
- (iii) providing voyage estimates and accounts and calculating of hire, freights, demurrage and/or dispatch moneys due from or due to the charterers of the Vessel;
- (iv) issuing of voyage instructions;
- (v) appointing agents;
- (vi) appointing stevedores;
- (vii) arranging surveys associated with the commercial operation of the Vessel.

3.4. Insurance Arrangements

(only applicable if agreed according to Box 8)

The Managers shall arrange insurances in accordance with Clause 6, on such terms and conditions as the Owners shall have instructed or agreed, in particular regarding conditions, insured values, deductibles and franchises.

3.5. Accounting Services

(only applicable if agreed according to Box 9)

The Managers shall:

- (i) establish an accounting system which meets the requirements of the Owners and provide regular accounting services, supply regular reports and records;
- (ii) maintain the records of all costs and expenditure incurred as well as data necessary or proper for the settlement of accounts between the parties.

3.6. Sale or Purchase of the Vessel

(only applicable if agreed according to Box 10)

The Managers shall, in accordance with the Owners' instructions, supervise the sale or purchase of the Vessel, including the performance of any sale or purchase agreement, but not negotiation of the same.

3.7. Provisions

(only applicable if agreed according to Box 11) The Managers shall arrange for the supply of provisions.

3.8. Bunkering

(only applicable if agreed according to Box 12) The Managers shall arrange for the provision of bunker fuel of the quality specified by the Owners as required for the Vessel's trade.

4. Managers' Obligations

4.5. The Managers undertake to use their best endeavours to provide the agreed Management Services as agents for and on behalf of the Owners in accordance with sound ship management practice and to protect and promote the interests of the Owners in all matters relating to the provision of services hereunder. Provided, however, that the Managers in the performance of their management responsibilities under this Agreement shall be entitled to have regard to their overall responsibility in relation to all vessels as may from time to time be entrusted to their management and in particular, but without prejudice to the generality of the foregoing, the Managers shall be entitled to allocate available supplies, manpower and services in such manner as in the prevailing circumstances the Managers in their absolute discretion consider to be fair and reasonable.

4.6. Where the Managers are providing Technical Management in accordance with sub-clause 3.2, they shall procure that the requirements of the law of the flag of the Vessel are satisfied and they shall in particular be deemed to be the "Company" as defined by the ISM Code, assuming the responsibility for the operation of the Vessel and taking over the duties and responsibilities imposed by the ISM Code when applicable.

5. Owners' Obligations

5.5. The Owners shall pay all sums due to the Managers punctually in accordance with the terms of this Agreement.

5.6. Where the Managers are providing Technical Management in accordance with sub-clause 3.2, the Owners shall:

- (i)** procure that all officers and ratings supplied by them or on their behalf comply with the requirements of STCW 95;
- (ii)** instruct such officers and ratings to obey all reasonable orders of the Managers in connection with the operation of the Managers' safety management system.

5.5. Where the Managers are not providing Technical Management in accordance with sub-clause 3.2, the Owners shall procure that the requirements of the law of the flag of the Vessel are satisfied and that they, or such other entity as may be appointed by them and identified to the Managers, shall be deemed to be the "Company" as defined by the ISM Code assuming the responsibility for the operation of the Vessel and taking over the duties and responsibilities imposed by the ISM Code when applicable.

6. Insurance Policies

The Owners shall procure, whether by instructing the Managers under sub-clause 3.4 or otherwise,

that throughout the period of this Agreement:

- 6.1. at the Owners' expense, the Vessel is insured for not less than her sound market value or entered for her full gross tonnage, as the case may be for:
 - (i) usual hull and machinery marine risks (including crew negligence) and excess liabilities;
 - (ii) protection and indemnity risks (including pollution risks and Crew Insurances); and
 - (iii) war risks (including protection and indemnity and crew risks) in accordance with the best practice of prudent owners of vessels of a similar type to the Vessel, with first class insurance companies, underwriters or associations ("the Owners' Insurances");
- 6.2. all premiums and calls on the Owners' Insurances are paid promptly by their due date,
- 6.3. the Owners' Insurances name the Managers and, subject to underwriters' agreement, any third party designated by the Managers as a joint assured, with full cover, with the Owners obtaining cover in respect of each of the insurances specified in sub-clause 6.1:
 - (i) on terms whereby the Managers and any such third party are liable in respect of premiums or calls arising in connection with the Owners' Insurances; or
 - (ii) if reasonably obtainable, on terms such that neither the Managers nor any such third party shall be under any liability in respect of premiums or calls arising in connection with the Owners' Insurances; or
 - (iii) on such other terms as may be agreed in writing.

Indicate alternative (i), (ii) or (iii) in Box 14. If Box 14 is left blank then (i) applies.
- 6.4. written evidence is provided, to the reasonable satisfaction of the Managers, of their compliance with their obligations under Clause 6 within a reasonable time of the commencement of the Agreement, and of each renewal date and, if specifically requested, of each payment date of the Owners' Insurances.

7. Income Collected and Expenses Paid on Behalf of Owners

- 7.1. All moneys collected by the Managers under the terms of this Agreement (other than moneys payable by the Owners to the Managers) and any interest thereon shall be held to the credit of the Owners in a separate bank account.
- 7.2. All expenses incurred by the Managers under the terms of this Agreement on behalf of the Owners (including expenses as provided in Clause 8) may be debited against the Owners in the account referred to under sub-clause 7.1 but shall in any event remain payable by the Owners to the Managers on demand.

8. Management Fee

- 8.1. The Owners shall pay to the Managers for their services as Managers under this Agreement an annual management fee as stated in Box 15 which shall be payable by equal monthly installments in advance, the first installment being payable on the commencement of this Agreement (see Clause 2 and Box 4) and subsequent installments being payable every month.

- 8.2.** The management fee shall be subject to an annual review on the anniversary date of the Agreement and the proposed fee shall be presented in the annual budget referred to in sub-clause 9.1.
- 8.3.** The Managers shall, at no extra cost to the Owners, provide their own office accommodation, office staff, facilities and stationery. Without limiting the generality of Clause 7 the Owners shall reimburse the Managers for postage and communication expenses, traveling expenses, and other out of pocket expenses properly incurred by the Managers in pursuance of the Management Services.
- 8.4.** In the event of the appointment of the Managers being terminated by the Owners or the Managers in accordance with the provisions of Clauses 17 and 18 other than by reason of default by the Managers, or if the Vessel is lost, sold or otherwise disposed of, the "management fee" payable to the Managers according to the provisions of sub-clause 8.1, shall continue to be payable for a further period of three calendar months as from the termination date. In addition, provided that the Managers provide Crew for the Vessel in accordance with sub-clause 3.1:
 - (i)** the Owners shall continue to pay Crew Support Costs during the said further period of three calendar months and
 - (ii)** the Owners shall pay an equitable proportion of any Severance Costs which may materialize, not exceeding the amount stated in Box 16.
- 8.5.** If the Owners decide to lay-up the Vessel whilst this Agreement remains in force and such lay-up lasts for more than three months, an appropriate reduction of the management fee for the period exceeding three months until one month before the Vessel is again put into service shall be mutually agreed between the parties.
- 8.6.** Unless otherwise agreed in writing all discounts and commissions obtained by the Managers in the course of the management of the Vessel shall be credited to the Owners.

9. Budgets and Management of Funds

- 9.1.** The Managers shall present to the Owners annually a budget for the following twelve months in such form as the Owners require. The budget for the first year hereof is set out in Annex "C" hereto. Subsequent annual budgets shall be prepared by the Managers and submitted to the Owners not less than three months before the anniversary date of the commencement of this Agreement (see Clause 2 and Box 4).
- 9.2.** The Owners shall indicate to the Managers their acceptance and approval of the annual budget within one month of presentation and in the absence of any such indication the Managers shall be entitled to assume that the Owners have accepted the proposed budget.
- 9.3.** Following the agreement of the budget, the Managers shall prepare and present to the Owners their estimate of the working capital requirement of the Vessel and the Managers shall each month up-date this estimate. Based thereon, the Managers shall each month request the Owners in writing for the funds required to run the Vessel for the ensuing month, including the payment of any occasional or extraordinary item of expenditure, such as emergency repair costs, additional insurance premiums, bunkers or provisions. Such funds shall be received by the Managers within ten running days after the receipt by the Owners of the Managers' written request and shall be held to the credit of the Owners in a separate bank account.

- 9.4. The Managers shall produce a comparison between budgeted and actual income and expenditure of the Vessel in such form as required by the Owners monthly or at such other intervals as mutually agreed.
- 9.5. Notwithstanding anything contained herein to the contrary, the Managers shall in no circumstances be required to use or commit their own funds to finance the provision of the Management Services.

10. Managers' Right to Sub-Contract

The Managers shall not have the right to sub-contract any of their obligations hereunder, including those mentioned in sub-clause 3.1, without the prior written consent of the Owners which shall not be unreasonably withheld. In the event of such a sub-contract the Managers shall remain fully liable for the due performance of their obligations under this Agreement.

11. Responsibilities

11.1. **Force Majeure** - Neither the Owners nor the Managers shall be under any liability for any failure to perform any of their obligations hereunder by reason of any cause whatsoever of any nature or kind beyond their reasonable control.

11.2. Liability to Owners

- (i) Without prejudice to sub-clause 11.1, the Managers shall be under no liability whatsoever to the Owners for any loss, damage, delay or expense of whatsoever nature, whether direct or indirect, (including but not limited to loss of profit arising out of or in connection with detention of or delay to the Vessel) and howsoever arising in the course of performance of the Management Services **UNLESS** same is proved to have resulted solely from the negligence, gross negligence or willful default of the Managers or their employees, or agents or sub-contractors employed by them in connection with the Vessel, in which case (save where loss, damage, delay or expense has resulted from the Managers' personal act or omission committed with the intent to cause same or recklessly and with knowledge that such loss, damage, delay or expense would probably result) the Managers' liability for each incident or series of incidents giving rise to a claim or claims shall never exceed a total of ten times the annual management fee payable hereunder.
- (ii) Notwithstanding anything that may appear to the contrary in this Agreement, the Managers shall not be liable for any of the actions of the Crew, even if such actions are negligent, grossly negligent or wilful, except only to the extent that they are shown to have resulted from a failure by the Managers to discharge their obligations under sub-clause 3.1, in which case their liability shall be limited in accordance with the terms of this Clause 11.

11.3. **Indemnity** - Except to the extent and solely for the amount therein set out that the Managers would be liable under sub-clause 11.2, the Owners hereby undertake to keep the Managers and their employees, agents and sub-contractors indemnified and to hold them harmless against all actions, proceedings, claims, demands or liabilities whatsoever or howsoever arising which may be brought against them or incurred or suffered by them arising out of or in connection with the performance of the Agreement, and against and in respect of all costs, losses, damages and expenses (including legal costs and expenses on

a full indemnity basis) which the Managers may suffer or incur (either directly or indirectly) in the course of the performance of this Agreement. 367

11.4. "Himalaya" - It is hereby expressly agreed that no employee or agent of the Managers (including every sub- contractor from time to time employed by the Managers) shall in any circumstances whatsoever be under any liability whatsoever to the Owners for any loss, damage or delay of whatsoever kind arising or resulting directly or indirectly from any act, neglect or default on his part while acting in the course of or in connection with his employment and, without prejudice to the generality of the foregoing provisions in this Clause 11, every exemption, limitation, condition and liberty herein contained and every right, exemption from liability, defence and immunity of whatsoever nature applicable to the Managers or to which the Managers are entitled hereunder shall also be available and shall extend to protect every such employee or agent of the Managers acting as aforesaid and for the purpose of all the foregoing provisions of this Clause 11 the Managers are or shall be deemed to be acting as agent or trustee on behalf of and for the benefit of all persons who are or might be their servants or agents from time to time (including sub-contractors as aforesaid) and all such persons shall to this extent be or be deemed to be parties to this Agreement.

12. Documentation

Where the Managers are providing Technical Management in accordance with sub-clause 3.2 and/or Crew Management in accordance with sub-clause 3.1, they shall make available, upon Owners' request, all documentation and records related to the Safety Management System (SMS) and/or the Crew which the Owners need in order to demonstrate compliance with the ISM Code and STCW 95 or to defend a claim against a third party.

13. General Administration

- 13.1.** The Managers shall handle and settle all claims arising out of the Management Services hereunder and keep the Owners informed regarding any incident of which the Managers become aware which gives or may give rise to claims or disputes involving third parties.
- 13.2.** The Managers shall, as instructed by the Owners, bring or defend actions, suits or proceedings in connection with matters entrusted to the Managers according to this Agreement.
- 13.3.** The Managers shall also have power to obtain legal or technical or other outside expert advice in relation to the handling and settlement of claims and disputes or all other matters affecting the interests of the Owners in respect of the Vessel.
- 13.4.** The Owners shall arrange for the provision of any necessary guarantee bond or other security.
- 13.5.** Any costs reasonably incurred by the Managers in carrying out their obligations according to Clause 13 shall be reimbursed by the Owners.

14. Auditing

The Managers shall at all times maintain and keep true and correct accounts and shall make the same available for inspection and auditing by the Owners at such times as may be mutually agreed. On the termination, for whatever reasons, of this Agreement, the Managers shall release

to the Owners, if so requested, the originals where possible, or otherwise certified copies, of all such accounts and all documents specifically relating to the Vessel and her operation.

15. Inspection of Vessel

The Owners shall have the right at any time after giving reasonable notice to the Managers to inspect the Vessel for any reason they consider necessary.

16. Compliance with Laws and Regulations

The Managers will not do or permit to be done anything which might cause any breach or infringement of the laws and regulations of the Vessel's flag, or of the places where she trades.

17. Duration of the Agreement

This Agreement shall come into effect on the day and year stated in Box 4 and shall continue until the date stated in Box 17. Thereafter it shall continue until terminated by either party giving to the other notice in writing, in which event the Agreement shall terminate upon the expiration of a period of two months from the date upon which such notice was given.

18. Termination

18.1. Owners' default

- (i) The Managers shall be entitled to terminate the Agreement with immediate effect by notice in writing if any moneys payable by the Owners under this Agreement and/or the owners of any associated vessel, details of which are listed in Annex "D", shall not have been received in the Managers' nominated account within ten running days of receipt by the Owners of the Managers written request or if the Vessel is repossessed by the Mortgagees.
- (ii) If the Owners:
 - (a) fail to meet their obligations under sub-clauses 5.2 and 5.3 of this Agreement for any reason within their control, or
 - (b) proceed with the employment of or continue to employ the Vessel in the carriage of contraband, blockade running, or in an unlawful trade, or on a voyage which in the reasonable opinion of the Managers is unduly hazardous or improper, the Managers may give notice of the default to the Owners, requiring them to remedy it as soon as practically possible. In the event that the Owners fail to remedy it within a reasonable time to the satisfaction of the Managers, the Managers shall be entitled to terminate the Agreement with immediate effect by notice in writing.

18.2. Managers' Default

If the Managers fail to meet their obligations under Clauses 3 and 4 of this Agreement for any reason within the control of the Managers, the Owners may give notice to the Managers of the default, requiring them to remedy it as soon as practically possible. In the event that the Managers fail to remedy it within a reasonable time to the satisfaction of the Owners, the Owners shall be entitled to terminate the Agreement with immediate effect by notice in

writing.

18.3. Extraordinary Termination

This Agreement shall be deemed to be terminated in the case of the sale of the Vessel or if the Vessel becomes a total loss or is declared as a constructive or compromised or arranged total loss or is requisitioned.

18.4. For the purpose of sub-clause 18.3 hereof

(i) the date upon which the Vessel is to be treated as having been sold or otherwise disposed of shall be the date on which the Owners cease to be registered as Owners of the Vessel;

(ii) the Vessel shall not be deemed to be lost unless either she has become an actual total loss or agreement has been reached with her underwriters in respect of her constructive, compromised or arranged total loss or if such agreement with her underwriters is not reached it is adjudged by a competent tribunal that a constructive loss of the Vessel has occurred.

18.5. This Agreement shall terminate forthwith in the event of an order being made or resolution passed for the winding up, dissolution, liquidation or bankruptcy of either party (otherwise than for the purpose of reconstruction or amalgamation) or if a receiver is appointed, or if it suspends payment, ceases to carry on business or makes any special arrangement or composition with its creditors.

18.6. The termination of this Agreement shall be without prejudice to all rights accrued due between the parties prior to the date of termination.

19. Law and Arbitration

19.1. This Agreement shall be governed by and construed in accordance with English law and any dispute arising out of or in connection with this Agreement shall be referred to arbitration in London in accordance with the Arbitration Act 1996 or any statutory modification or re-enactment thereof save to the extent necessary to give effect to the provisions of this Clause. The arbitration shall be conducted in accordance with the London Maritime Arbitrators Association (LMAA) Terms current at the time when the arbitration proceedings are commenced. The reference shall be to three arbitrators. A party wishing to refer a dispute to arbitration shall appoint its arbitrator and send notice of such appointment in writing to the other party requiring the other party to appoint its own arbitrator within 14 calendar days of that notice and stating that it will appoint its arbitrator as sole arbitrator unless the other party appoints its own arbitrator and gives notice that it has done so within the 14 days specified. If the other party does not appoint its own arbitrator and give notice that it has done so within the 14 days specified, the party referring a dispute to arbitration may, without the requirement of any further prior notice to the other party, appoint its arbitrator as sole arbitrator and shall advise the other party accordingly. The award of a sole arbitrator shall be binding on both parties as if he had been appointed by agreement. Nothing herein shall prevent the parties agreeing in writing to vary these provisions to provide for the appointment of a sole arbitrator. In cases where neither the claim nor any counterclaim exceeds the sum of USD50,000 (or such other sum as the parties may agree) the arbitration shall be conducted in accordance with the LMAA Small Claims Procedure current at the time when the arbitration proceedings are commenced.

19.2. This Agreement shall be governed by and construed in accordance with Title 9 of the United States Code and the Maritime Law of the United States and any dispute arising out of or in connection with this Agreement shall be referred to three persons at New York, one to be appointed by each of the parties hereto, and the third by the two so chosen; their decision or that of any two of them shall be final, and for the purposes of enforcing any award, judgment may be entered on an award by any court of competent jurisdiction. The proceedings shall be conducted in accordance with the rules of the Society of Maritime Arbitrators, Inc. In cases where neither the claim nor any counterclaim exceeds the sum of USD50,000 (or such other sum as the parties may agree) the arbitration shall be conducted in accordance with the Shortened Arbitration Procedure of the Society of Maritime Arbitrators, Inc. current at the time when the arbitration proceedings are commenced.

19.3. This Agreement shall be governed by and construed in accordance with the laws of the place mutually agreed by the parties and any dispute arising out of or in connection with this Agreement shall be referred to arbitration at a mutually agreed place, subject to the procedures applicable there.

19.4. If Box 18 in Part I is not appropriately filled in, sub- clause 19.1 of this Clause shall apply.

Note: 19.1, 19.2 and 19.3 are alternatives; indicate alternative agreed in Box 18.

20. Notices

20.1. Any notice to be given by either party to the other party shall be in writing and may be sent by fax, telex, registered or recorded mail or by personal service.

20.2. The address of the Parties for service of such communication shall be as stated in Boxes 19 and 20, respectively.



1. Date of Agreement		THE BALTIC AND INTERNATIONAL MARITIME COUNCIL (BIMCO) STANDARD SHIP MANAGEMENT AGREEMENT CODE NAME: "SHIPMAN 98"	
		Part I	
2. Owners (name, place of registered office and law of registry) (Cl. 1)		3. Managers (name, place of registered office and law of registry) (Cl. 1)	
Name		Name	
Place of registered office		Place of registered office	
Law of registry		Law of registry	
4. Day and year of commencement of Agreement (Cl. 2)			
5. Crew Management (state "yes" or "no" as agreed) (Cl. 3.1)		6. Technical Management (state "yes" or "no" as agreed) (Cl. 3.2)	
7. Commercial Management (state "yes" or "no" as agreed) (Cl. 3.3)		8. Insurance Arrangements (state "yes" or "no" as agreed) (Cl. 3.4)	
9. Accounting Services (state "yes" or "no" as agreed) (Cl. 3.5)		10. Sale or purchase of the Vessel (state "yes" or "no" as agreed) (Cl. 3.6)	
11. Provisions (state "yes" or "no" as agreed) (Cl. 3.7)		12. Bunkering (state "yes" or "no" as agreed) (Cl. 3.8)	
13. Chartering Services Period (only to be filled in if "yes" stated in Box 7) (Cl. 3.3(i))		14. Owners' Insurance (state alternative (i), (ii) or (iii) of Cl. 6.3)	
15. Annual Management Fee (state annual amount) (Cl. 8.1)		16. Severance Costs (state maximum amount) (Cl. 8.4(ii))	
17. Day and year of termination of Agreement (Cl. 17)		18. Law and Arbitration (state alternative 19.1, 19.2 or 19.3; if 19.3 place of arbitration must be stated) (Cl. 19)	
19. Notices (state postal and cable address, telex and telefax number for serving notice and communication to the Owners) (Cl. 20)		20. Notices (state postal and cable address, telex and telefax number for serving notice and communication to the Managers) (Cl. 20)	

It is mutually agreed between the party stated in Box 2 and the party stated in Box 3 that this Agreement consisting of PART I and PART II as well as Annexes "A" (Details of Vessel), "B" (Details of Crew), "C" (Budget) and "D" (Associated vessels) attached hereto, shall be performed subject to the conditions contained herein. In the event of a conflict of conditions, the provisions of PART I and Annexes "A", "B", "C" and "D" shall prevail over those of PART II to the extent of such conflict but no further.

Signature(s) (Owners)	Signature(s) (Managers)
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Appendix 5-2 Short Training Program on Ship-management

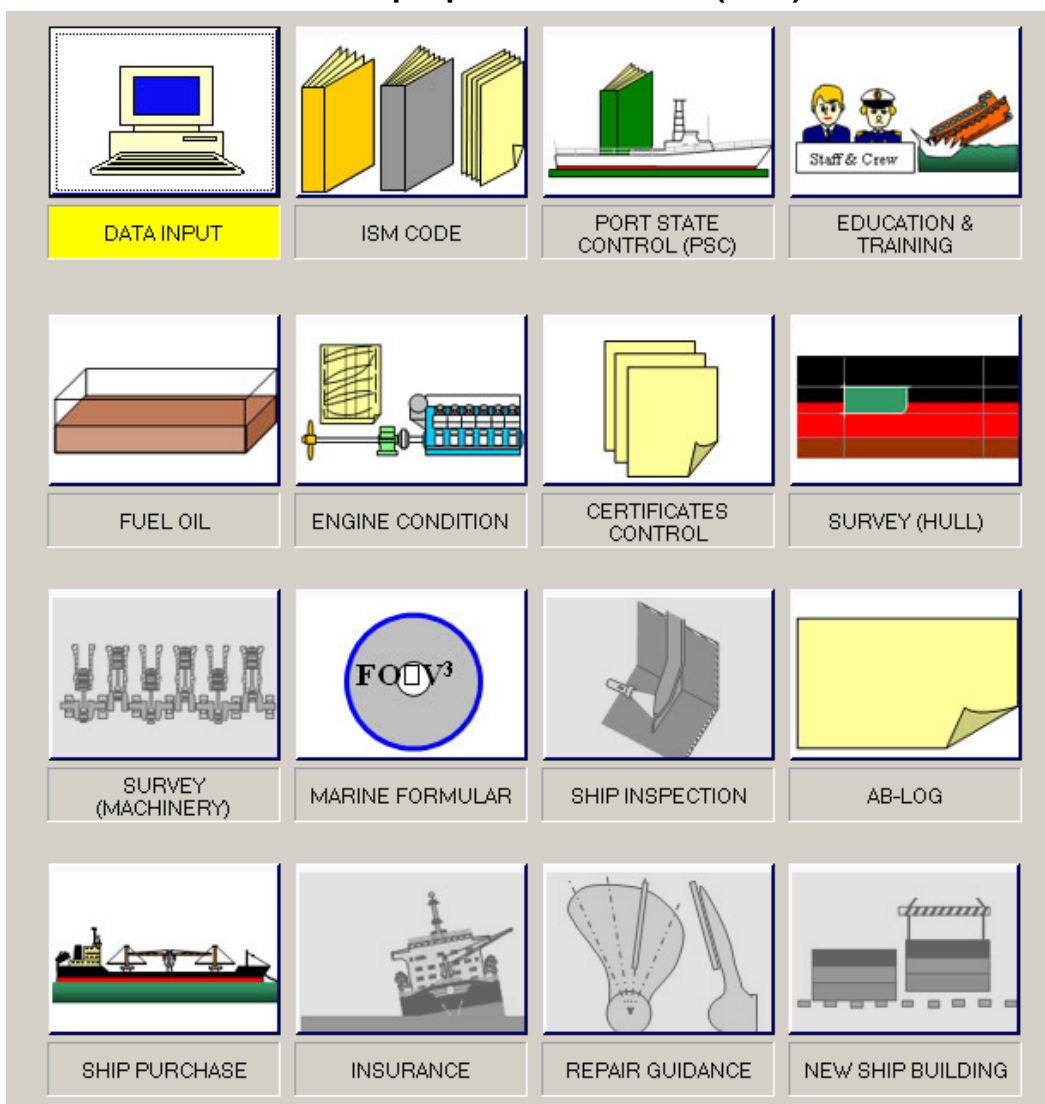
(1) Outlines

STRAMINDO II	
SHORT TRAINING PROGRAM ON SHIP-MANAGEMENT	
Session	Contents of the Session
1	Case Study of for On-board Inspection
	<ul style="list-style-type: none"> - Passenger Ferry (Imperfection and defect of safety equipment) - Container Vessel (Accident occurred by lack of analysis ability of engine operation data) - Chemical Tanker (Critical condition caused by lack of analysis ability of engine operation data and insufficient internal audit) - Explanation of analysis with survey reports and sample software.
2	What is ISM Code
	<ul style="list-style-type: none"> - Explanation of importance to specify the ordinary works which are conducted in shipping company in general (such as a policy, organization and authority, document management, safe operation, ship's equipment maintenance, emergency, deficiency matter and corrective action, internal audit, training and drill, etc.), in manual or process document with internationally demanded items, and to register in check list.
3	Examples of Accident
	<ul style="list-style-type: none"> - Wreck of hull by being frozen of air tube in cold latitudes - Damage of propeller and running repair - Example of nonconformities caused by design of repair methods
4	ISM Code (to Apply Domestic Ships of Indonesian Owners)
	<ul style="list-style-type: none"> - ISM is important in the view of safety operation and sea pollution prevention in both international and domestic. In Indonesia, applying ISM such as "Indonesian Safety Management" will be effective to avoid accidents or to reduce repair cost by corrective action
5	The Relation between ISM Code and Implementation of Safe Operation of Ships
	<ul style="list-style-type: none"> - Explanation about importance of finding nonconformity, reporting evaluation of risk level, taking corrective action, inspecting and reviewing committee of managers. - Explanation about importance of introduction of ISM to avoid incorrect arbitrary judgment and decision made by managers.

(2) Comments Made by Participants of Short Training Course

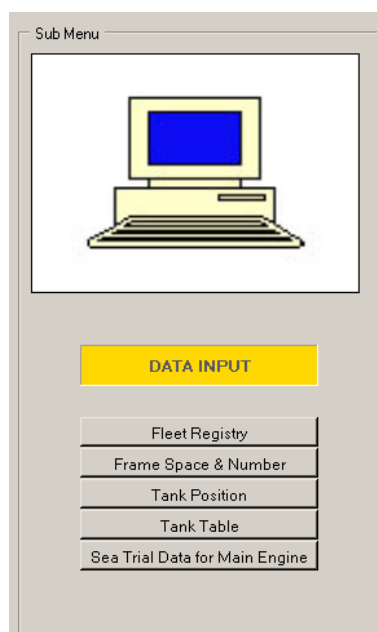
Items	Comments
1. Contents	<ul style="list-style-type: none"> • Case study, trouble shooting, inspection method of second-hand vessel purchase • Practical/technical method to solve the problems mostly occurred during on-board inspection • Shipping business and lending, methods and application of on-board inspection and ship audit, management of ship-management business, basic knowledge of superintendent • Planning-maintenance system, method of actual use and share of ship-management • Human development of seafarers and practical use of ISM Code.
2. Textbook	<ul style="list-style-type: none"> • Hardcopy of text and soft copy should be prepared in a set. • Textbook should be compact. • Shipping business should be a topic of textbook. • Teaching material should be more systematic.
3. Teaching Method	<ul style="list-style-type: none"> • The higher level person of shipping company can be a lecturer. • It needs mutual lecture (both from lecturer and from participants) • It should be more visualized with showing slid or projector. • Specific matters can be more detail. • It needs a group discussion.
4. Overall Course	<ul style="list-style-type: none"> • Since the education level of participants are not always same, practical course should be adopted in the lecture.
5. Others	<ul style="list-style-type: none"> • More about the topics relating to business • It needs plural lecturers by specialties. • It's useful for the field works of Surveyor/inspector/superintendent • It needs more ideas to attract participants to joining the lecture. • It's useful and needs continuous holding of the course.

Appendix 5-3 CD Software of Ship Operation Practice (SOP)



Chap01	DATA INPUT	A-48
Chap02	ISM Code (incl.Indonesian Text)	A-49
Chap03	PORT STATE CONTROL (PSC) (incl. Indonesian Text)	A-178
Chap04	EDUCATION & TRAINING (incl. Indonesian Text).....	A-218
Chap05	FUEL OIL.....	A-219
Chap06	ENGINE CONDITION.....	A-220
Chap07	CERTIFICATES CONTROL.....	A-221
Chap08	CLASS SURVEY GUIDANCE (HULL) (incl. English Text)..	A-222
Chap09	CLASS SURVEY GUIDANCE (MACHINERY).....	A-223
Chap10	MARINE FORMULA	A-224
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Chap16	NEW SHIP BUILDING (incl. English Text)	A-230

Chapter 01 Data Input



01 Fleet Registry

A database to manage the Gross Tonnage, Type of Vessel and Classification of Vessel

02 Frame Space & Number

A database to manage the size of frame of vessel, position of flame, position of partition, number of hold, etc. Once entering these figures, a shape of vessel will be automatically drawn.

03 Tank Position

A database to manage the number of fuel tank, position of flame, position of tank and shape of tank. Once entering these figures, a shape of tank will be automatically drawn.

04 Tank Table

A database to manage the volume of tank and condition of the tank. Once entering these figures, a graph of tank table will be automatically drawn.

This table is useful to estimate the fuel volume to be loaded, scheduled arrival time, etc. With analysing this data, an accident of fuel leakage can be prevented.

05 Sea Trial Data for Main Engine

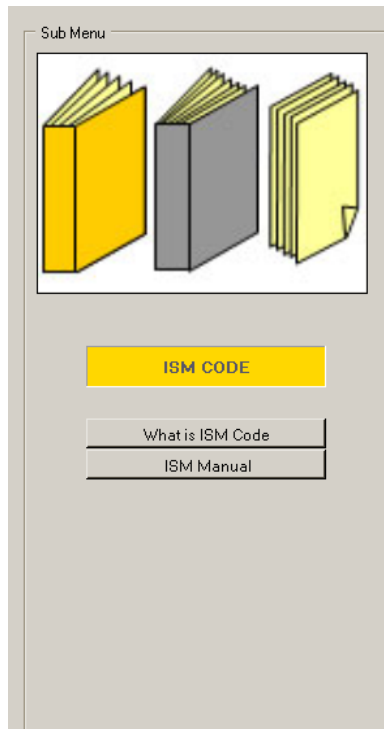
A database to manage the performance of main engine. Once entering the measured figures of sea trial in shipyard, the performance curve of main engine will be automatically drawn.

The graph of performance curve is linking to "Chapter 6 Engine Condition" and can apply to analysis of the condition.

Example of the picture : 03 Tank Position

		TANK NO	SHAPE	POSITION	CAPACITY (m3)	AFT FR NO	FORE FR NO
HFO	NO	1	[Red Box]	BOTTOM (C)	150		
	NO	2					
	NO						
	NO						
TOTAL					150		
		TANK NO	SHAPE	POSITION	CAPACITY (m3)	AFT FR NO	FORE FR NO
MDO	NO	1					
	NO	2					
	NO						
	NO						
TOTAL					0		

Chapter 02 ISM Code



01 What is ISM Code

The document which explain the ISM Code with simple explanation and comic, since the ISM Code is written based on demanding code and difficult to understand for new graduates or a person who doesn't have on-board experience. This document is including following topics;

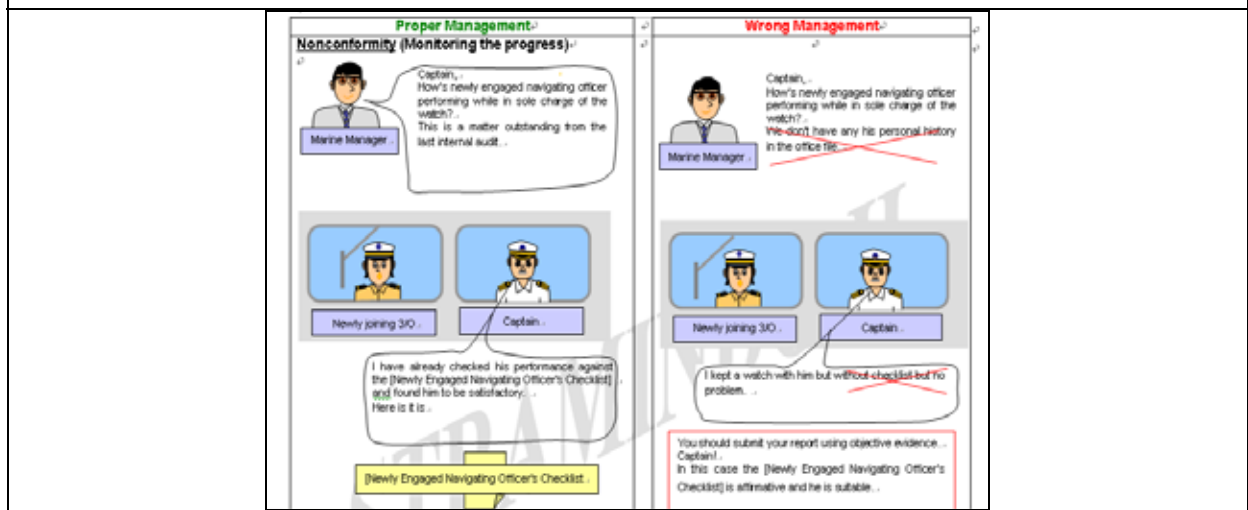
1. Management Reviews
2. Management Organization Structure
3. Safety Management Documentation
4. Shipboard Personnel
5. Safe Operation Ships
6. Environmental Protection
7. Maintenance of Ship's Equipment
8. Shore Based Contingency Plans
9. Shipboard Emergency Plans
10. Nonconformity and Corrective Action
11. The internal Audit
12. Training

02 ISM Code Standard Manual

The standard manual of ISM Code which is simplified and easy to understand is installed both English and Indonesian language.

1. Management Reviews
2. Management Organization Structure
3. Safety Management Documentation
4. Shipboard Personnel
5. Safe Operation Ships
6. Environmental Protection
7. Maintenance of Ship's Equipment
8. Shore Based Contingency Plans
9. Shipboard Emergency Plans
10. Nonconformity and Corrective Action
11. The internal Audit
12. Training

Example of the picture : 01 What is ISM Code



Chapter 02	APA ITU ISM CODE	
	INDEX	

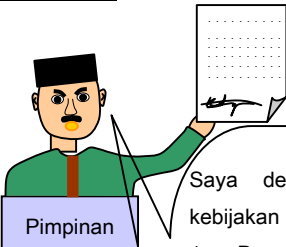
INDEX

Chapter	ENGLISH	INDONESIAN	PAGE No.
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1	The Management Reviews	Tinjauan Ulang Manajemen	54
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4	Shipboard Personnel	Personil kapal	71
5	Safe Operation of Ships	Pengoperasian kapal secara aman	74
6	Instructions for the Protection of the Environment	Instruksi untuk Perlindungan terhadap Lingkungan	85
7	Maintenance of Ship's Equipment	Pemeliharaan Peralatan Kapal	88
8	Shore Based Contingency Plans	Perencanaan Kemungkinan Yang Mendasar di Darat	-
9	Shipboard Emergency Plans	Perencanaan darurat di atas Kapal	-
10	Nonconformity and Corrective Action	Ketidaksesuaian dan Tindakan korektif	94
11	The Audit Team and Its Function	Tim Audit dan Fungsi Nya	106
12	Training	Pelatihan	-

Chapter 02	APA ITU ISM CODE	
Bab 00	Kebijakan Keselamatan dan perlindungan lingkungan	

Manajemen yang benar

Membuat kebijakan Keselamatan dan perlindungan lingkungan



Saya dengan ini mengumumkan bahwa kebijakan perusahaan itu untuk memastikan :

1. Dengan kebijakan keselamatan dan lingkungan dapat menemukan sasaran/tujuan yang akan dicapai.;
2. Peraturan dan aturan yang ditetapkan telah ditaati;
3. Orang yang ditunjuk (D.P) telah ditetapkan;
4. Hal itu berlaku bagi semua jenis pengaturan kapal;
5. Bahwa semua personil, di darat dan diatas kapal berpegang pada prosedur keamanan operasional kapal dan pengembangan technology; dan
6. Peninjauan ulang manajemen dan audit internal telah dilaksanakan.

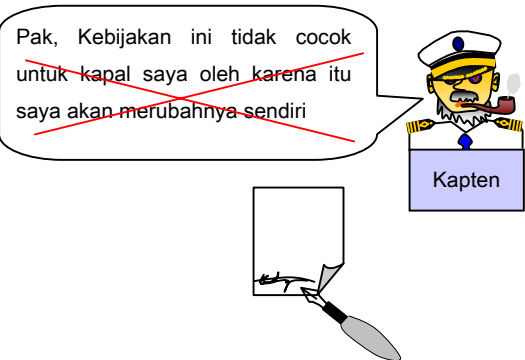
Penetapan orang yang ditunjuk (D.P)



Manajer Umum, kamu ditetapkan sebagai D.P. meskipun kamu tidak mempunyai pengalaman diatas kapal, tapi kamu punya banyak pengalaman dalam manajemen kapal.

Saya akan bekerja sebaik-baiknya, pak

Manajemen yang salah

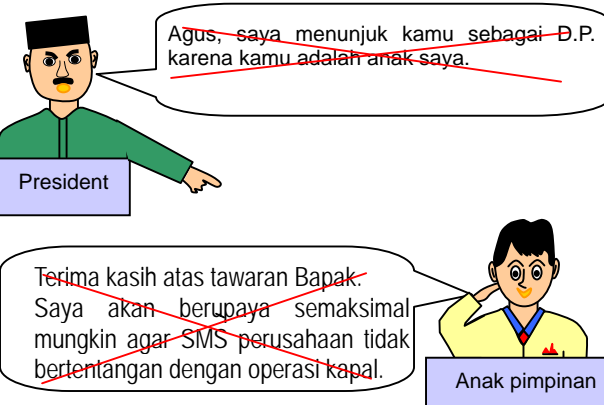


~~Pak, Kebijakan ini tidak cocok untuk kapal saya oleh karena itu saya akan merubahnya sendiri~~

Capten mempunyai kewenangan lebih dan tanggung jawab dalam mengambil keputusan berkenaan dengan pencegahan polusi dan keselamatan tetapi kamu tidak dapat merubah sendiri dokumen SMS, disebabkan :

1. Persetujuan diberikan oleh manajemen tinjauan ulang.
2. Persetujuan diberikan oleh Badan sertifikasi.

Jika kamu harus merubahnya, silahkan melaporkan kepada orang yang ditunjuk dengan (diperlukan pengambilan tindakan/Collecting action require)



~~Agus, saya menunjuk kamu sebagai D.P. karena kamu adalah anak saya.~~

~~Terima kasih atas tawaran Bapak. Saya akan berupaya semaksimal mungkin agar SMS perusahaan tidak bertentangan dengan operasi kapal.~~

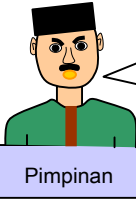
Agus baru saja menyelesaikan sekolahnya dan tidak pernah mengetahui mengenai nama kapal yang diatur oleh perusahaan!

Semua personil perusahaan dan Kapten dapat mengeluarkan sebuah (permintaan tindakan perbaikan/correction action request) untuk meningkatkan kebijakan keselamatan dan perlindungan lingkungan perusahaan

Chapter 02	APA ITU ISM CODE	
Bab 00	Kebijakan Keselamatan dan perlindungan lingkungan	

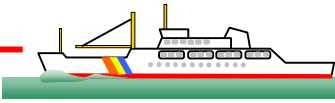
Manajemen yang Benar

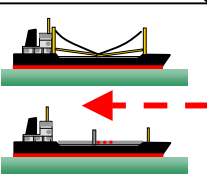
Ketika bentuk manajemen kapal telah dirubah




Pimpinan

Kita menerapkan manajemen pada beberapa jenis kapal baru
Kita akan melakukan peninjauan ulang dan meninjau kembali kebijakan perusahaan serta memberitahu Badan sertifikasi (Biro Klasifikasi)

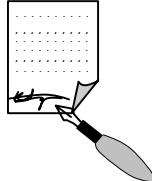




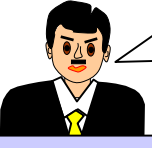


Manajer Umum

Kita akan merubah kebijakan, prosedur dan ceklis kapal penumpang harus dikeluarkan Dan disampaikan kepada Biro klasifikasi.




Menempatkan kebijakan perusahaan



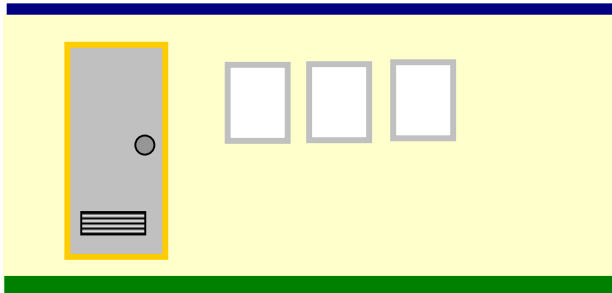
Manajer Umum

Apakah (kebijakan) perusahaan dan (SMC) (Sertifikat manajemen keselamatan) ditempatkan, dimana semua personil kapal dapat melihatnya?

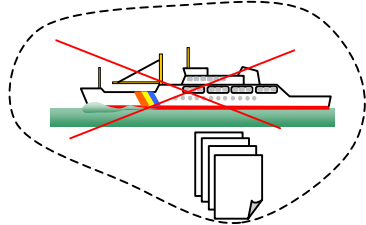


Kapten


Ya, telah dikerjakan



Manajemen yang salah




~~Saya adalah Kapten kapal penumpang yang lalu
Saya dapat mengoperasikan kapal tanpa beberapa pedoman dan prosedur untuk penumpang~~



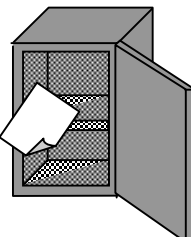
Kapten

Kebijakan, prosedur dan ceklis penumpang harus disiapkan.

~~Jangan khawatir Pak, saya mengetahui kebijakan dan SMC adalah dokumen yang sangat penting, jadi sudah disimpan semuanya dalam tempat yang aman di ruang Kapten~~



Kapten

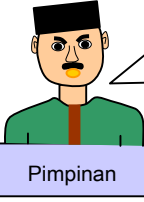


Capt. Jangan lakukan itu.
Kebijakan, salinan DOC dan SMC harus ditempatkan dimana semua awak kapal dapat melihatnya dan memahaminya.

Chapter 02	APA ITU ISM CODE	
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Manajemen yang Benar

Pelatihan dan pengembangan tekhology




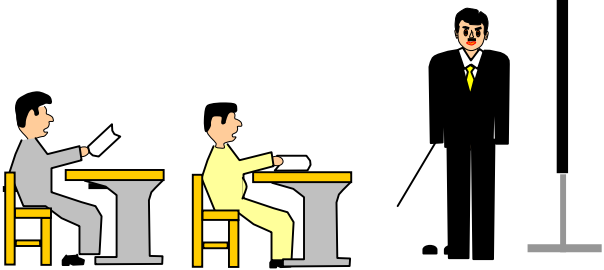
Pimpinan

Manajer Umum,
Sudahkah kamu melakukan pertemuan untuk mempelajari ISM Code yang baru saja dikenalkan dalam perusahaan dan di atas kapal?




Manajer Umum

Ya, sudah saya lakukan

Sumber Daya




Manajer Teknis

1. Kami membutuhkan pendidikan mengenai ISM code untuk semua staff.
2. Superintendent membutuhkan lebih banyak keahlian teknis yang menguntungkan.
3. Kami tidak dapat memelihara kapal sebagaimana mestinya untuk keuntungan staff.

1. Kami akan menjelaskan (apa itu ISM code) untuk semua kapal-kapal dan di kantor agar dimengerti.

2. Saya merencanakan untuk mengirimkan superintendent kami ke JICA Ship Manajemen Training Course.


3. Kami akan mempekerjakan superintendent



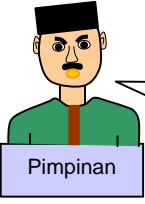
Manajer Umum

Manajemen yang Salah

~~Saya adalah Capten kapal yang lalu. Saya dapat mengoperasikan kapal tanpa beberapa manual dan prosedur pemeriksaan untuk penumpang.~~




Kapten



Pimpinan

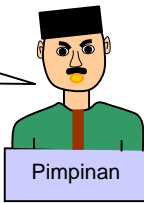
~~Jangan membuang-buang uang untuk pendidikan. Hal itu telah dipelajari di sekolah pelayaran.~~

Kebijakan, prosedur dan ceklis penumpang harus disiapkan
Pemimpin, ini adalah tanggung jawab kamu.



Manajer Teknis

~~Kami tidak dapat mengusahakan superintendent untuk berlatih dan belajar disebabkan kekurangan tenaga kerja dan biaya.~~

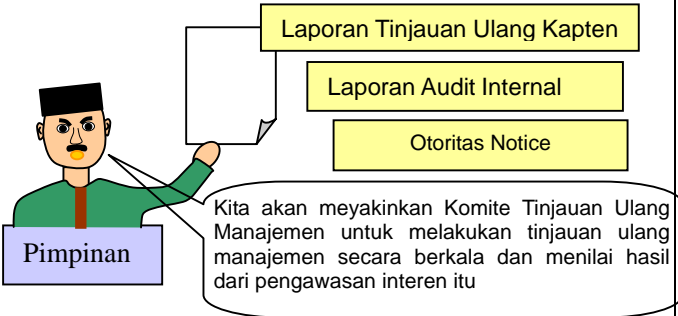


Pimpinan

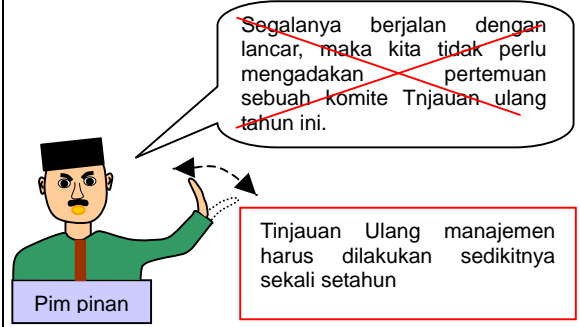
Chapter 02	APA ITU ISM CODE	
Bab 01	Tinjauan Ulang Manajemen	

Manajemen yang benar

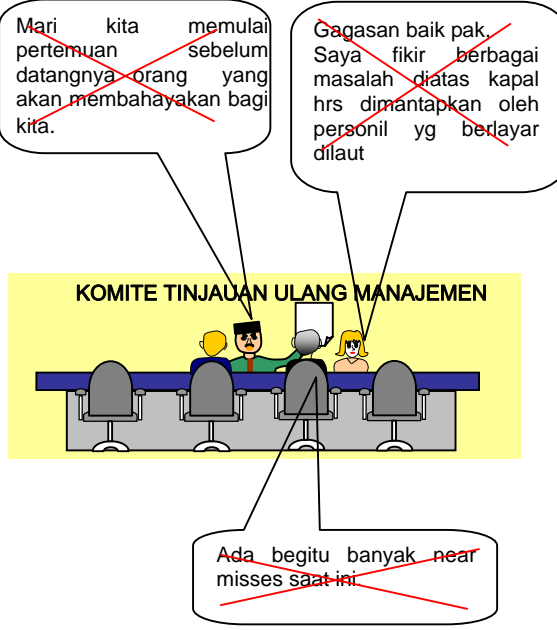
Tinjauan Ulang Manajemen



Manajemen yang salah

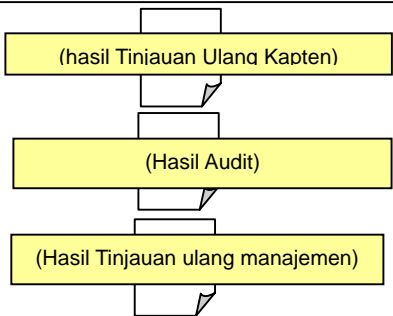


Komite Tinjauan Ulang



Isi Diskusi

1. Tujuan & kebijakan perusahaan;
2. Adanya pemenuhan SMS;
3. Tinjauan Ulang Kapten & laporan kekurangan dalam SMS;
4. Laporan audit Internal (Kantor & Kapal);
5. Hasil penyelidikan & analisa kecelakaan serta near- miss;
6. Perubahan peraturan dan kebijakan;
7. Tugas untuk menerapkan perubahan;
8. Mengusulkan peningkatan teknologi;
9. Kontrak/perjanjian;
10. Hasil sub-kontraktor;
11. Sumber daya manusia dan infra struktur;
12. Fokus terhadap pelanggan

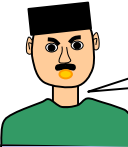


Semakin banyak anggota yang hadir, akan semakin bermanfaat diskusi itu. Masing-masing anggota komite perlu menghadiri pertemuan atau mengirimkan seorang wakilnya.

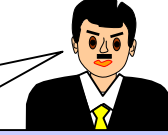
Chapter 02	APA ITU ISM CODE	
Bab 01	Tinjauan Ulang Manajemen	

Manajemen yang Benar

Pemeriksaan Kapal Bekas




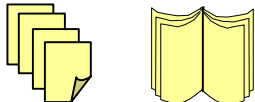
Mengapa ada banyak masalah setelah kapal dibeli

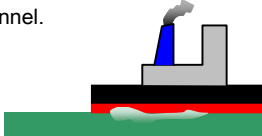



Penyebabnya adalah dibawah ini, Oleh karena itu diperlukan (permintaan tindakan koreksi), berikut ini:


1. Kita harus memelihara reputasi baik dengan cara menjaga hubungan baik dengan pasar bekas dan menemukan perantara yang baik.
2. Kita memerlukan keterampilan dari pengawas sesuai bentuk standart untuk pemeriksaan.


3. Suatu konsultan Jepang harus dapat digunakan untuk memeriksa catatan survey, membuat laporan pelayanan dan memperbaiki catatan spesifikasi yang harus dijelaskan.


4. Pengawas pembeli harus tiba sebelum kapal sandar dan tetap berada di kapal sampai kapal meninggalkan pelabuhan untuk memeriksa kondisi mesin dari asap pada fennel.


5. Minyak pelumas di dalam tangki harus di cek dengan memancarkan lampu senter dan kertas saringan.


6. Daftar perlengkapan gudang, onderdil dan peralatan yang ada harus didapatkan pada saat pemeriksaan dan mengambil fotonya untuk dijadikan sebagai bukti.


7. Minimum 2 tangki ballast harus diminta dibuka untuk Dilakukan pemeriksaan.

Manajemen yang salah

~~Aku punya banyak pengalaman, tapi aku nggak mau mengajar mereka, karena takut kehilangan posisiku.~~



Manajer Armada

Kita tidak bisa menggunakan konsultan Jepang karena biayanya mahal.

Kita tidak dapat mengirimkan seseorang dari kita secara cepat disebabkan mahal biayanya.



Manajer teknis

~~Saya menemukan banyak cadangan di atas kapal, pada saat pemeriksaan di pelabuhan~~


~~Tetapi saya tidak mengambil fotonya untuk dijadikan sebagai bukti.~~



Chapter 02	APA ITU ISM CODE	
Bab 01	Tinjauan Ulang Manajemen	


Manajemen yang benar

Memasukan kapal ke galangan kapal setelah pembelian kapal bekas






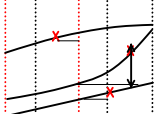
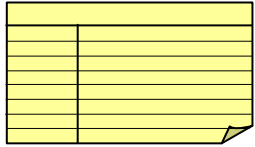
Dia marah.

Beberapa bulan setelah pembelian, Mengapa kapal dimasukan ke galangan kapal, apa dikarenakan kerusakan mesin?




Kita akan mencoba untuk meninjau kembali prosedur dan daftar pemeriksaan untuk menghindari permasalahan ini.

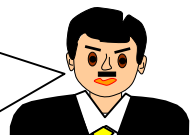
Penyebabnya adalah masalah sebagai berikut, Oleh karena itu, (permintaan tindakan koreksi) yang berikut ini sangat diperlukan.;

- Perwakilan pembeli harus berada di atas kapal utk familiarisasi sebelum kapal dibeli dan mencantulkannya dengan jelas dalam MOA. 
- Satu hal yang penting adalah untuk dapat memperoleh sebuah buku petunjuk dalam bahasa inggris juga pelayanan teknis yang baru dari pembuatnya harus didapatkan. 
- Semua Nozzle F.O. harus diperbaharui dengan cadangan yang baru. 
- Putaran minimum dari mesin induk harus diuji dan dibandingkan dengan tes uji layak jalan setelah perbaikan.
Jika putaran mesin berhenti mendadak, semua piston harus diperiksa secara seksama.
- 50% sampai 75% beban test harus dimuat dan semua data diukur untuk dapat dicatat dalam kurva pencapaian pada percobaan kelayakan di laut sebagai perbandingan. 
- Perencanaan pemeliharaan harus dibuat dan jadwal pemeliharaan harus ditempatkan di E/R. 

Manajemen yang salah



Kami telah membeli kapal container bekas dari pemilik "G", tetapi kecepatan kapal hanya 5 kt. Apa yang terjadi?




Pemimpin!
Saya menyarankan kepadamu jangan membeli mesin bekas type "V" dari pemilik "G". Pemilik "G" mempunyai reputasi sangat jelek di seluruh dunia.

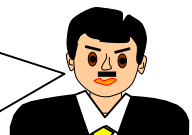
Tetapi kamu tidak mendengar nasehatku.

Dan juga superintendentku tidak mempunyai keahlian yang bagus untuk melakukan pemeriksaan tanpa ceklis.

Tinjauan Ulang Manajemen tidak berfungsi dengan benar. Kita harus membuat lembar penilaian dan kita harus mendapatkan konsensus persetujuan dari semua anggota.



Ma'af, kami telah melakukan kesalahan, untuk mengirim superintendent yang mempunyai keahlian yang cukup untuk melakukan pemeriksaan pembelian kapal



Tetapi kamu tidak mendengar nasehatku.

Kamu harus menyiapkan bentuk standart untuk melakukan pemeriksaan terhadap kapal bekas. Semua data dari Log-Books harus dicatat dan dipelajari oleh semua staff.

Chapter 02	APA ITU ISM CODE	
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Manajemen yang Benar

Pelayaran ke satu pelabuhan luar negeri setelah penyerahan kapal bekas kepada Pemilik Baru.



Pemimpin penjual!

Pembeli tidak memegang sebuah DOC pada perusahaannya sebab perusahaannya merupakan perusahaan domestic di wilayah Indonesia saja.

Mereka meminta kamu untuk membawa kapal ke pelabuhan luar Negeri berikutnya menggunakan DOC kamu.

Mereka akan mengirim anak buah kapal untuk melakukan pelayaran. Terimalah usulan ini karena harga yang ditawarkan sangat bagus.



Tidak, kita tidak bisa lakukan itu, pak Broker. DOC dan SMC kami secara rinci membatasi operasi kami yaitu untuk pelayaran domestik Jepang saja.

Jika ada crew orang asing yang sedang bergabung, kita harus memperkerjakannya langsung.

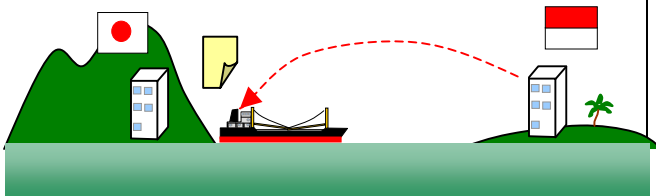
Lagipula kita harus menerjemahkan dokumen kita ke dalam bahasa yang dipakai atau bahasa yang dimengerti (Indonesia) oleh mereka untuk memenuhi anjuran ISM Code.

Kita akan memastikan untuk mempunyai surveyor PSC pemeriksa kapal di pelabuhan asing.

Jika informasi yang salah telah diberikan kepada Penguasa Pelabuhan oleh pihak ketiga, kapal bisa ditangkap sampai tindakan korektif telah dilengkapi.

Ini bisa mengakibatkan hukuman besar, dan suatu kerugian keuangan yang sangat besar.

Saya tidak akan pernah, tidak akan pernah mengijinkan ini.



Manajemen yang salah

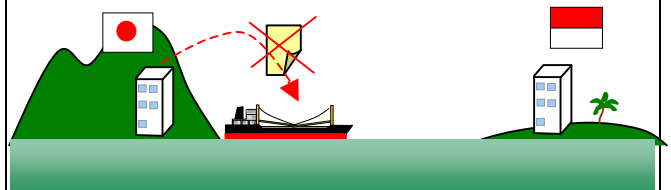
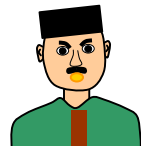


~~Saya mempunyai gagasan yang baik, pak Broker!
Anak buah kapal pembeli dapat menggunakan sistem ISM kita jika mereka membayar sejumlah uang untuk menangani tugas ini.~~



~~Pemimpin penjual!
Terima kasih atas kerjasamanya untuk menggunakan pelayaran tunggal.~~

Ma'af, saya tidak dapat menerima



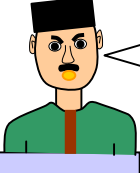
Hati-hati, pemimpin pembeli!

Jika ada kecelakaan yang menyebabkan kematian atau yang berhubungan dengan perlindungan terhadap lingkungan, kerusakan dll, pada saat kapal berada dalam manajemen kamu, maka tanggung jawab ada pada kamu

Chapter 02	APA ITU ISM CODE	
Bab 01	Tinjauan Ulang Manajemen	

Manajemen yang benar

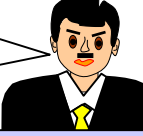
★ Manajemen kapal oleh Anak Perusahaan dalam perusahaan yang sama



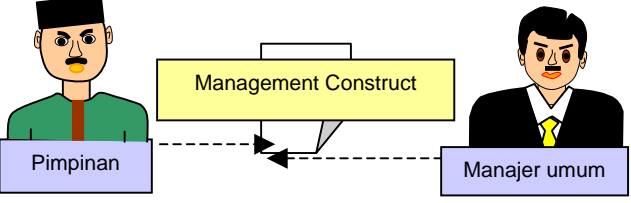
Pimpinan

Manajer Umum,
Anak perusahaan kami (yang hanya diatas kertas saja) benar-benar mengatur satu kapal dalam satu armada. Haruskah anak perusahaan mendapatkan DOC sendiri?

Tidak, tidak perlu pak,
Perusahaan kita benar-benar mengatur M/V "BALI", jadi kita dapat mengoperasikannya berdasarkan SMS kita. Bagaimanapun, kita harus mempunyai sebuah (perjanjian manajemen) dengan pemilik M/V "BALI"



Manajer umum

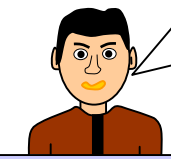


Management Construct

Pemimpin Manajemen perusahaan

Perwakilan anak perusahaan

Manajemen kapal milik sendiri oleh perusahaan lain



Pimpinan (B)

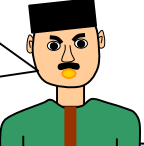
Bapak Pimpinan A,
Sangat sulit bagi kami untuk menerapkan SMS dikarenakan kami kekurangan staff yang ahli.

Dapatkah kami menggunakan sertifikat ISM anda untuk mengoperasikan kapal kami?

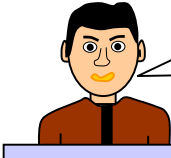
Mustahil Pak pemimpin B,

Kamu harus memperoleh DOC perusahaan milik kamu sendiri dan mengatur kapalmu sesuai dengan ISM code.

Atau jika kamu memerlukan kami untuk mengaturnya, kita harus membuat sebuah perjanjian (membangun manajemen) antara kita saja dan kamu harus mendaftarkannya kemudian



Pimpinan (A)




Pimpinan (B)

Bagus, itu telah saya pahami
Saya akan menandatangani sebuah (kontrak manajemen) dengan kamu.

Manajemen yang salah

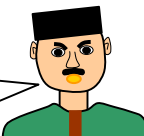
Pak !
Jika pemilik kapal mempunyai DOC sendiri, siapapun bisa mengatur kapal yang mereka miliki.



Anak

Kamu salah,
Nama pemilik kapal tercantum dalam DOC.
Manajemen Perusahaan juga memegang DOC sendiri.

Tentu, Pimpinan B
Kami akan menyediakan DOC perusahaan kami kepadamu.



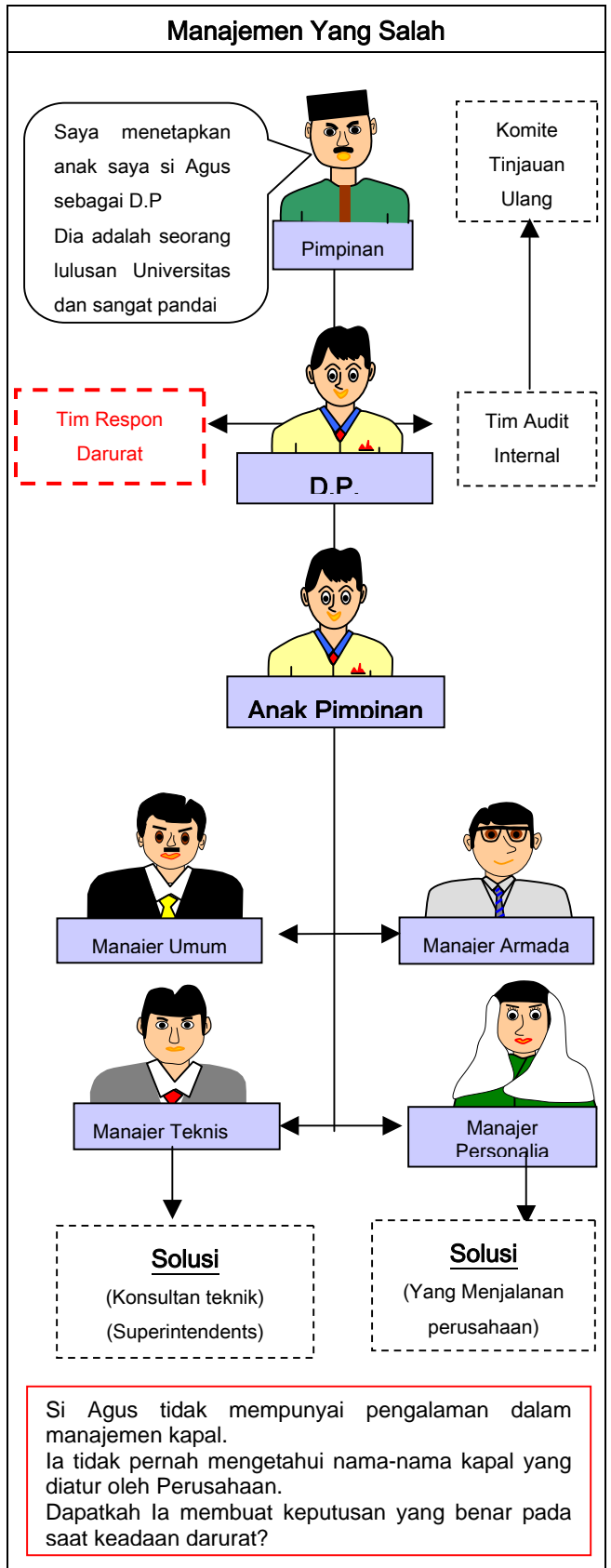
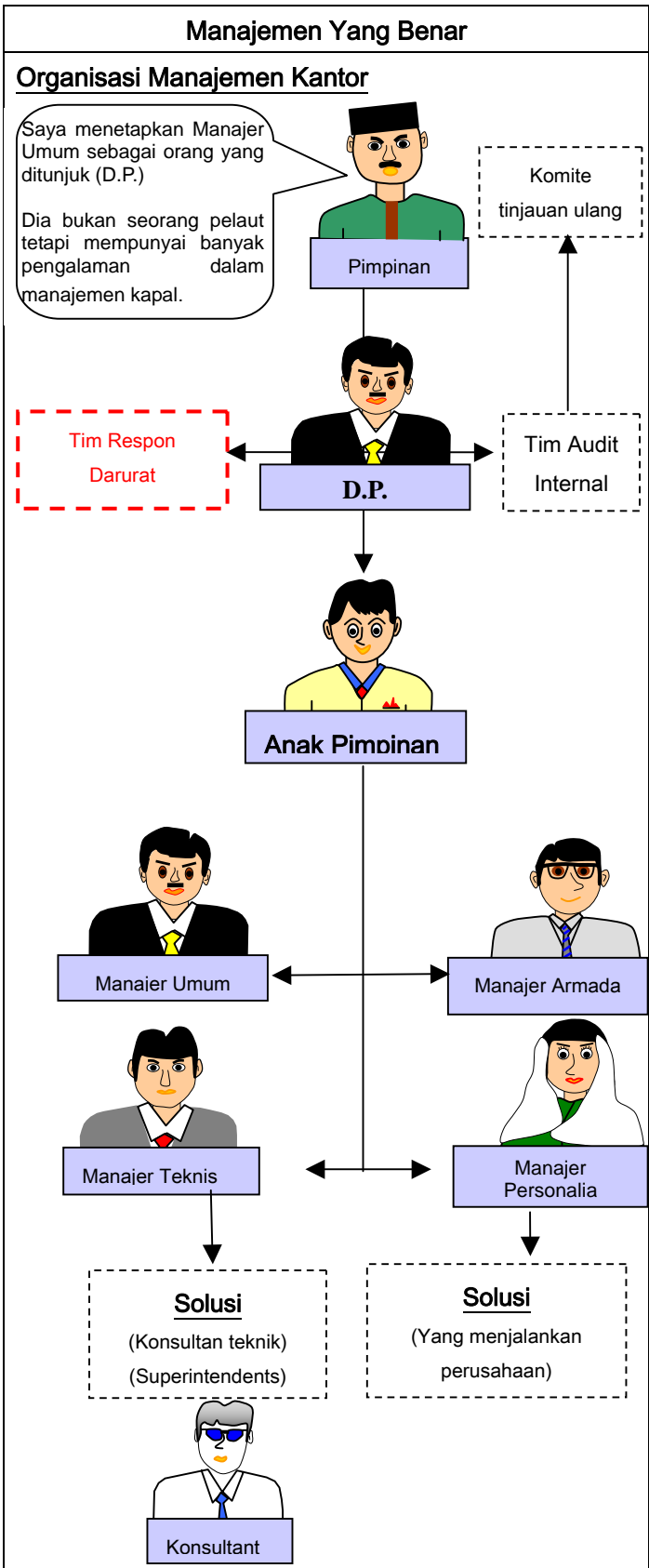
Pimpinan (A)

Jangan lakukan itu, pemimpin B!

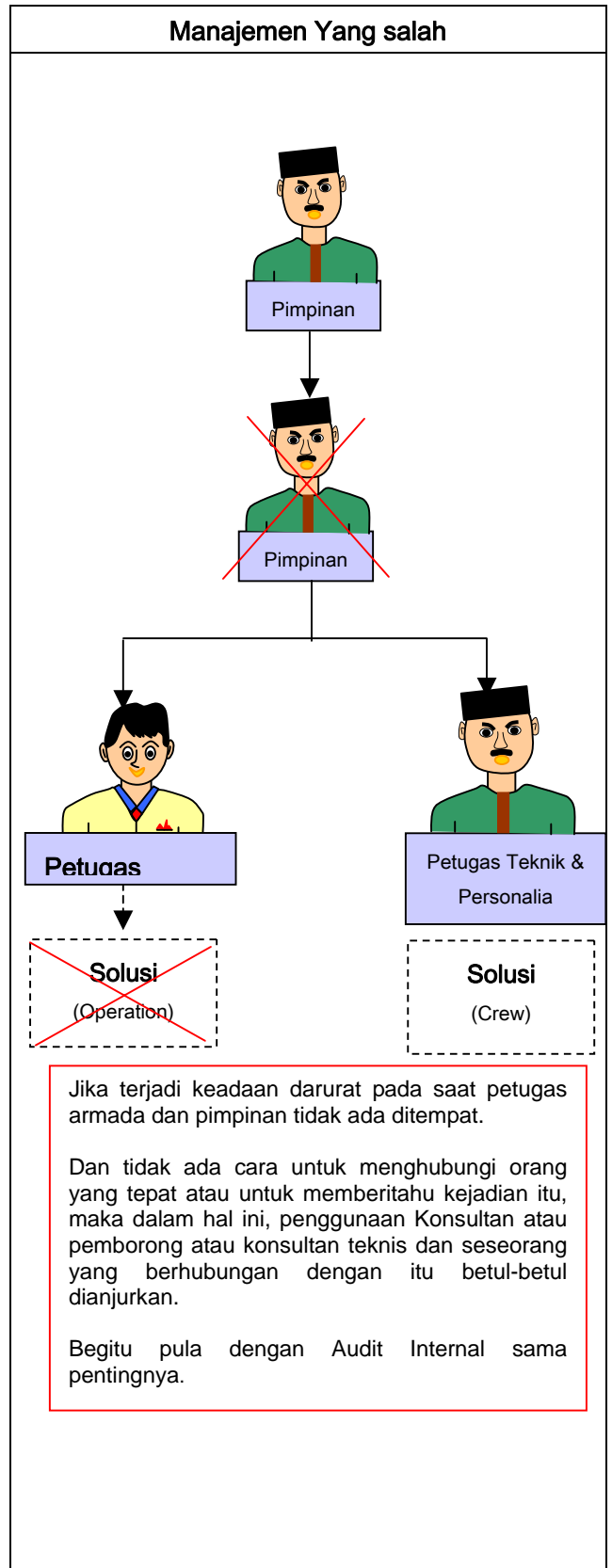
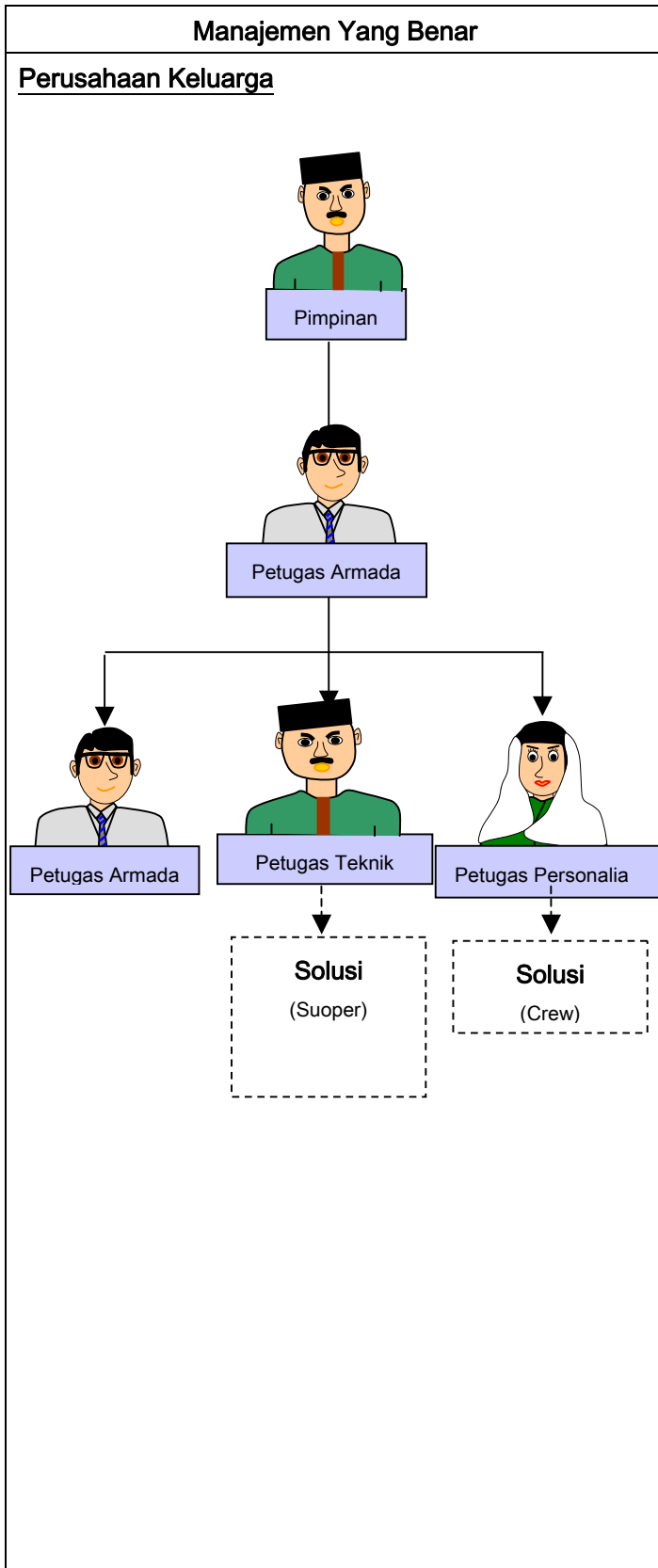
Dalam sistem kami no. kontrak darurat kapal sepenuhnya berbeda dari SOPEP kapal mereka.
Juga tampaknya surveyor PSC asing telah siap menghubungi D.P. untuk memberitahu hal ini ke kantornya melalui telephone!

Kemungkinan akan terjadi sesuatu hal!
Itu akan menimbulkan suatu masalah utama jika keterangan dan detail kapal dari Kapten berbeda dengan D.P.

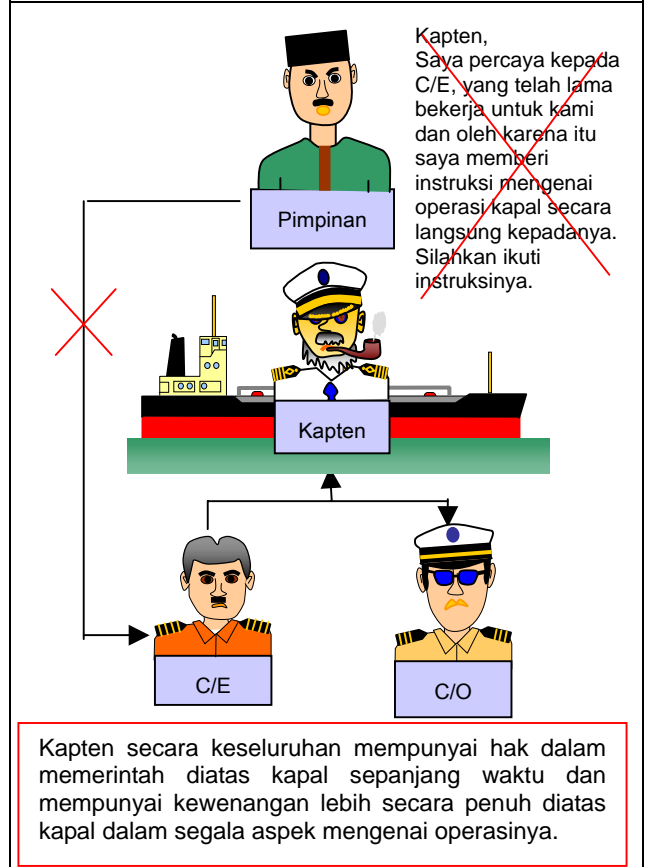
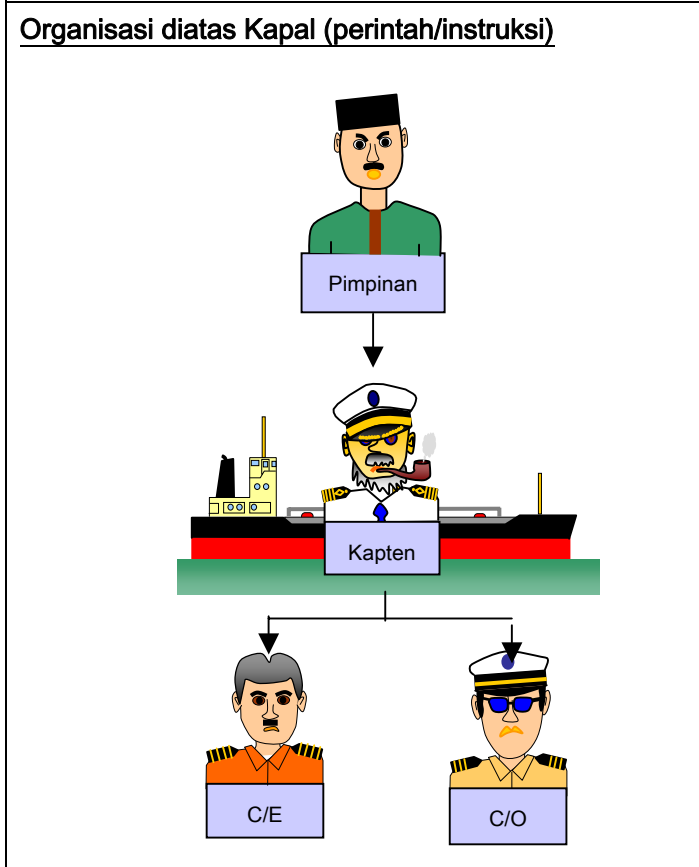
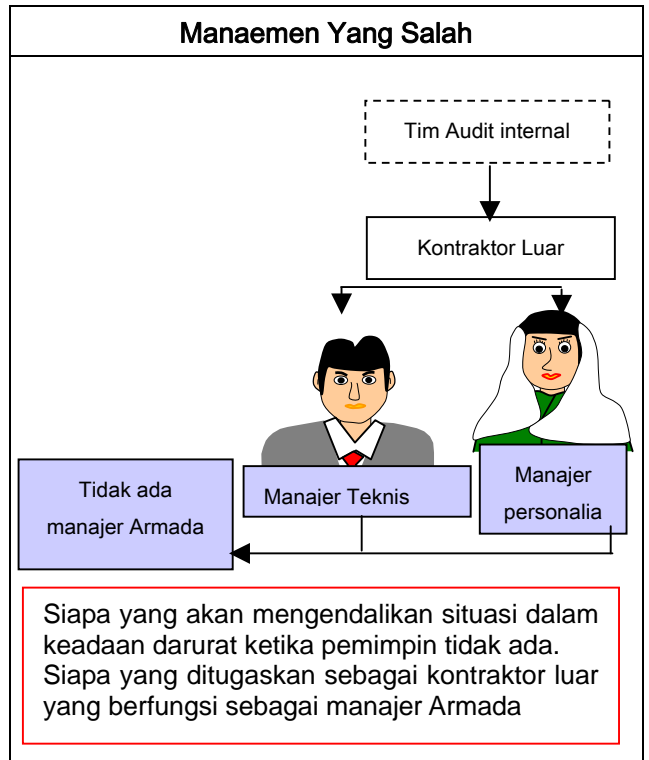
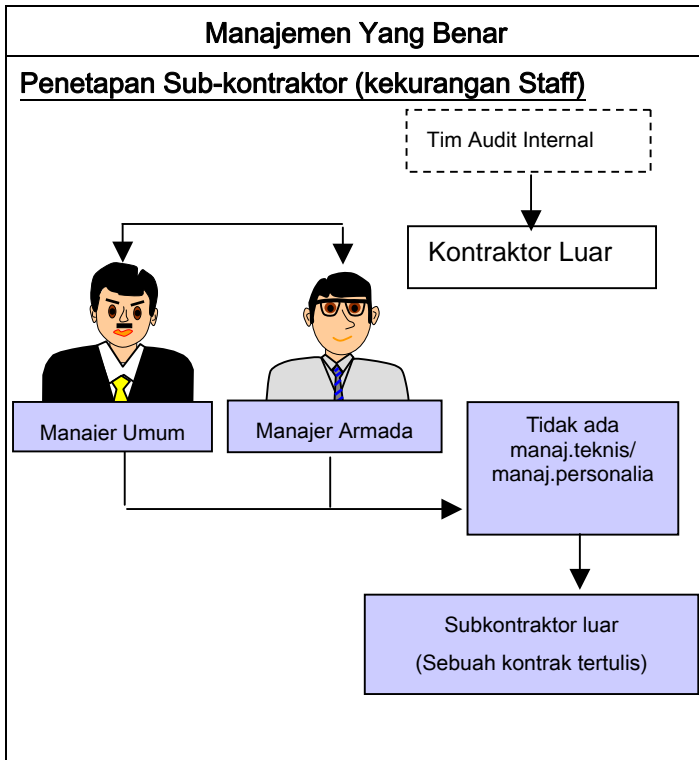
Chapter 02	APA ITU ISM CODE	
Bab 02	Struktur Organisasi manajemen di Darat dan di Kapal	



Chapter 02	APA ITU ISM CODE	
Bab 02	Struktur Organisasi manajemen di Darat dan di Kapal	



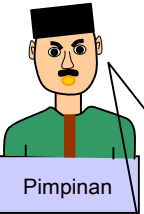
Chapter 02	APA ITU ISM CODE	
Bab 02	Struktur Organisasi manajemen di Darat dan di Kapal	



Chapter 02	APA ITU ISM CODE	
Bab 02	Struktur Organisasi manajemen di Darat dan di Kapal	

Manajemen Yang Benar

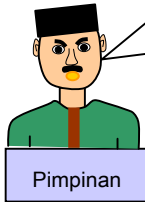
Tugas dan Tanggung jawab Pemimpin



Dengan ini saya mengumumkan bahwa kebijakan perusahaan itu untuk memastikan;


1. Dengan kebijakan keselamatan dan lingkungan dapat menemukan sasaran yang ingin dicapai.
2. Bahwa aturan yang telah ditetapkan dan peraturannya, dll telah ditaati.
3. Penetapan D.P. ;
4. Hal itu diberlakukan bagi semua jenis pengaturan kapal;
5. Bahwa semua personil, di darat dan diatas kapal berpegang pada prosedur operasional kapal secara aman dan mengembangkan technology ;
6. Audit Internal dan manajemen tinjauan ulang telah dikerjakan.

Manajemen Yang Salah




~~Ma'af Manjer Umum,
Ini bukan urusan saya.
Ini urusanmu~~

Tugas dan Tanggung Jawab Kapten



Kapten akan :

1. Menerapkan kebijakan keselamatan perusahaan dan perlindungan lingkungan;
2. Memotivasi anak buah kapal dalam rangka mengamati kebijakan itu;
3. Mengeluarkan perintah dan instruksi yang tepat menurut cara yang mudah dan jelas;
4. Memferifikasikan persyaratan yang ditetapkan yang telah diamati;
5. Meninjau ulang sistem manajemen keselamatan (SMS) dan melaporkan kekurangannya kepada D.P.
6. Mempunyai perintah secara mutlak diatas kapal; dan
7. Mempunyai kewenangan lebih dan bertanggung jawab untuk membuat keputusan yang berhubungan dengan keselamatan dan pencegahan polusi serta meminta bantuan kepada perusahaan bila dianggap perlu.




~~Ya, Manajer Armada
Saya akan mengikutil rute perjalanan yang kamu perintahkan meskipun kondisi laut berbahaya.

Saya juga akan menginstruksikan C/E untuk menggunakan engine power pada saat di laut berbahaya.~~

Chapter 02	APA ITU ISM CODE	
Bab 02	Struktur Organisasi manajemen di Darat dan di Kapal	

Manajemen Yang Benar

Tugas dan Tanggung Jawab D.P.



Manajer umum

D.P. itu akan:

1. Memelihara, memonitor dan meningkatkan SMS;
2. Mengeluarkan dan menyetujui dokumentasi SMS;
3. Menugaskan Audit Internal dan menerapkan pengawasan Internal;
4. Mengatur dan mengendalikan serta memonitor tindakan korektif tanpa kompromi;
5. Melaporkan hasil kerjanya dan memberi saran kepada Pimpinan;
6. Mengendalikan Tim yang menangani keadaan darurat

Manajemen Yang Salah




Manajer Umum


Saya tidak dapat mengatur semua departemen.

Manajer Teknis, kamu dapat memberikan keputusan dan menyetujui sendiri, tanpa persetujuan dari saya.


Tugas dan Tanggung Jawab Beberapa Manager



Manajer Armada




Manajer Teknis



Manajer personalia


Kami mengetahui semua aspek yang menyangkut tugas dan Tanggung jawab yang ditetapkan dalam SMS perusahaan untuk anggota departemen kami.



Manajer Armada


~~Kita tidak bisa melakukan apa-apa, karena boss kita hanya seorang.~~

~~Dia ingin memutuskan segalanya menurut kehendak dia.~~



Manajer Teknis

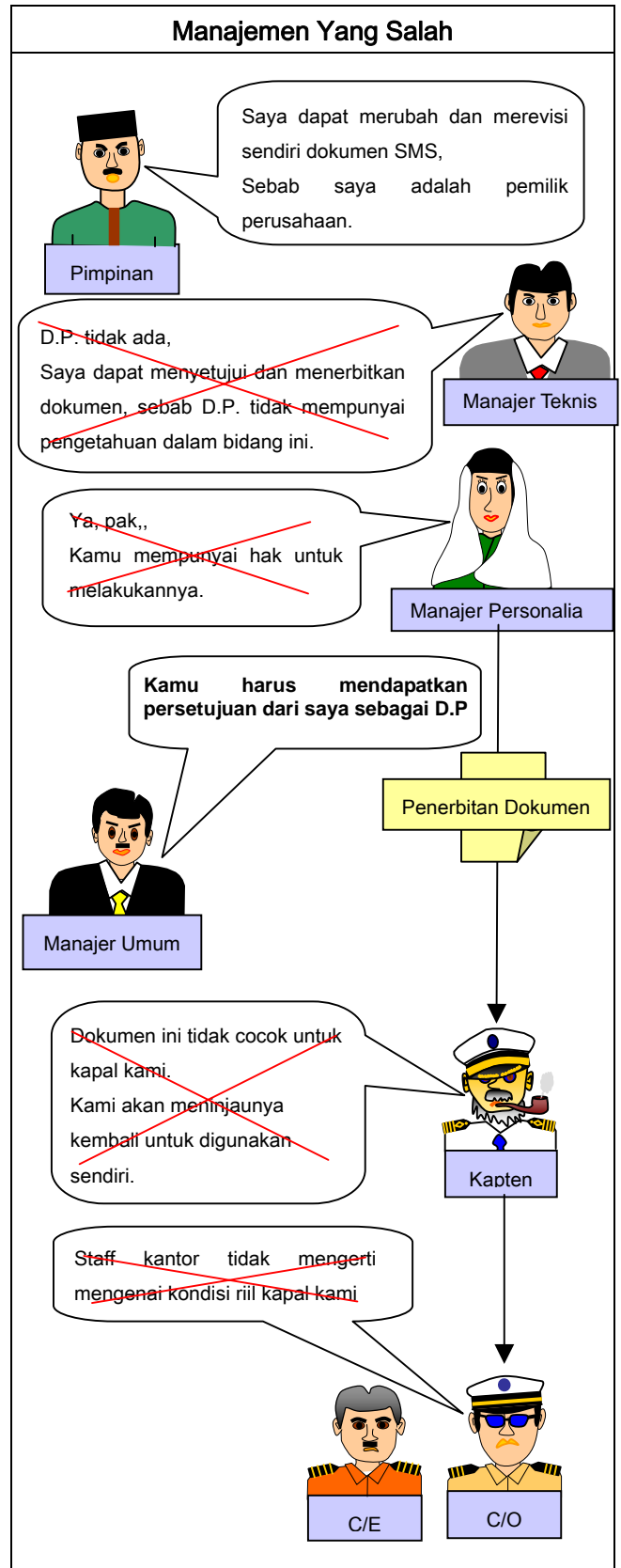
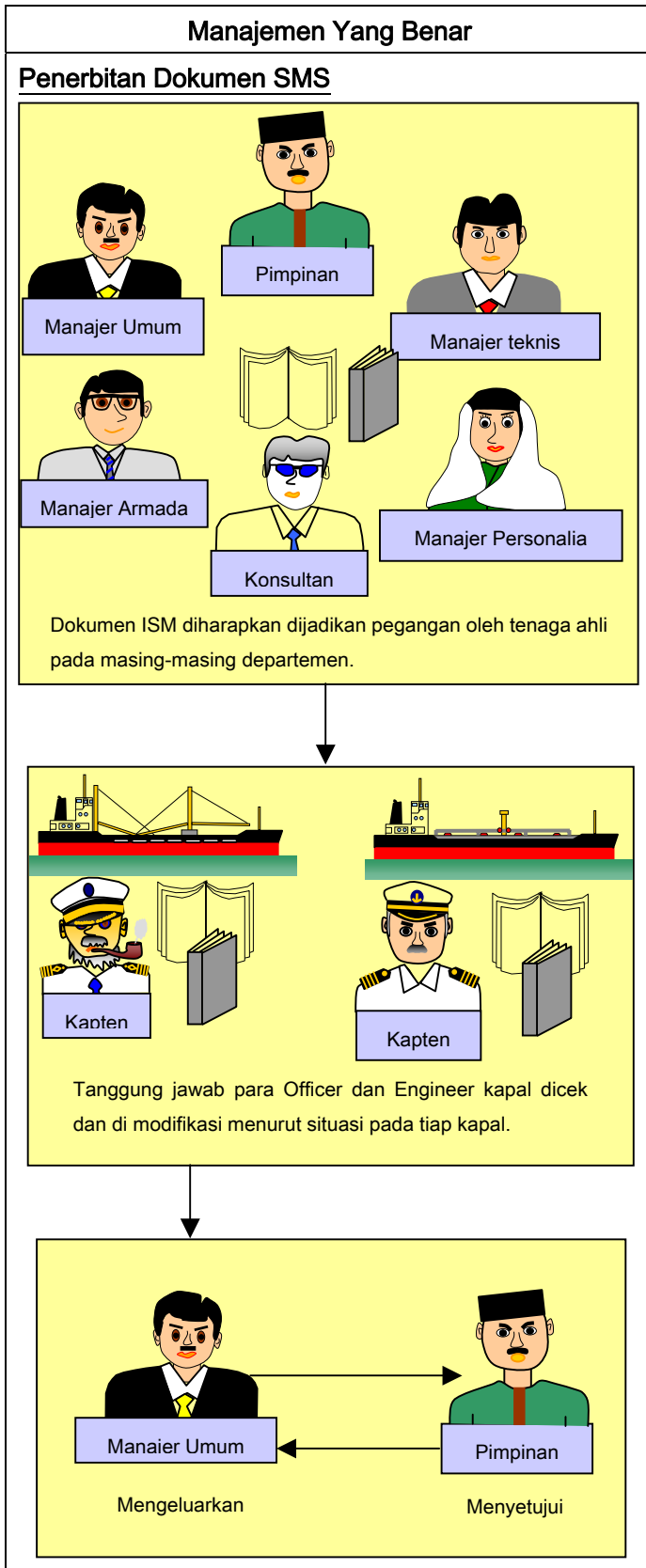
~~Jangan membantah demi perbaikan perusahaan.~~
~~(Dia telah melakukan kolusi di perusahaan ini).~~



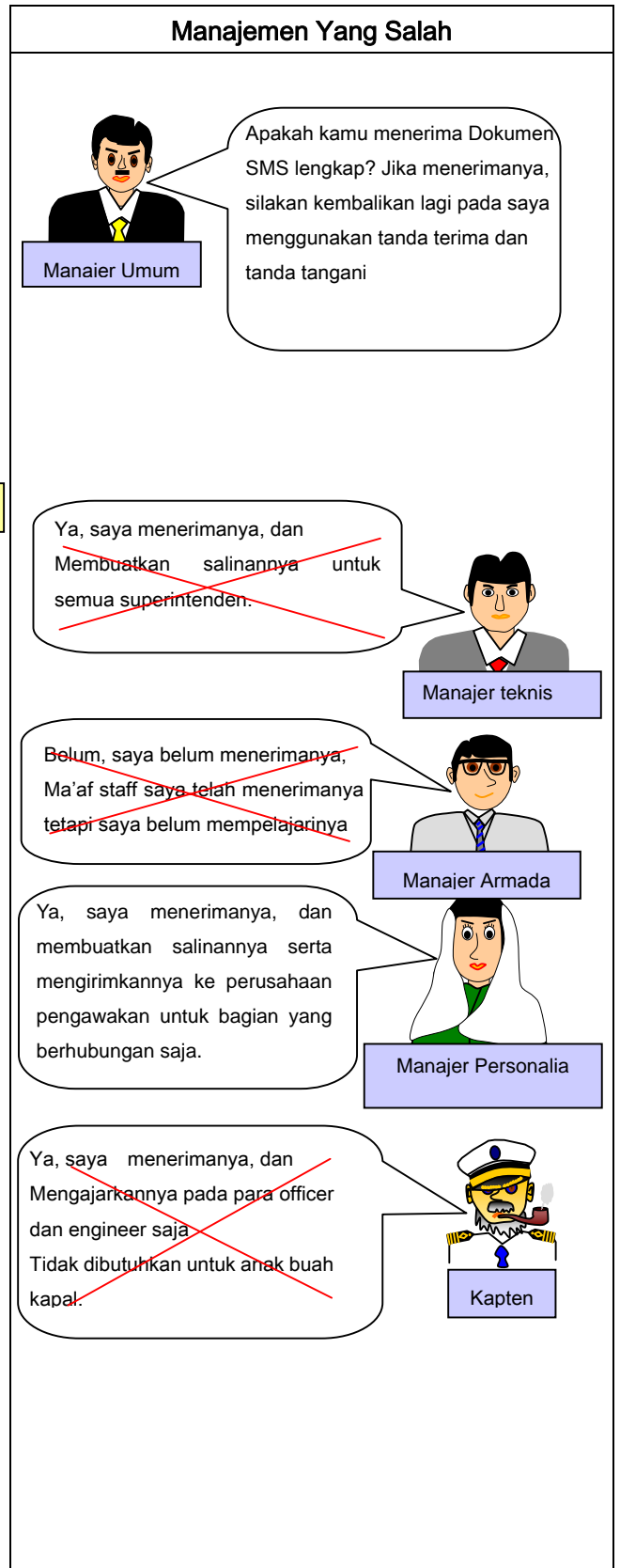
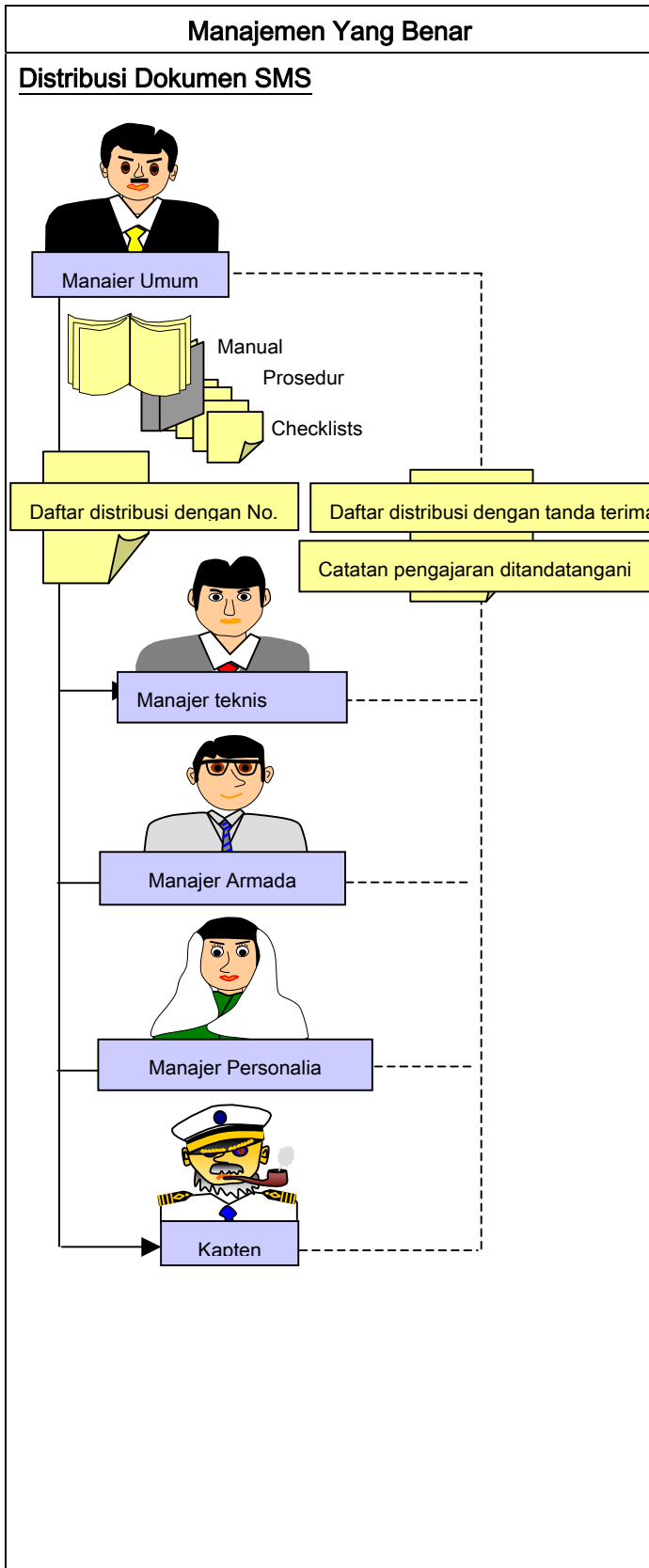
Manajer Personalia

~~Ma'af, saya tidak dapat mengklaim perusahaan pengawakan, karena perusahaan itu ada hubungannya dengan pimpinan.~~

Chapter 02	APA ITU ISM CODE	
Bab 03	Documenters manajemen keselamatan dan pengendalian perubahan	



Chapter 02	APA ITU ISM CODE	
Bab 03	Documenters manajemen keselamatan dan pengendalian perubahan	



Chapter 02	APA ITU ISM CODE	
Bab 03	Documenters manajemen keselamatan dan pengendalian perubahan	

Manajemen Yang Benar

Belajar ISM Code

Kapten: Apakah kamu tahu apa itu ISM Code?

Ya, pak, Kami memahami sepenuhnya! ISM Code itu baik untuk kami.

C/E, 3/E, Chief Cook, Sailor

Manajemen Yang Salah

~~Ma'af, Ini bukan urusan saya, Ini urusanmu!~~

~~Ma'af, Ini bukan urusan saya, Dapatkan SMS memasak makan malam yang lezat?~~

~~Saya baru saja bergabung diatas kapal. Saya tidak mengetahui SMS sama sekali, PSC survey, D.P, apa itu?~~

3/E, Chief Cook, Pelaut

Tujuan dari ISM code adalah untuk memastikan keselamatan di laut, mencegah kecelakaan jiwa atau kerugian akibat kecelakaan & menghindari kerusakan pada lingkungan dan property.

Kebutuhan akan Code ini berlaku bagi semua kapal dan personilnya.

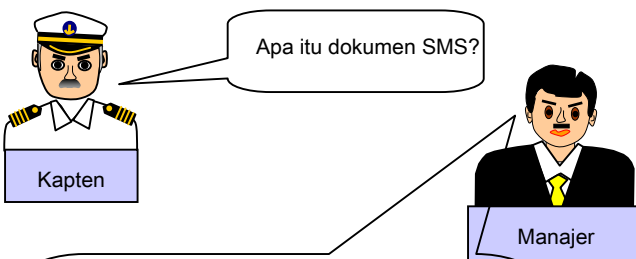
Demi semuanya yang kamu miliki, kamu harus terbiasa dengan SMS.

Perusahaan perlu menetapkan prosedur dan menyediakan pedoman pengoperasian dan latihan, sedemikian rupa sehingga personil kapal dapat memperoleh informasi yang relevan mengenai SMS dalam suatu bahasa yang biasa dipakai atau bahasa yang dimengerti oleh setiap awak kapal.

Chapter 02	APA ITU ISM CODE	
Bab 03	Documenters manajemen keselamatan dan pengendalian perubahan	

Manajemen Yang Benar

Apa itu dokumen SMS?



Kapten

Manajer

1. Semua Dokumen ISM
2. Catatan Pemeriksaan Klas
3. Sertifikat pemeriksaan menurut Undang-undang.
4. Perjanjian carter
5. Asuransi Lambung kapal & Mesin.
6. Asuransi P&I
7. Daftar Awak kapal
8. Laporan medis untuk semua Awak kapal
9. Gambar penyelesaian kapal dan instruksi peralatannya
10. Catatan Galangan kapal

Manajemen Yang Salah



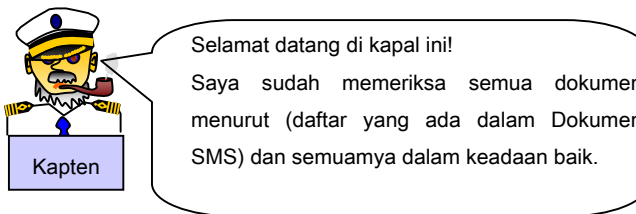
Manajer Teknis

Manajer Armada

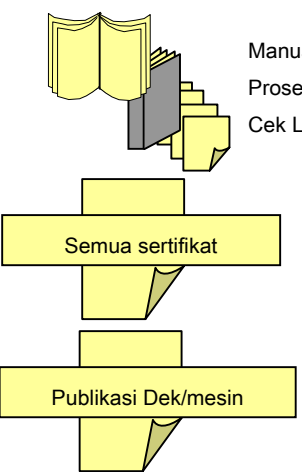
~~Apakah kita mempunyai salah satunya? Saya tidak tahu~~

Kamu dapat menemukan semua dokumen sistim dalam (catatan daftar dokumen manajemen keselamatan)

Serah terima jabatan Kapten



Kapten



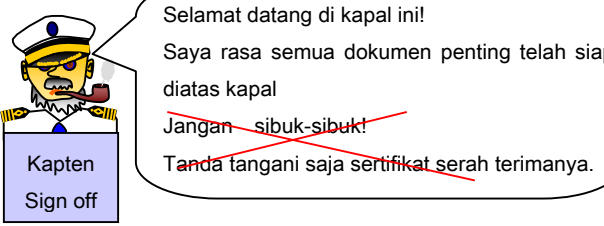
Manual ISMI
Prosedur
Cek Lis

Semua sertifikat

Publikasi Dek/mesin

Terima kasih

Kapten



Kapten Sign off

Kapten baru

Ma'af pak, tapi kita harus memeriksa semua dokumen satu persatu menurut (daftar pemeriksaan dari dokumen SMS) dan (daftar pemeriksaan buku Officer/kapal) Hal itu sangat baik untuk kamu dan saya

Kamu dapat dengan mudah dan tepat memeriksa dokumen menggunakan (ceklist Dokumen SMS) dan (ceklist buku-buku Officer/Kapal)

Chapter 02	APA ITU ISM CODE	
Bab 03	Documenters manajemen keselamatan dan pengendalian perubahan	

Manajemen Yang Benar

Dokument Retensi

Kapiten

Manual, Cek lis dan prosedur harus disimpan di tempat yang sesuai/benar

ISM

Manajemen Yang Salah

~~Mengoreksi table/peta adalah tugas saya. Saya akan menyimpan semua cek lis dan catatan koreksi di ruangan saya~~

2/O

~~Cek list yang saya buat akan saya simpan dalam satu file yang sama. Saya akan menyimpannya dalam kotak~~

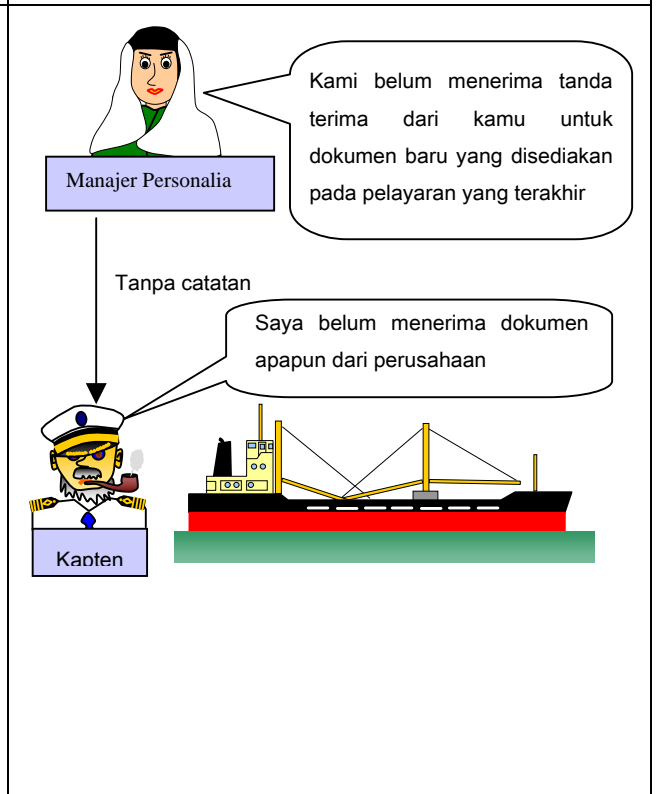
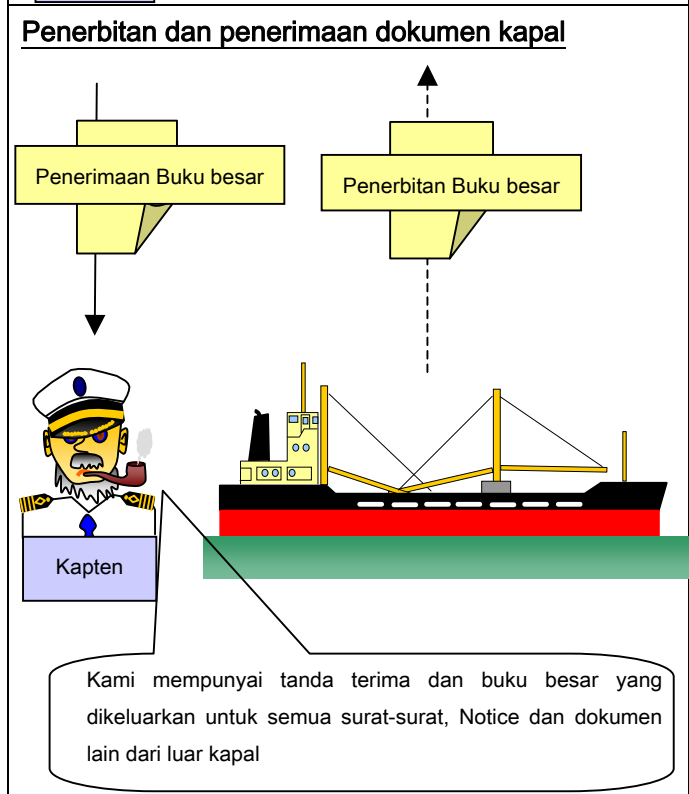
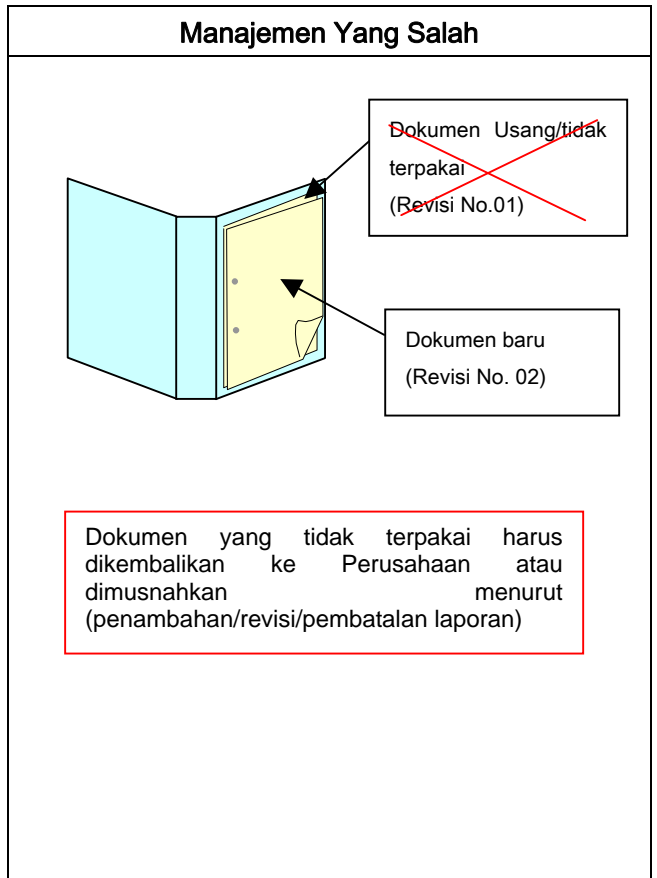
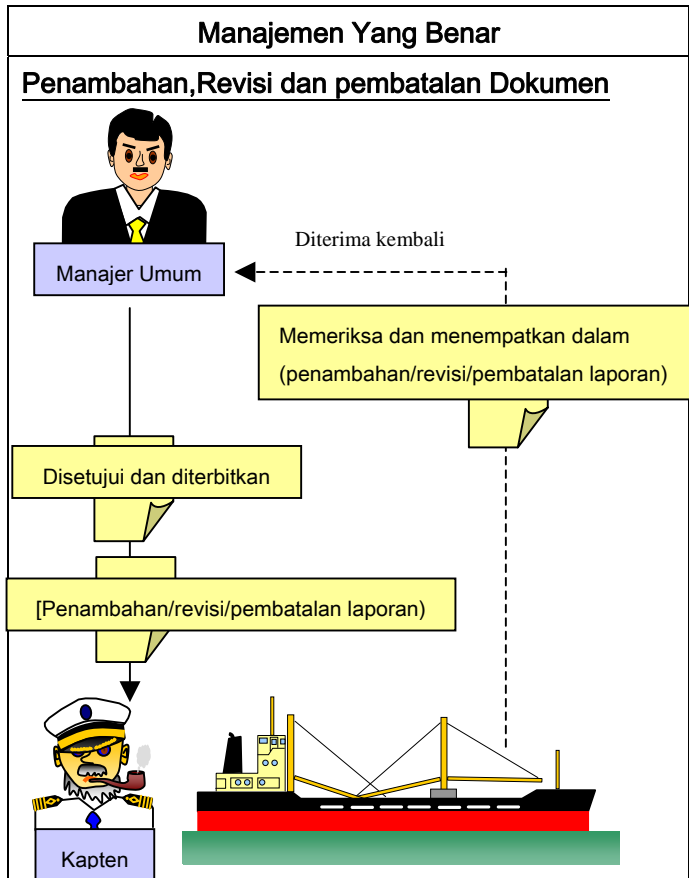
3/E

~~Prosedur dipegang dalam kabin masing-masing Officer.~~

~~Manual disimpan didalam ruangan kapten~~

Dokumen Manajemen harus disimpan dengan tepat menurut (prosedur pengendalian dokumen kapal)

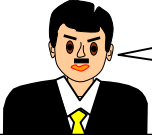
Chapter 02	APA ITU ISM CODE	
Bab 03	Documenters manajemen keselamatan dan pengendalian perubahan	



Chapter 02	APA ITU ISM CODE	
Bab 03	Documenters manajemen keselamatan dan pengendalian perubahan	

Manajemen Yang Benar


Pengendalian sertifikat



Manaier Umum

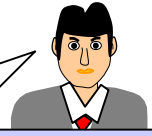
Apakah kamu memeriksa semua sertifikat yang jatuh tempo?

Tentu, Saya telah melaporkannya setelah melakukan survey, berikut dengan (laporan survey yang jatuh tempo) dan mengirimkannya ke manajer teknis



Kapten

Ya, kami menerima itu. Tanggal jatuh tempo sertifikat dari semua kapal telah ditulis pada papan tulis



Manajer Teknis

	SE	LL	SC	SR	IOPP
M/V "A"	21/12/05	2/12/05	2/12/05	21/12/05	21/12/04
M/T "B"	2/12/04	2/12/04	2/12/04	2/12/04	10/12/05
P/S "C"	11/2/05	11/2/05	11/2/05	11/5/05	11/2/05

Manajemen Yang salah



Pimpinan

Kami mengklaim perusahaan asuransi untuk klaim muatan yang ditanggungkan tetapi perusahaan asuransi telah menolaknya karena tanggal jatuh tempo dari semua sertifikat telah lewat, Apa yang terjadi?



~~Ma'af, itu bukan wewenang saya. Tanyakan saja pada manajer teknis untuk masalah ini.~~



Manajer Umum

~~Ma'af, Saya telah memerintahkan superintendent untuk memeriksanya.~~



Manajer Teknis

Chapter 02	APA ITU ISM CODE	
Bab 04	Personil Kapal	

Manajemen Yang Benar

Pekerja



Perusahaan baru saja mau mengatur dan baru saja mengoperasikan kapal yang mengangkut kayu.
Pakai anak buah kapal yang cakap sesuai standart prosedur ketenaga kerjaan kami.

Manajer Umum

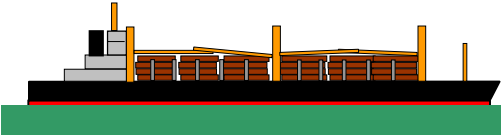
Ok, Saya akan memulai segera dan mengirimkan (Daftar pemeriksaan tenaga kerja) kami kepada agen pengawakan agar dapat diperhatikan olehnya.

Mengapa Kapten ini tidak terpilih?

Padahal catatan pengalamannya menunjukan dia mempunyai pengalaman sebagai Kapten pada kapal log carrier dan dia mempunyai catatan yang baik.



Manajer Personalia



Sungguh disayangkan pengalamannya hanya pada kapal yang mengangkut kayu biasa seperti mengangkut kayu chip. Ia tidak punya pengalaman pada angkutan kayu balok dan saya menghawatirkan musim dingin dan musim topan di wilayah Jepang.
Oleh karena itu kami harus menolak dia dan mencari seseorang yang mempunyai pengalaman yang benar-benar sesuai.

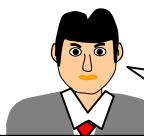


Manajer Armada

Rangkaian Perintah




Manajemen Yang Salah



3/O adalah saudara dari teman dekat saya. Teman saya adalah orang yang dapat dipercaya, oleh karena itu silahkan pekerjakan orang ini.

Manajer teknis

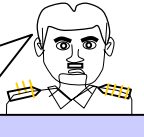
Ya, saya akan lakukan itu.
Tidak penting untuk memeriksa sejarah pribadinya, kalau dia adalah teman kamu.




Manajer personalia

Semua pegawai harus diperlakukan sesuai dengan prosedur perusahaan.

Kapten, kita pernah sama-sama satu sekolah bukan?
Saya telah bekerja untuk perusahaan XXX , yang lebih besar dari perusahaan ini.
Kegiatan perusahaan ini tidak sebagus dengan perusahaan saya yang terakhir.



C/E(Shadow Capt.)



Kapten

C/E tidak boleh mempengaruhi keputusan yang ditangani Kapten sekalipun kapten adalah teman sekelas yang lebih muda. Lagi pula tidak bijak untuk membandingkan satu sistim operasi kapal suatu perusahaan dengan perusahaan lain, ukuran, tipe kapal, kegiatan perdagangan mungkin sangat berbeda.
Perusahaan perlu menerapkan kebijakan operasi yang paling pantas untuk perusahaannya sendiri.
Ingat! Kapten mempunyai perintah mutlak dan mempunyai kewenangan lebih di atas kapal.

Chapter 02	APA ITU ISM CODE	
Bab 04	Personil Kapal	

Manajemen Yang benar

Data penilaian (anak buah kapal)

Anak buah kapal M/V "XXX" mengatakan bahwa agen pengawakan telah menunda pembayaran gaji kepada keluarganya.

Penilaian Agen Pengawakan

(Agen pengawakan yang melakukan catatan penilaian), tahun lalu memberi suatu tinjauan ulang yang baik terhadap perusahaan dan kami tidak mempunyai masalah sejak mereka ada. Kemungkinan ada kesalahan, saya rasa. Saya akan menelitinya lagi.

Manajemen Yang Salah

Saya mengamati Tingkat bunga bank, jika bunga bank sangat tinggi didalam negeri dari agen yang menangani. Tampaknya mereka menahan pembayaran kepada anak buah kapalnya untuk mendapatkan bunga dari uang yang disimpannya di bank.

~~Kami membayar gaji pada agen tepat waktu oleh karena itu keterlambatannya adalah tanggung jawab mereka. Jika kami ikut campur tangan dalam masalah ini kemungkinan akan menyebabkan masalah pada perusahaan kami sendiri~~

Cek Medis dan Sertifikat

Anak buah kapal tetap M/V "XXX" mempunyai banyak masalah kesehatan. Ini berarti P & I kita akan membayar biaya mahal. Disana terdapat pula biaya kesehatan yang tinggi sebelum awak kapal bergabung diatas kapal. Tolong diselidiki semua penyebab ini dan berilah saran untuk perbaikan.

Kami sudah menyelidiki dan menemukan seorang dokter yang ditunjuk di negara mereka yang telah melakukan pekerjaannya dengan tidak memuaskan. Dia telah mengeluarkan sertifikat tanpa dilakukan tes terlebih dahulu. Saya menginstruksikan agen pengawakan untuk melakukan pertemuan dengan staff rumah sakit itu untuk membuat perjanjian tes kesehatan.

Ada lagi ?

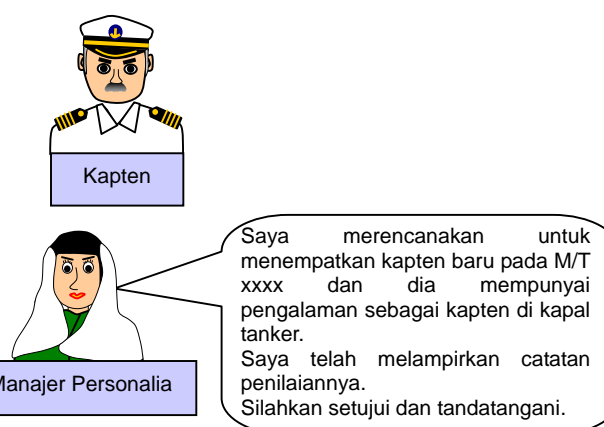
Kapten, Tolonglah saya, saya harus pergi ke Dokter gigi. Saya sakit gigi sejak saya bergabung 10 hari yang lalu dikapal ini.

C/O
Saya tidak bisa melakukan pelayaran hari ini sebab saya sudah merasa capek sejak bergabung dikapal ini.

Pastikan bahwa semua Crewmember kapal secara medis dalam keadaan sehat dan mempunyai surat keterangan sehat sebelum bergabung diatas kapal.

Chapter 02	APA ITU ISM CODE	
Bab 04	Personil Kapal	


Manajemen Yang Benar



Kapten


Manajer Personalia

Saya merencanakan untuk menempatkan kapten baru pada M/T xxxx dan dia mempunyai pengalaman sebagai kapten di kapal tanker. Saya telah melampirkan catatan penilaiannya. Silahkan setuju dan tandatangani.



Manajer Teknis

Manajemen Yang Salah



Manajer Personalia

Kapten dan Chief officer pada M/T xxxx ingin turun/ sign-off di pelabuhan berikutnya dan saya menyetujuinya. Apakah kamu menerima rencana ini?

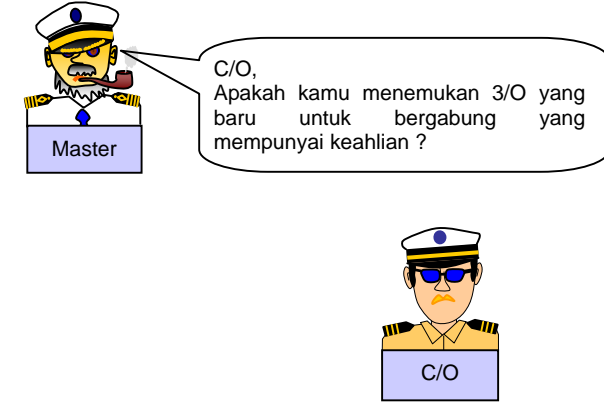
Manajer Armada

~~Ya, nggak masalah~~

Tech. Manager


Kenapa, M/T xxx akan melakukan dok setelah pelayaran nanti. C/O harus tetap ada sampai dok selesai, untuk mengawasi pekerjaan dok.

Assessment Record (Shipboard Personnel)




Master

C/O, Apakah kamu menemukan 3/O yang baru untuk bergabung yang mempunyai keahlian ?



C/O



Master

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Manajemen Yang Benar

Operasi Kapal secara aman

Tinjauan ulang manajemen harus dilakukan sedikitnya sekali setahun..

Pimpinan

Saya menghendaki semua kapal yang diatur oleh Perusahaan dapat dioperasikan secara aman, tanpa korban jiwa atau kecelakaan yang menyebabkan luka-luka dan mencegah polusi terhadap lingkungan. Selalu mengikuti prosedur yang ditetapkan dan melakukan cek lis untuk memastikan keamanan bagi pengoperasian kapal, penanganan muatan dll.

Manajemen Yang Salah

~~Pak, pemimpin! Saya mempunyai pengalaman lebih dari 35 tahun sebagai kapten. Saya dapat mengatur operasi kapal secara aman tanpa adanya beberapa prosedur dan saran yang baik kepada anak buah kapal saya.~~

Kapten

Wewenang kapten

Kapten

Jarak penglihatan sudah mulai tidak jelas, untuk melindungi kapal pada pelayaran sesuai skala yang ditetapkan perusahaan dalam jarak penglihatan terbatas, akhirnya saya memutuskan untuk menunda keberangkatan sebab jaga malam akan dilakukan oleh Officer yang baru bergabung.

Saya tidak mengetahui mengapa semua Officer yang baru bergabung tidak mempunyai pengalaman pada kapal tanker padahal kapal ini adalah kapal tanker.

Saya harus melaporkannya kepada perusahaan dengan (permintaan tindakan korektif) untuk menyeleksi anak buah kapal.

Officer yang baru bergabung tanpa pengalaman tanker

~~Kapten, Walaupun perusahaan mempunyai aturan yang tegas menurut SMS dan pimpinan telah menetapkan kebijakan perusahaan, kamu harus tetap berlayar meskipun cuaca berkabut untuk menghindari segala klaim dari pengirim.~~

Manajer

~~Ya, saya akan melakukannya dan berusaha untuk menggunakan satu kapal penarik sesuai instruksi kamu untuk memperkecil biaya pelabuhan.~~

Kapten

Manajer bertanggung jawab untuk menugaskan awak kapal dan personel kapal yang bertugas sesuai aturan pengecekan yang dilaksanakan menurut item-item berikut, tetapi tidak terbatas pada hal itu:

- Personil awak kapal yang berijazah tepat dan berkualitas;
- Mempunyai pengalaman berlayar yang cukup pada kelas kapal yang mereka miliki;
- Sudah lulus pemeriksaan kesehatan yang terbaru;
- Lancar/pandai berbahasa Inggris sehingga pantas mendapat jabatan (berlayar keluar negeri).

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Manajemen Yang Benar

Persiapan untuk Keberangkatan

Mempersiapkan keberangkatan dengan menggunakan (cek lis pre-departure)



- linstruksi perjalanan
- Rencana lintasan pelayaran
- kapal pandu/kapal penarik
- Cek lis anjungan
- cek lis dek
- Cek lis mesin

Kami telah melakukan pemeriksaan menggunakan cek lis dan kami menemukan semuanya dalam keadaan mantap.


C/O


1/E


2/O


2/E


3/O


3/E

Manajemen Yang Salah

~~Semua sudah ditangani, Ok, bersiap-siap~~

~~Kapten~~

~~Siap untuk S/B pak, Tidak perlu (Cek lis) sebab tidak ada pemeriksaan mesin di pelabuhan ini dan semuanya dalam keadaan baik.~~

~~C/E~~

~~Siap untuk S/B pak, Tidak perlu (cek lis), sebab pada perjalanan berikutnya juga sama dengan pelayaran yang lalu.~~

~~C/O~~

~~Siap untuk S/B pak, Tidak perlu (cek lis), seperti koreksi peta dan rencana lintasan pelayaran, sebab perjalanan yang berikutnya adalah sama dengan pelayaran yang lalu.~~

~~2/O~~

Semua sudah ditangani,
 Siapkan segala sesuatunya (Cek lis pre-departure) sebelum S/B.

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Manajemen Yang Benar

Menyelesaikan S/B dan berlayar penuh pada lintasan

Kapten: Saya akan memerintahkan berlayar penuh pada lintasan setelah melewati mercu suar dan setelah itu saya akan masuk keruangan saya. Kamu harus mempersiapkan perjalanan dengan (rencana lintasan pelayaran)

3/O: Ya, pak.

Manajemen Yang Salah

~~**Kapten:** Saya sekarang akan masuk keruangan saya lakukan putaran cepat pelayaran pada lintasan (FAOP) pada saat mercu suar menyoreti dan ikuti latihan 186~~

3/O: Ya, 186 pak

Kapten,
Ini adalah tanggung jawabmu untuk berada dianjurkan setelah sampai FAOP (full away on passage) dan kamu hanya dapat meninggalkan anjungan setelah kamu merasa aman dengan semua kondisi dan memberitahu officer tentang kejadian yang telah dikontrol penuh pada situasi itu.

Navigasi khusus

(Berkabut, Selat sempit, perairan yang padat)

3/O Baru bergabung: Keadaan sangat berkabut pada suatu wilayah yang padat. Saya sangat cemas, sebab :

1. Kapten sedang tidur;
2. Saya tidak dapat menggunakan pluit pada malam hari;
3. Saya tidak bisa mengurangi kecepatan tanpa memberi pesan ke E/R sebelum penggantian bahan bakar.
4. Bagaimanapun : Prosedur untuk berlayar melalui perairan padat adalah sangat jelas terperinci dalam SMS manual, tetapi saya harus memberitahu Kapten untuk datang ke anjungan

Berpenalaman A/B: Itu betul! Saya akan memanggil kapten

~~**3/O Baru bergabung:** Apa yang harus saya lakukan? Saya merasa cemas, tapi mari kita tunggu saja apa yang akan terjadi.~~


~~**Berpenalaman A/B:** Apa yang kamu cemaskan 3/O? Di kapal saya yang dulu, 3/O menjaga kecepatan penuh dibawah kondisi ini. Saya mempunyai banyak pengalaman. Tidak usah khawatir tentang hal ini dan percayalah pada saya!~~

Mestinya A/B tidak berkata begitu pada 3/O. Perusahaan telah menegaskan prosedur pada saat berkabut untuk jarak penglihatan yang terbatas dalam "operasi khusus kapal" didalam manual.

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Manajemen Yang Benar


Navigasi Khusus (Laut berbahaya)



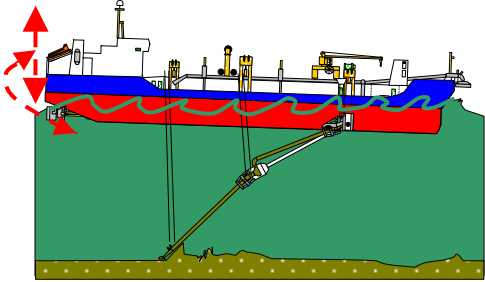
Kapten

Corong penghisap mesin keruk kami sedang mengalami kerusakan yang sangat buruk dikarenakan angin dan laut yang berbahaya. Sistem pipa penghisapan mungkin rusak disebabkan karena kami melakukan pengerukan terlalu banyak. Saya harus menghentikan operasi pengerukan.

Ok, Saya mengerti. Itu akan menyebabkan penundaan proyek ini, hal itu merupakan masalah besar. Tapi saya menerima keputusan Kapten.



Manajer Proyek



Manajemen Yang Salah

Tidak, tidak, Kapal keruk sebelumnya selalu beroperasi dalam cuaca seperti ini. Kondisi laut tidak menunjukkan keadaan laut yang berbahaya yang digambarkan oleh perusahaan. Saya akan mengambil alih tanggung jawab, jadi mari kita teruskan untuk melakukan pengerukan




Manajer Proyek



Jika gambaran mengenai laut yang berbahaya tidak jelas, buatlah suatu permintaan untuk merubah itu, dengan menggunakan (Keharusan Tindakan korektif). Kapten mempunyai perintah mutlak menyangkut kapal dan mempunyai kewenangan penuh pada operasi ini.

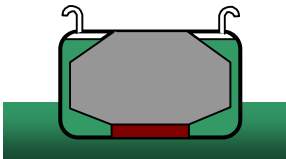
Navigasi khusus (daerah dingin)




C/O

Ada banyak es disekitar sini. Navigator harus menunjukan hal yang berikut ini untuk mematuhi prosedur perusahaan;

1. Mengurangi tingkat air dalam semua tangki ballast untuk mencegah kerusakan lambung kapal;
2. Memelihara draft untuk mencegah kerusakan pada baling-baling.
3. Dinginkan sirkulasi sistim SW dari tangki ke tangki.
4. Jalankan semua mesin di dek secara terus menerus dengan kecepatan rendah untuk mencegah pembekuan.





C/E



C/O

Hallo, engine control room. Pompakan air ballast ke semua tangki sampai penuh dan alirkan air dari pipa udara

Jangan, jangan lakukan itu. Jika diisi dengan SW, mungkin tangki akan rusak dikarenakan tekanan pada pompa sebab air vent pipe beku. Kamu harus menyampaikannya segera pada C/O.



C/E



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Manajemen Yang Benar

Persiapan tiba di pelabuhan

Bersiap-siap untuk tiba (Cek lis pre-arrival)

Kapten

- Informasi pelabuhan
- Tingkat pengamanan
- Pandu/kapalpenarik
- Cek lis anjungan
- Cek lis Dek
- Cek lis mesin

C/E

SSO

1/E

2/O

2/E

3/O

3/E

Kami telah melakukan pemeriksaan dengan menggunakan semua Cek lis dan menemukan keadaan sesuai yang diharapkan

Manajemen Yang Salah

Semua sudah ditangani!
Apakah semuanya dalam keadaan siap untuk tiba? Ok! Siap utk tiba.

Kapten

Saya adalah petugas Pengamanan kapal (SSO-Ship Security Officer)
Saya tidak mengetahui tingkat keamanan pelabuhan ini.
Saya akan bertanya kepada agen setelah datang di pelabuhan.
Saya tidak perlu mempersiapkan sebuah (Cek lis pre-arrival) sebab kami membawa muatan yang sama dengan pelayaran yang lalu.

SSO

M/E telah dioperasikan dengan baik pada lintasan itu. Jadi test astern kapal tidak diperlukan.

C/E

Kami akan melakukan pemeriksaan crank case pada M/E sesuai dengan (rencana pemeliharaan) pada saat running hours, tapi M/E telah berjalan dalam keadaan baik. Oleh karena itu kami tidak akan melakukan pemeriksaan di pelabuhan ini.

1/E

Kami akan mengisi bahan bakar di pelabuhan ini. Tapi sounding FOT No.1 tidak dibutuhkan untuk pengukuran sebab telah dikosongkan di perabuhan keberangkatan.

3/E

Semua telah ditangani,
Siapkan semua yang dibutuhkan (Cek lis pre-arrival) sebelum S/B.

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Manajemen Yang Benar

Penjagaan pelabuhan (Pendelegasian tanggung jawab Kapten)



Kapten: Muallim 1, tidak ada muatan yang dikerjakan untuk dua hari ini. Saya akan pergi ke darat untuk main golf dan akan kembali besok. Oleh karena itu saya mendelegasikan tanggung jawab saya padamu.

Muallim 1: Ya pak, Silahkan pergi bersama teman-teman anda dan selamat bersenang-senang.

Manajemen Yang Salah



C/O: Muallim 3, Saya juga akan pergi ke darat dengan muallim 2. Jagalah dengan baik pada posisi pelabuhan kita sebab cuaca buruk akan datang malam ini. Jika kami tidak mendapat perahu malam ini kami tetap tinggal di darat.

2/O: Ya pak,

3/O: Kamu tidak boleh pergi ke darat pada waktu bersamaan pada saat kapten pergi juga ke darat. Muallim 1! adalah tanggung jawabmu untuk tetap berada diatas kapal.

Manajemen Yang Benar

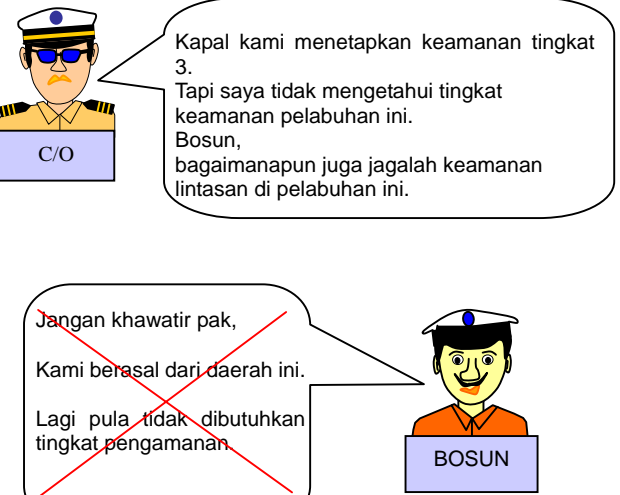
Penjagaan Pelabuhan (Tingkat pengamanan)



C/O: Kapal kita menetapkan pengamanan tingkat 3. Tetapi pelabuhan ini telah menetapkan tingkat 2. Mempertimbangkan kondisi yang ada kami setuju untuk merubah pengamanan tingkat 3 ke tingkat 2. Bosun, siapkan tindakan yang diperlukan.

Bosun: Ya pak, Kami akan mempersiapkan orangnya menurut rencan pengamanan Kapal.

Manajemen Yang Salah



C/O: Kapal kami menetapkan keamanan tingkat 3. Tapi saya tidak mengetahui tingkat keamanan pelabuhan ini. Bosun, bagaimanapun juga jagalah keamanan lintasan di pelabuhan ini.

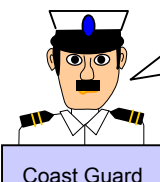
Bosun: Jangan khawatir pak, Kami berasal dari daerah ini. Lagi pula tidak dibutuhkan tingkat pengamanan.

C/O: Kamu harus bertanya pada petugas pelabuhan atau petugas keamanan perusahaan/Company Security Officer (CSO) untuk mengetahui tingkat pengamanan dan mengambil tindakan penting secara tepat.

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Manajemen Yang Benar


Penjagaan Pelabuhan (SSP Disclosed)



Petugas keamanan kapal (Ship Security Officer- SSO),
Bolehkah saya melihat rencana pengamanan kapalmu (SSP)?


Saya juga ya !

Ma'af, saya tidak dapat lakukan itu,
Ini adalah sangat rahasia.
Saya tidak dapat menunjukkannya pada
siapapun, kecuali surveyor ISPS dari badan
Sertifikasi.




C/O


Penanganan muatan (muatan berbahaya)



Mualim 1.
Ini adalah pertama kalinya memuat barang
semacam ini dan saya mengetahui tidak ada
karakteristiknya.
Apakah kamu mengetahui hal lainnya tentang
ini?




Ya pak,
Kami mempunyai muatan yang berbahaya diatas
kapal.
Saya telah meyiapkan peringatan tentang muatan
ini di ruang makan dan memberi tahu pada semua
awak kapal.
Saya juga instruksikan ke awak kapal tentang
bagaimana cara menyimpan/menanganinya.



C/O


Manajemen Yang Salah

~~Ya, silahkan.~~

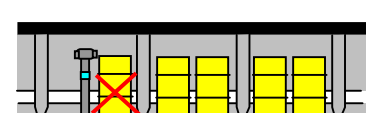


C/O


Itu adalah dokumen yang sangat rahasia, oleh karena itu Polisi dan petugas penjaga pantai pun tidak dapat melihat nya.



Kapten



~~Saya instruksikan kepada awak kapal.
Drum ini harus disimpan di udara terbuka diatas buritan dekat FWT pipa saluran udara.~~



C/O

Jangan
Itu sangat berbahaya sebab cairan/obat itu akan bercampur kedalam air bersih, jika drum itu rusak oleh ombak laut yang berbahaya.

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Manajemen Yang Benar

Penanganan muatan (Cargo gear)




Mualim 1,
Apakah kamu memeriksa kondisi semua cargo gear, terutama sekali kerusakan pada wires,, kebocoran minyak, dll?



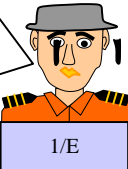
Ya pak,
Kami telah menemukan kebocoran minyak hidrolik dari winch motor No.2 1/E memperbaikinya sebelum kita tiba di pelabuhan.



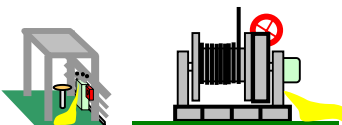
Manajemen Yang Salah



1/E.
Tolong stop kebocoran minyak pada winch motor No.2 sebelum kita tiba dipelabuhan.



~~Jangan membuang-waktu Chief Officer.
Kebocoran yang terjadi sangat kecil di dek. Kamu dapat menggunakan serbuk gergaji untuk menutupnya.
Kami sangat sibuk dengan pemeriksaan piston di kamar mesin.~~



1/E
Kami mengetahui itu bukan kebocoran besar tetapi itu sangat penting bagi perlindungan terhadap lingkungan. Kamu harus memperbaikinya segera!

Penanganan muatan (Cargo Operation)

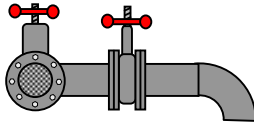


Mualim 1,
Kerahkan semua crew member yang menangani pekerjaan muatan yang mengetahui kondisi dan lokasi dari valves dan mengetahui bagaimana cara mengoperasikannya?




Ya pak,
Kami sudah mengecek dan memeriksa semua valves menurut cek lis dan kami menemukannya dapat dioperasikan dengan baik dan dalam kondisi yang diharapkan.





~~Jangan cemas pak, semuanya beres!
Cek lis tidak perlu sebab muatan ini sama dengan muatan pelayaran yang lalu Kami sangat sibuk sekarang, maka saya akan mengisi Cek lis nanti.~~



Jangan!
Prosedur penanganan muatan berbeda saat dipelabuhan.
Bahkan untuk muatan yang sama.
Kamu harus mempersiapkan (Cek lis penanganan

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Manajemen Yang Benar

Persiapan untuk keberangkatan

Persiapan keberangkatan dengan Menggunakan (Pre-departure)

Kaptan

- Informasi pelabuhan
- Tingkat pengamanan
- Kapal pandu
- Cek lis aniungan
- Cek lis Deck
- Cek lis mesin

C/E

SSO

1/E

2/O

2/E

3/O

3/E

Kami telah memeriksa dengan cek lis semuanya dan menemukan kondisi dalam keadaan yang diharapkan

Manajemen Yang Salah

Semua sudah ditangani! Apakah segalanya dalam keadaan siap untuk berangkat? Ok! S/B untuk keberangkatan.

~~Saya adalah petugas pengamanan kapal (Ship Security Officer - SSO). Saya tidak mengetahui tingkat pengamanan lintasan pelayaran berikutnya. Saya harus menanyakannya pada perusahaan. Saya tidak perlu mempersiapkan (Cek lis pre-departure). Sepertinya kami membawa muatan yang sama dengan pelayaran yang lalu.~~

~~M/E tidak perlu overhaul. Jadi sebuah tes percobaan pada mesin tidak diperlukan.~~

~~Kami menerima bunker di pelabuhan ini tapi sonding untuk FOT no 1 tidak dilakukan pengukuran. Sebab didalam tangki tidak ada persediaan minyak.~~

Semua sudah ditangani
Siapkan semua yang dibutuhkan (Cek lis Pre-departure) sebelum S/B.

SSO

C/E

3/E

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Manajemen Yang Benar

Kapal Penumpang



Mualim 1,
Berapa banyak penumpang diatas kapal?

Kapten

Ya, 156 orang dewasa dan 26 orang anak-anak, total 182 orang penumpang diatas kapal pak. Kita mempunyai cukup baju pelampung untuk kedua jenis penumpang itu.




C/O




Manajemen Yang Salah

~~Saya mempunyai 5 orang saudara yang tidak mempunyai tiket dan tidak terdaftar dalam daftar nama penumpang.~~

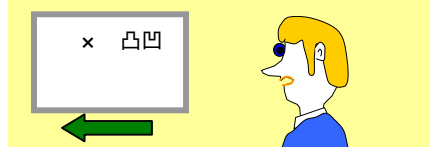
~~Kita mempunyai 12 penumpang orang asing. Kapal tidak mempunyai tanda keselamatan dalam bahasa Inggris dan tidak dijelaskan. Mereka harus mempelajari bahasa Indonesia.~~



C/E



2/O



Masuk ke dalam Ruang Tertutup

Cek lis enclosed

Kami sangat menjaga keamanan sebab kami mengikuti prosedur perusahaan untuk masuk kedalam ruangan tertutup. Kami mempersiapkan :

1. Detector gas,
2. Meter CO2 ,
3. Breathing apparatus dan
4. Yang dianjurkan (ceklis keselamatan untuk masuk kedalam ruangan tertutup) di anjungan dengan menggunakan staff navigasi untuk mengamati kegiatan operasi.



Tidak, tidak.. Kita tidak bisa masuk ke tangki tanpa melengkapi dengan (Cek lis keselamatan untuk memasuki ruangan tertutup).

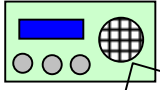
~~Kenapa,, Apa yang kamu lakukan! Kamu sangat cepat pada saat makan tetapi sangat lambat dalam bekerja. Kami akan lakukan hanya dalam beberapa menit, jadi jangan cemas mengenai Cek lis atau ijin nya.~~




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Manajemen Yang Benar


Peperangan di zona Navigasi




Berita BBC
Sebuah Proyektil Tamahawk telah diluncurkan pada XX/XX di Negara ??? oleh UN di dalam laut XXXX .



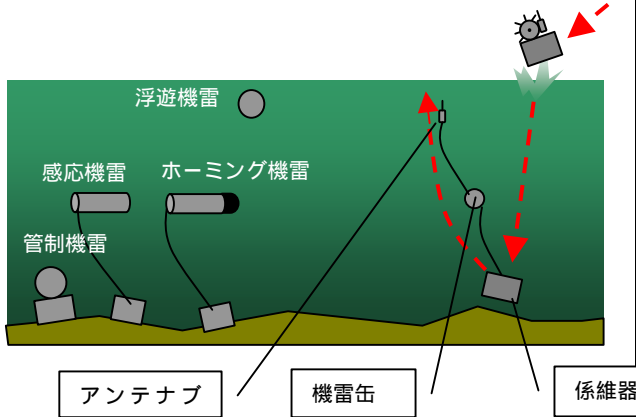
C/O: Sebuah proyektil Tamahawk telah diluncurkan!
Apa itu ?
Saya harus memberitahu Kapten.



2/O: Sebuah proyektil Harpoon ssm telah diluncurkan !
Apakah itu ,Chief Engineer?

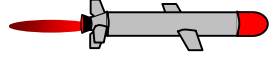



3/O: Dimana UN meluncurkan roket penjelajah?
Hilang dari layar radar kita!
Mungkin sedang bergerak pada kecepatan 56 kt.



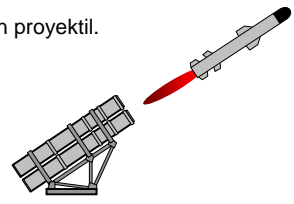
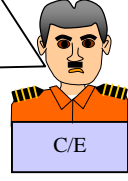
Penjelasan

C/O
Telusuri pada kecepatan 0.5-0.7 mach dan pada jarak 300-700 miles, control lewat komputer, input data ke darat untuk pemberitahuan ke pantai bahwa ada serangan.

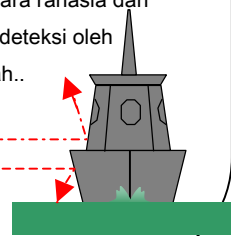

Kapten

2/O
telusuri pada kecepatan 0.9 mach dan jarak 130 km dengan radar aktif untuk memberitahu dari kapal ke kapal bahwa ada penyerangan.
Jika proyektil ditembakkan sebuah kapal pada jarak pendek, kita harus bersiap-siap dengan kebakaran yang sangat besar disebabkan oleh sisa dari bahan proyektil.

C/E

No, 3/O
Pada umumnya, suatu kecepatan maksimum kapal perang adalah sekitar 32 Kt. Kamu harus merawat radar dengan baik untuk mengawasi kapal perang. Sebab disain dan konstruksi lambung kapal perang telah dirancang secara rahasia dan kapal tidak dapat dideteksi oleh radar dengan mudah..

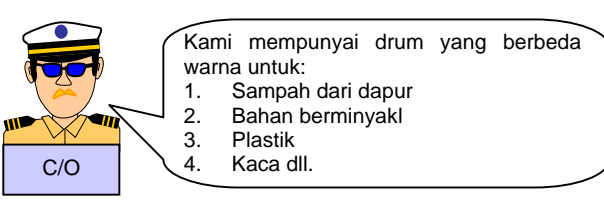



Manaj.Umum

Chapter 02	APA ITU ISM CODE	
Bab 06	Perlindungan Terhadap Lingkungan	

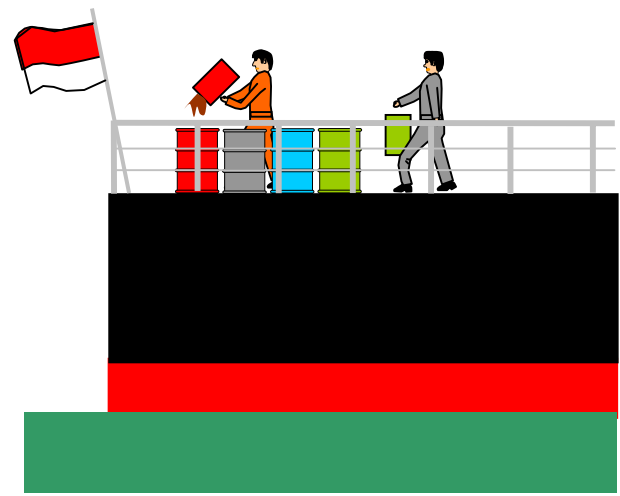
Manajemen Yang Benar

Manajemen Sampah

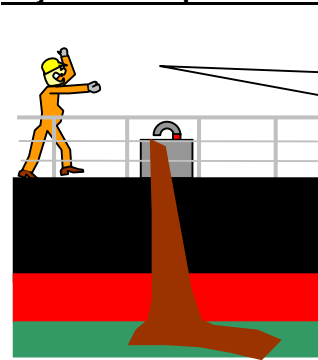


Kami mempunyai drum yang berbeda warna untuk:


1. Sampah dari dapur
2. Bahan berminyakl
3. Plastik
4. Kaca dll.




Kejadian Tumpahan Minyak



Officer yang jaga, dalam keadaan darurat menemukan minyak keluar dari FOT No.2




Tim pencegahan Polusi harus dimobilisasi.

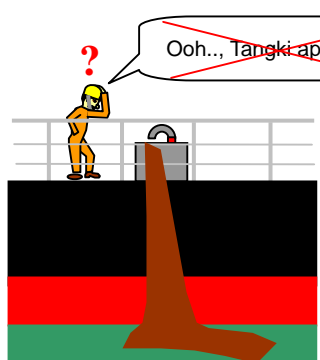


Saya harus memerintahkan engineer yang bertugas untuk menghentikan Pompa F.O.

Manajemen Yang Salah



~~Saya tidak peduli, ini laut bebas. Kita dapat membuang segala sesuatu ke dalam laut.~~



~~Ooh.., Tangki apa ini?~~

Pada saat suatu tumpahan minyak terjadi seseorang petugas menemukan tumpahan itu dan harus memberitahu officer secepatnya, sehingga dapat diketahui nomor tangkinya.

Chapter 02	APA ITU ISM CODE	
Bab 06	Perlindungan Terhadap Lingkungan	

Manajemen Yang Benar

Tangki Pembuangan Minyak



Saya tidak peduli dengan banyaknya air laut dalam tangki pembuangan pada F.O.T Sebab itu bukan urusan saya.



Saya mengerti semua itu adalah tugas dan tanggung jawab saya ::

1. Buka drain plugs yang ke laut
2. Tutup drain plugs pada bunkring



Saya harus menjaga catatan dari semua F.O.T pada setiap pelabuhan.

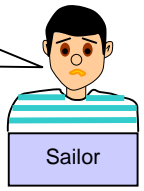


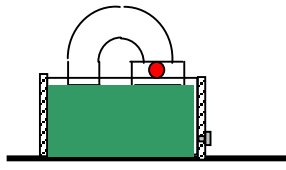


Kami harus mengikuti aturan dari MARPOL dan SOPEP.


Manajemen Yang Salah

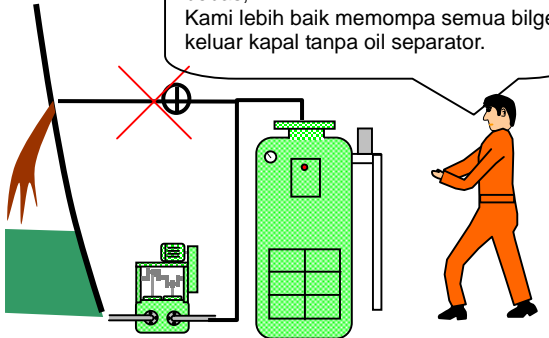
~~Saya tidak peduli dengan banyaknya air laut dalam tangki pembuangan pada F.O.T Sebab itu bukan urusan saya~~





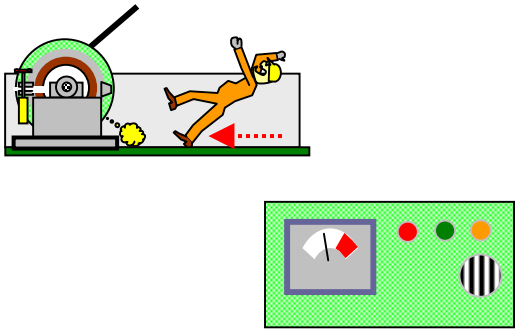
Tak ada orang yang melihat di laut bebas, Kami lebih baik memompa semua bilge keluar kapal tanpa oil separator.





Chapter 02	APA ITU ISM CODE	
Bab 06	Perlindungan Terhadap Lingkungan	

Manajemen Yang Benar

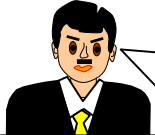


Manajemen Yang Salah

Chapter 02	APA ITU ISM CODE	
Bab 07	Pemeliharaan peralatan kapal	

Manajemen Yang Benar

Alasan-alasan pemeliharaan



Manajer Umum

Kapten dan Chief Engineer!
Kamu harus mengikuti semua aturan dan peraturan Internasional, peraturan dari Biro Klasifikasi, persyaratan bendera Negara serta rawatlah kapal dalam keadaan dan kondisi yang baik.

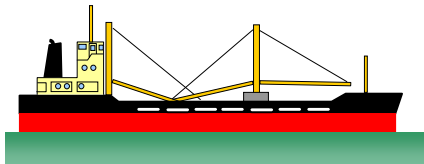
Tentu saja pak,
Kami memahaminya, semua itu adalah tanggung jawab kami untuk melindungi property, menjaga keselamatan jiwa dan memelihara lingkungan laut berdasarkan ISM Code.



Kapten



C/E



Rencana Pemeliharaan/perawatan



Manajer Teknik

Perusahaan telah menyediakan suatu skedul rencana pemeliharaan untuk menangani segala perawatan rutin. Bagaimanapun juga, itu merupakan rencana standart perusahaan, dan oleh karena itu kamu harus memodifikasi rinciannya untuk menyelaraskan kebutuhan kapal yang spesifik. Jika perlu, kamu harus mengeluarkan sebuah (permintaan tindakan korektif) kepada D.P. untuk mematuhi prosedur standart yang tertulis.

Run Hrs	50	100	500	1000
L.O. Filter clean				
F.O. Nozzle tip				
Exh. Valve				

Bagus pak.
Saya akan mengaturnya.
Tolong informasikan kepada kami semua hasil analisa dan sediakan untuk kami dokumen penting untuk beberapa amandemen yang mungkin diperlukan nantinya.



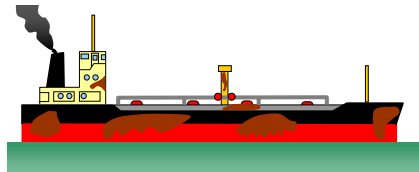
C/E

Manajemen Yang Salah

~~Oh tidak,
Mustahil untuk menerapkan sistim ISM pada Tanker saya sebab kami kekurangan personil yang dibutuhkan untuk menjaga kondisi dengan baik.~~

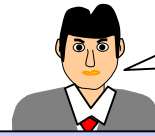


Kapten



C/E

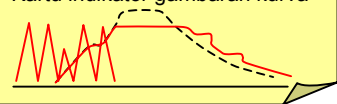
Jika sistim tidak sesuai dengan kebutuhan kapal yang spesifik, sebuah (Permintaan Tindakan Korektif) untuk revisi atau amandemen harus disampaikan kepada orang yang ditunjuk (Designed Person-DP).



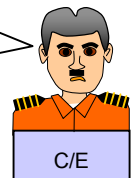
Manajer Teknik

Kenapa kamu tidak melakukan overhaul pada piston mesin induk? Saya dengar silinder No.3 dalam keadaan rusak.

Kartu indikator gambaran kurva



Oh, Itu masih tidak perlu. Menurut skedul perencanaan pemeliharaan kita mempunyai beberapa waktu untuk berlayar dulu sebelum pemeriksaan berkala tiba.




C/E

Mesin induk, Mesin Generator, alat kemudi, dll. Digambarkan sebagai alat permesinan penting (disebut mesin kritis). Pemeliharaan diperlukan menurut prosedur tertulis dan (Ceklis Operasional) untuk beberapa item dari mesin kapal.

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Manajemen Yang Benar

Pemeliharaan untuk mesin penting




Manajer Umum

Daftar peralatan dan sistim teknis berdasarkan ISM, yang secara tiba-tiba mengalami kerusakan dalam operasinya yang mungkin berakibat pada situasi yang berbahaya, seperti :


1. Mesin Induk
2. Mesin Generator
3. Alat Kemudi

Peralatan dan sistim itu, mencakup beberapa sistim stand-by (pompa L.O. S/B dll), diharapkan dapat dilakukan pemeriksaan dengan (Ceklis operasi) setiap 3 bulan.

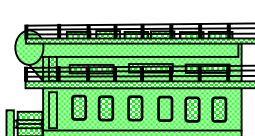
Ya, itu tanggung jawab kami untuk mematuhi Code ISM yang dibutuhkan untuk memelihara kehidupan dan lingkungan.

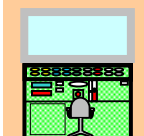


Kapten




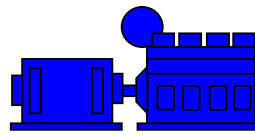
C/E







Ceklis Operasi

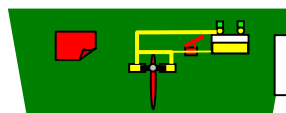





Ceklis Operasi








Ceklis Operasi




Manajemen Yang Salah

Oh, tidak.
Kita tidak memerlukan Ceklis. Saya memiliki anak buah kapal yang handal.
Kami tidak pernah mengalami kecelakaan sebelumnya..



Kapten



C/E

Hal yang paling utama adalah memelihara kapal dalam keadaan dan kondisi yang baik.
Prosedur yang sesuai/benar harus diikuti.

Chapter 02	APA ITU ISM CODE	
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Manajemen Yang Benar

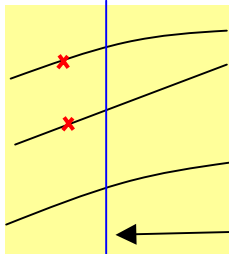
Melaporkan kerusakan



Apakah kamu menerima laporan dan data saya?
 Ketika menghidupkan mesin induk seluruh perputarannya sangat lemah.
 Tolong sediakan liner dan Plunyer/barrel F.O. injection Pump yang baru.

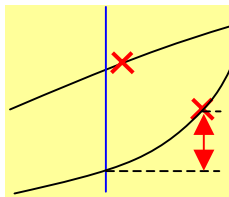
Data yang dilaporkan sebagai berikut :

1. Tekanan maksimum dan tekanan compressor sangat rendah dan Exhaust gas temperaturnya terlalu tinggi



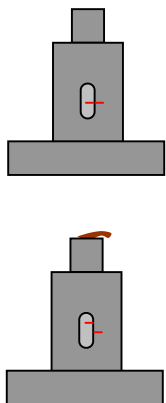
Press.maksimum
Comp. pressure
Scav. Air Pressure
Engine power

2. Scav. Air Pressure terlalu tinggi



Turbo Charger Rev (rpm)
Scav. Air Pressure

3. Terdapat perbedaan waktu yang besar antara pump mark dan F.O. injection secara jelas.



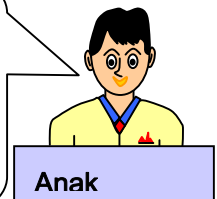
Pump Timing (B.T.D.C)	Cyl. No.		
	1	2	3
Body Mark	12.0	11.5	12.5
Actual(Oil flow)	7.0	9.5	10.5

Manajeme Yang Salah



~~Agus,
 Bisakah kamu menyediakan masing-masing 6 buah liners dan plunger/barrel mesin induk.
 Sebab, ada barang besar yang jatuh.~~

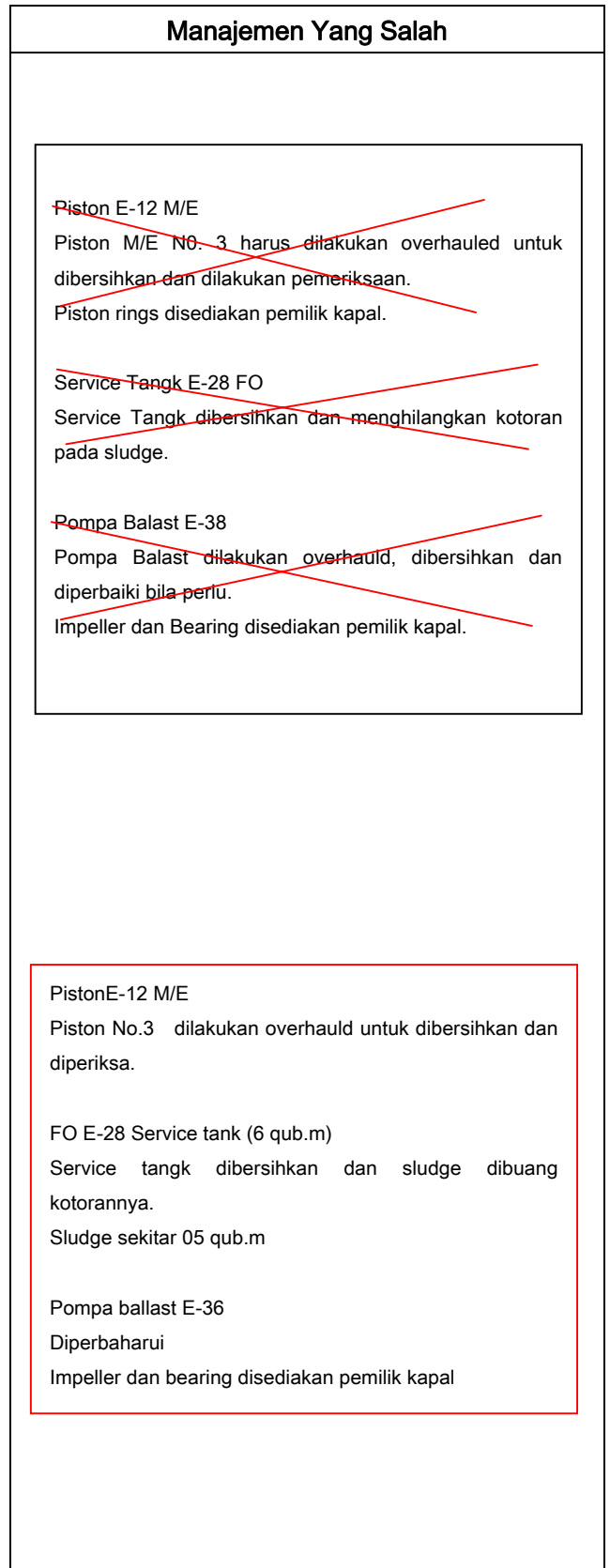
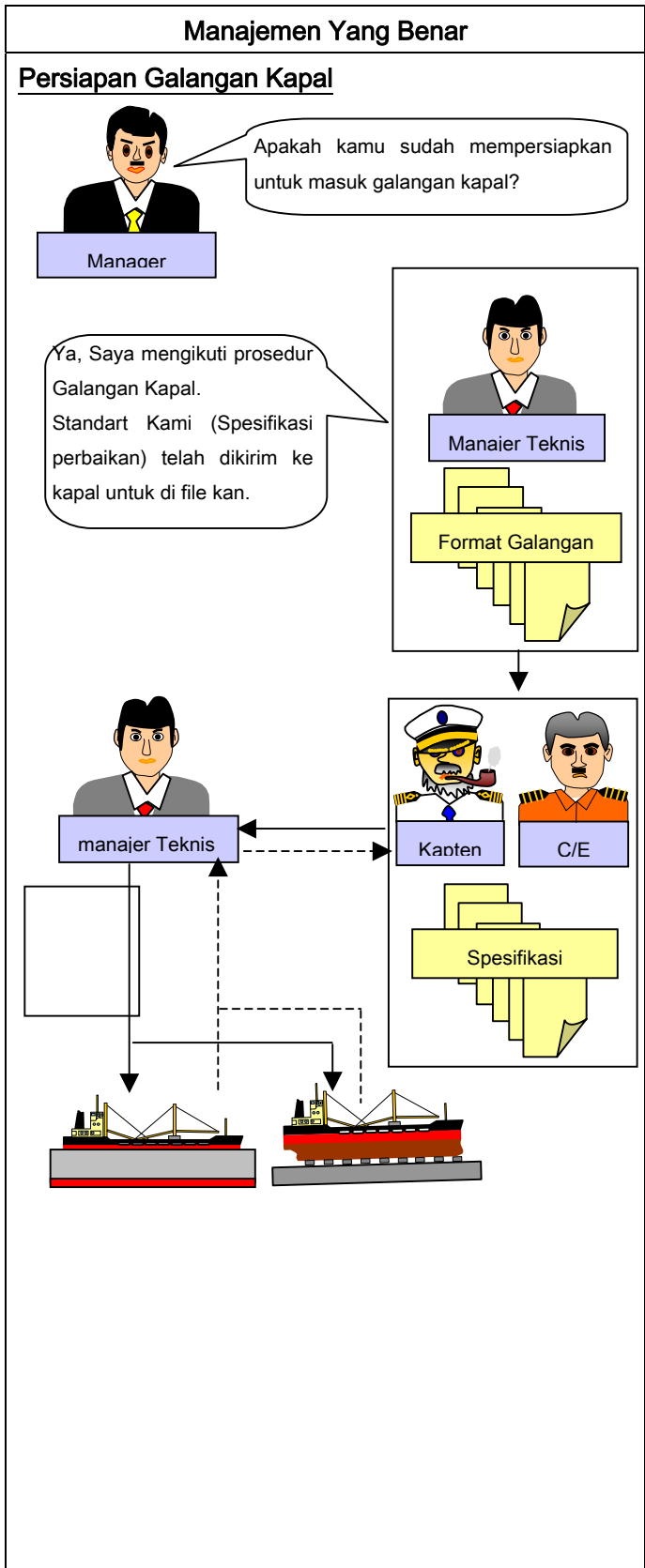
~~Chief,
 Baru saja saya memikirkan kondisi itu.
 Hal itu biayanya sangat mahal sekitar 80.000 US dolar dan kita tidak dapat menyediakan biaya itu saat ini.~~



Chief,
 Kamu harus melaporkan bukti ini (seperti catatan indikator dan data running dll).

Agus,
 kamu harus mengambil tindakan lebih lanjut dan menunjukkannya pada seorang yang ahli seperti Superintendent.)

Chapter 02	APA ITU ISM CODE	
Bab 07	Pemeliharaan peralatan kapal	



Chapter 02	APA ITU ISM CODE	
Bab 07	Pemeliharaan peralatan kapal	

Manajemen Yang Benar

Pengendalian Minyak Pelumas

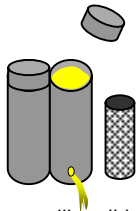


Manager Teknis,
Pada saat saya berada di atas kapal, saya menemukan L.O. itu keadaannya kotor sekali. Kita tidak mempunyai beberapa prosedur analisa L.O dan iinstruksinya. Oleh karena itu tolong keluarkan prosedur pengendalian L.O.

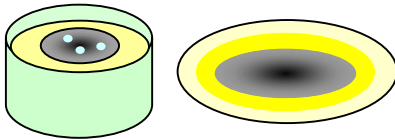
Mengerti pak,
Kita mempunyai prosedur yang dikeluarkan sebagai berikut :



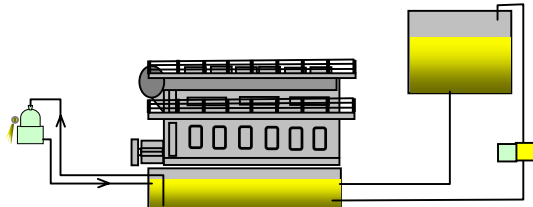
Manajer Teknis



1. Saringan L.O. harus dibersihkan tiap hari.
2. Kondisi L.O harus dicek dengan cara meneteskan minyak diatas kaca lampu senter atau saringan kertas dan mengkonfirmasi adanya kontaminasi air dan karbon.

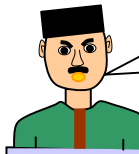


3. LO purifiers harus digunakan secara terus menerus atau ditransfer ke set TK pada saat dipelabuhan.



4. Kuantitas LO harus dijaga 2 lt/ps untuk menghindari deterioration
5. Sump tank oil level harus diukur dan di data dalam log-book pada saat di pelabuhan untuk menghindari pencemaran air laut dalam kaitannya dengan kebocoran Cooler L.O. Dalam hal ini, terjadi peningkatan saat di pelabuhan Berkurang pada saat berjalan.
6. Sump tank harus dibersihkan setiap 6 bulan.
7. Sump tank LO harus dikirim ke pabrik minyak untuk diteliti. Ketika kantor menerima hasil tentang laporan analisa, kami akan memberikan saran ke kapal.

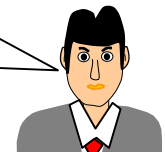
Manajemen Yang Salah



Pimpinan

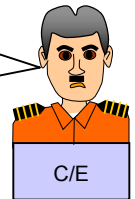
Mengapa selalu banyak gangguan kerusakan pada bearings dan pada crank shaft?

~~Kami tidak mempunyai beberapa prosedur perawatan LO tapi C/E dapat mengirimkan contoh LO pada kami untuk dianalisa.~~



Manajer Taknis

~~Tidak ada masalah, Sebab kami tidak mengalami gangguan apapun di tahun ini.~~



C/E

~~Kami tidak mempunyai banyak waktu untuk membersihkan Tangki LO yang sudah ditetapkan karena sangat sibuk.~~




1/E

Perusahaan harus mempersiapkan prosedur Rencana Pemeliharaan LO.

Chapter 02	APA ITU ISM CODE	
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Manajemen Yang Benar

Rencana Pemeliharaan




Perusahaan kami telah mengeluarkan (Rencana Pemeliharaan) untuk skedul pembersihan, pemeriksaan, dan Overhaul dalam rangka menjaga pemeliharaan kapal secara baik pada setiap kapal.


Ya,
Kami mengikuti (rencana pemeliharaan) perusahaan untuk menjaga kondisi kapal saya agar tetap baik.



Ya,
Rencana pemeliharaan yang kamu sediakan, tidak ada yang cocok untuk kapal kami.
Oleh karena itu saya merubahnya (rencana pemeliharaan) itu dan mengirimkannya ke kantor dengan (permintaan tindakan korektif)

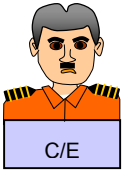


Manajemen Yang Salah



~~Kami tidak memahami tentang situasi kapalmu.
Kamu dapat membuatnya sendiri dan tidak dibutuhkan persetujuan~~

~~(Rencana Pemeliharaan) dari kamu tidak cocok untuk situasi kapal kami. Saya dapat merubahnya sendiri dan tidak membutuhkan persetujuan dari kamu.~~



Chapter 02	APA ITU ISM CODE	
Bab 10	Ketidaksesuaian dan permintaan tindakan korektif	

Manajemen Yang Benar

Apa itu Kekurangan

kekurangan adalah segala masalah yang ditemukan dalam menjalankan SMS, termasuk permasalahan dalam perangkat keras dan lunak
 Bila ada masalah yang ditemukan, semua personil perusahaan baik di darat maupun di laut perlu melaporkannya agar masalah itu dapat diperhatikan oleh DP dan meminta agar dilaksanakan koreksi atau penyelidikan oleh yang mengeluarkan (permintaan tindakan koreksi / corrective action request).

[permintaan tindakan korektif]

Pimpinan Kapten

Manajer Teknis Manajer Personalia Manajer Armada

Permintaan Tindakan korektif

Manajer Umum

Dengarlah,! Orang-orang
 Ketika kamu menemukan kekurangan yang membutuhkan koreksi, laporkan kepada saya oleh orang yang bersangkutan/yang mengeluarkan pernyataan (Permintaan Tindakan korektif)

Saya akan membahasnya bersama dengan para manajer departemen untuk mengoreksi kekurangan yang dilaporkan. Mereka akan mengklasifikasikan menurut tingkatan yang berikut ini.

1. Kritis.
2. Major/Utama
3. Minor/Tambahan
4. Observation/Pengamatan.

Permintaan tindakan korektif

Manajemen Yang Salah

Kekurangan yang diamati menunjukkan bahwa permasalahan ada dalam dokumen SMS.
 Ketika kecelakaan terjadi diatas kapal atau pada mesin-mesin yang menimbulkan kerusakan, itu tidak ada hubungannya dengan kami.
 Lagipula masalah awak kapal diharapkan ditangani di atas kapal.

Pimpinan

Semua kekurangan yang diamati dalam operasi SMS diharapkan dapat dilaporkan ke D/P
 Hal ini meliputi kekurangan pada dokumen, permesinan, peralatan, proferti, personil di darat dan diatas kapal, kontraktor luar, perangkat lunak dll, semuanya dan hal lain yang telah tercantum dalam SMS
 D/P bertanggung jawab untuk melaporkan kekurangan dan semua ketidaksesuaian itu.
 Ia akan menginstruksikan orang yang tepat untuk mengoreksi atau memonitornya.

Hallo,
 Saya harus menjelaskan suatu kekurangan melalui telephone
 Jika kamu tidak memahami apa yang aku katakan kamu harus datang ke kapal dan mencari sendiri

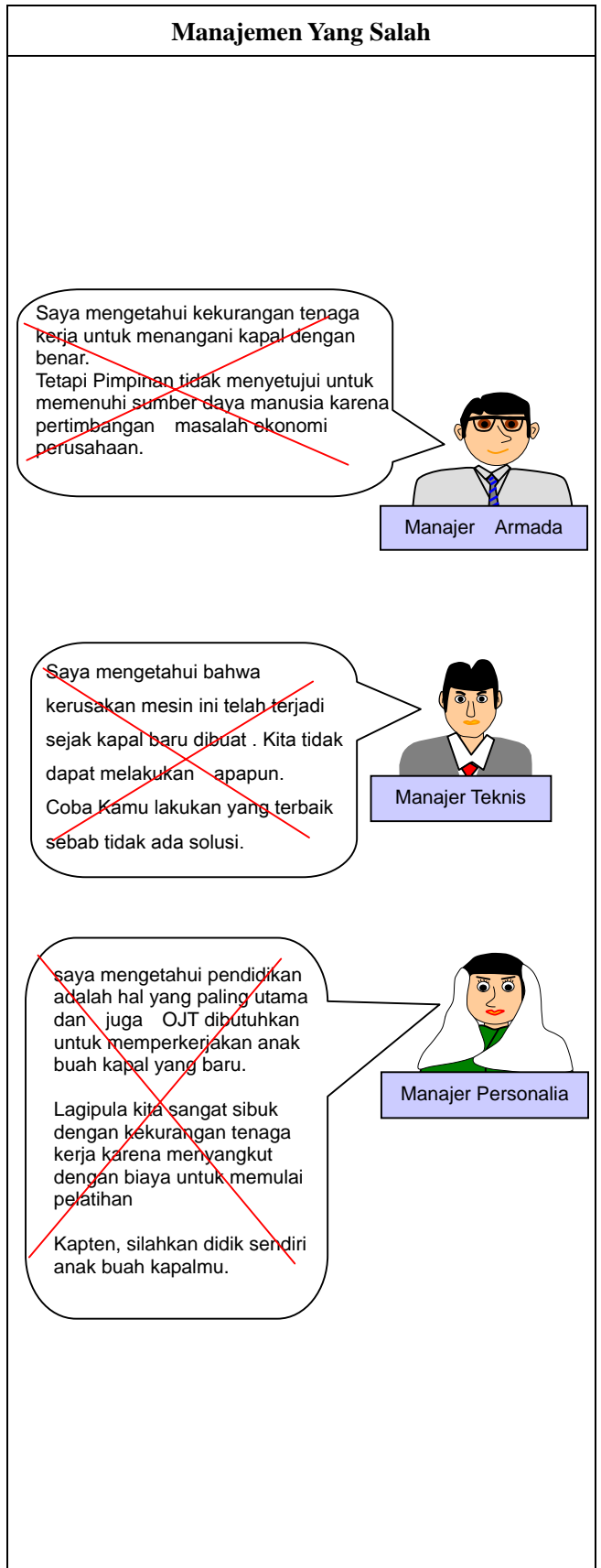
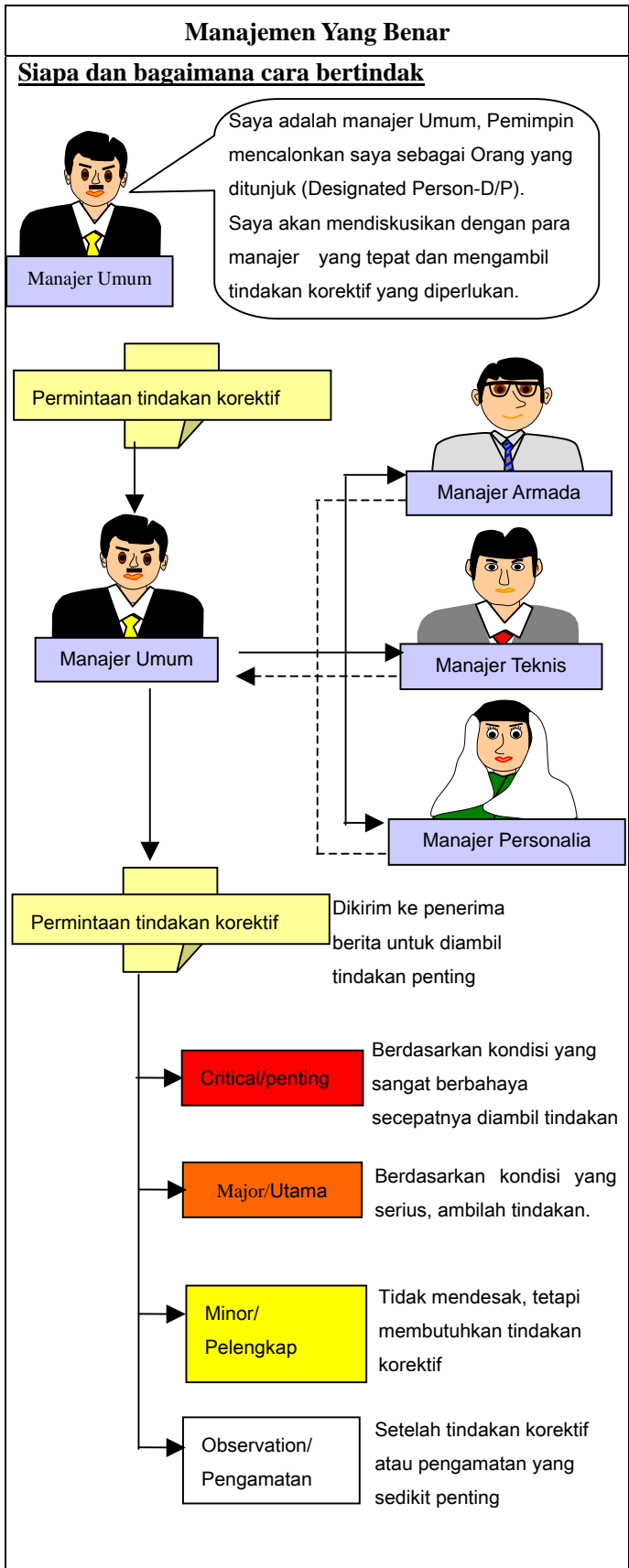
C/E

Terimakasih Chief,
 Saya memahami sepenuhnya.
 Saya akan mendiskusikan masalah ini dengan manajer teknis dan mengambil tindakan korektif.

Manajer Umum

Chief!
 Kamu harus melaporkan kekurangan dalam bentuk tulisan dan kemukakan sebuah (permintaan tindakan korektif) dengan penjelasan yang jelas.


Chapter 02	APA ITU ISM CODE	
Bab 10	Ketidaksesuaian dan permintaan tindakan korektif	



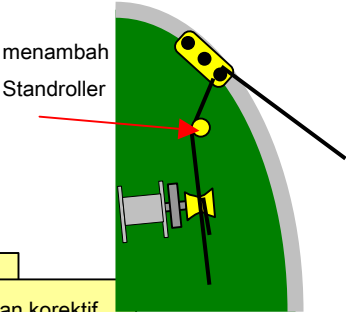
Chapter 02	APA ITU ISM CODE	
Bab 10	Ketidaksesuaian dan permintaan tindakan korektif	

Manajemen Yang Benar

Ketidaksesuaian (pada Deck fitting)

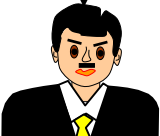



Manajer Armada,
Sebuah kecelakaan telah terjadi, sebuah tali tambat telah patah dan melukai seorang pelaut. Kerusakan itu disebabkan oleh kelebihan tegangan yang menyebabkan windless warping drum dengan fairleader menyimpang. Untuk mencegah hal ini terjadi lagi kami harus menyetel kembali fairleader atau menambah menginstal stand roller dengan windlass drum. Lalu saya membuat laporan (permintaan tindakan korektif/Corrective action request) untuk meminta perbaikan.



menambah Standroller


Permintaan tindakan korektif

Permintaan tindakan korektif

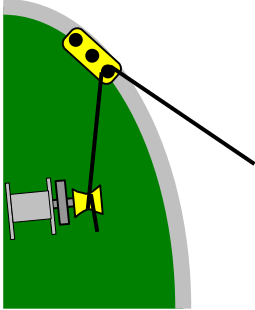
Kapten,
D/P telah memberitahu kekurangan yang kamu laporkan sebagai suatu **ketidaksesuaian yang penting** pada notice kami. Tindakan korektif akan ditangani kurang dari satu bulan

Manajemen Yang Salah

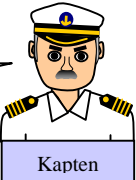


C/O,
Saya memahami kamu, tetapi shifting windlass berikut pengerjaannya akan mengeluarkan biaya 10.000 US dolar

Kamu dapat menyuruh anak buah kapal untuk meggunakan kemampuan mereka mencari cara lain untuk mengerjakan hawser pada windlass drum itu.



Manajer Teknis,
Kamu tidak dapat berkata begitu,

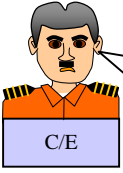


Sebuah kecelakaan serius terjadi pada seseorang, kasus ini harus digambarkan sebagai suatu ketidaksesuaian yang penting

Chapter 02	APA ITU ISM CODE	
Bab 10	Ketidaksesuaian dan permintaan tindakan korektif	

Manajemen Yang Benar

Ketidaksesuaian (gangguan M/E)

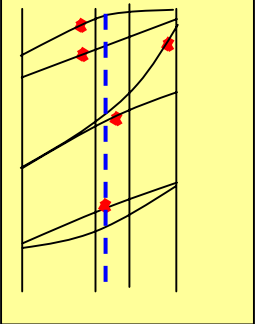


Kita tidak dapat menghidupkan M/E dengan mudah dan menemukan semua liner dalam keadaan menurun. Saya akan menyertakan semua data dengan kurva pencapaian.

Kondisi berikut dapat dibandingkan dengan catatan pada saat uji coba layak jalan/sea trial.

1. Suhu gas exhause sangat tinggi.
2. Compression pressure sangat rendah.
3. Maximum pressure sangat rendah.
4. Scav. Air pressure Sangat tinggi

Catatan :
Semua liner telah diperbaiki pada dry-dok terakhir



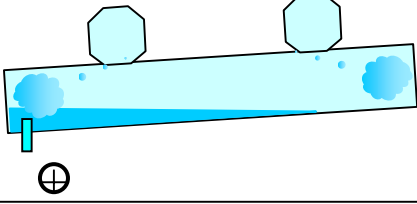
Laporan kondisi

Bukti harus diikutsertakan


Chief, Mengapa benda yang seharusnya tidak jatuh, menjadi jatuh!

Ada acid yang membuat kerusakan pada sulfur di dalam bahan bakar minyak dan mengalirkan air ke saluran air trunk.

Oleh karena itu coba kamu lihat drain cock itu salurannya telah tersumbat.




Barang khusus yang sangat besar telah jatuh pada Ujung air trunk side liners disebabkan karena air yang telah terkontaminasi oleh penetrasi yang sangat kuat.



Manajer Terknis

Manajemen Yang Salah

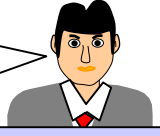


Kami tidak bisa menghidupkan M/E dengan mudah.

Kemungkinan sistim bahan bakar minyak atau masalah pada liner.

Tolong panggilkan teknisi agar datang ke kapal untuk mengeceknya.

Apakah kamu telah mengirimkan beberapa catatan?
Oh ma'af, saya menemukan laporanmu di atas meja superintendent tapi kami tidak segera mengeceknya




Manajer Teknis

1. Superintendent harus mengecek dan menandai semua laporan.
2. Kami memerlukan pendidikan superintendent.
3. Kami harus menyiapkan berita/laporan secara tehnik dan mendistribusikannya kepada semua kapal sebagai peringatan.

Chapter 02	APA ITU ISM CODE	
Bab 10	Ketidaksesuaian dan permintaan tindakan korektif	

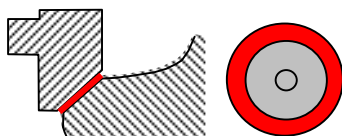
Manajemen Yang Benar

Ketidaksesuaian (Angle of Exh Valve and seat)



3/E

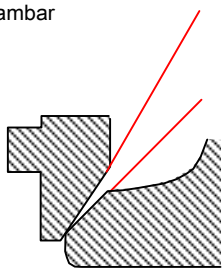
Mengapa exhaust valve selalu terbakar dan mengalami kerusakan. Kami selalu mengerjakannya dengan baik dan penuh kesabaran seperti pada saat menangani Flat. Material valve tidak bagus. Kami Juga hanya mempunyai instruksi dalam bahasa Jepang saja.



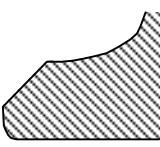
3/E !

Kamu harus memeriksa instruksi dari pabrik bahwa itu direkomendasikan untuk membedakan valve angle antara valve dan seat, sebab perluasan pemanasan pada valve akan membedakan temperatur pada saat kondisi berhenti dan pada saat dijalankan.

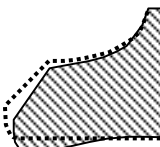
Lihat gambar




Sudut Yang direkomendasikan



Saat berhenti (dingin)




Saat dijalankan (panas)




C/E

Kami memerlukan keterampilan pendidikan untuk semua crewmember. Staff saya akan memberikan kursus praktis superintenden untuk mengajar pelatihan manajemen kapal untuk mengimplementasikan ISM.



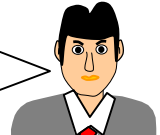
Manajer Teknis

Manajemen Yang Salah



C/E

~~Saya dapat mengoperasikan mesin dengan pengalaman yang saya miliki tanpa instruksi~~




Manajer Teknis

Perbedaan temperatur Exhaust pada masing-masing silinder tidaklah penting. Hal yang paling penting adalah tekanan tinggi pada beberapa silinder

Chapter 02	APA ITU ISM CODE	
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Manajemen Yang Benar

Ketidaksesuaian(pemakaian minyak Pelumas)



Chief,
Mengapa banyak minyak pelumas yang dikonsumsi/digunakan untuk mesin Induk?

Saya sudah melaporkannya ke kantormu disertai semua datanya dan ditemukan kondisi sebagai berikut ;

1. Comp. dan Pres.Max sangat rendah.
2. Temperatur Exh gas sangat tinggi.
3. Scav. Air press Sangat tinggi.
4. Minyak pelumas dalam sump tank sangat kotor.

1. E/R fire

Kerusakan T/C karena over- speed.

Secondary explotion

Comp. Max pres low

Exh. Gas high temp.

Gas blow & FO Mixed

Scav. Air Press. high

Fire

Atas dasar pertimbangan diatas, tolong siapkan Liner, Piston dan ring piston.
Kami akan melakukan overhaul di pelabuhan berikutnya

Gas & Canbon meluap ke crank case

L.O asid rusak

Shaft & bearing rusak

Manajemen Yang Salah

~~Saya tidak mengetahui tentang itu.
Saya kira mesin sudah terlalu tua.
Saya belum dapat mengkalkulasinya g/kw/hr.~~

C/E

Saya bertemu seseorang yang datang ke kapal kami untuk menempatkan drum pada track.
Saya tidak tahu apa yang terjadi

3/E

Chief,
Berikut ini point-point yang harus dicek dan dilaporkan ke perusahaan.

1. Temukan total running hour dan penggunaan minyak bahan bakar dalam K/T.
2. Temukan tenaga mesin induk dengan rumusan ini :

Konsumsi F.O

$$KW = \frac{K/T \times 10^3}{Run\ hrs \times 178\ a/kw/hr}$$


F.O Consump. rasio

3. Sump tank oil level harus dicatat dalam Log- Book pada saat di laut dan dipelabuhan.
Jika L.O cooler bocor,
Levelnya berkurang pada saat di laut dan inclosing pada saat di pelabuhan.
Dikarenakan perbedaan tekanan.

Chapter 02	APA ITU ISM CODE	
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Manajemen Yang Benar

Ketidaksesuaian (Kerusakan Propeller)




C/E

Kami mempunyai kejadian, Propeller blades rusak.

1. Hilangnya blade tip "A" pada 0.7 R.
2. melekuknya blade "B", "C" dan "D" 90 dig. sampai menekan sisi pada 0.8 R.

Tolong siapkan galangan kapal.

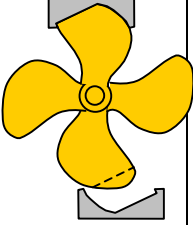
Kenapa? kita tidak memotong propeller blade "A" dengan disc cutter dan membentuk pola potongan yang terbuat dari Plat timah/tin plate.



Konsultan

Plat timah ini akan menghubungkan sebelah sisi blade "C" dengan memotongnya untuk menjaga keseimbangan.

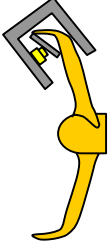
Lihat gambar A



Kecepatan kapal tidak akan menjatuhkannya. Dan kamu dapat menggunakannya sampai dok berikutnya.

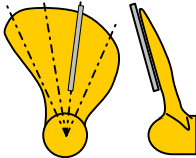
Blade yang bengkok akan diperbaiki dengan menggunakan propane gas pada divergent nozzle.

Jangan gunakan acetylene gas.



Jika alat gauge menunjukkan radiasi pada sisi tekanan dan parallel itu, maka kelurusan itu sangat bagus.


Lihat gambar.B



Manajemen Yang Salah

Kami akan mempersiapkan dry-dok dan meminta order propeller baru kepada pembuat propeller.

Itu akan membutuhkan waktu sekitar 60 hari.




Manajer Teknis

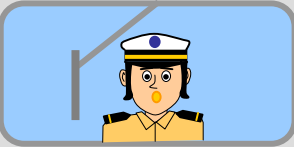
Chapter 02	APA ITU ISM CODE	
Bab 10	Ketidaksesuaian dan permintaan tindakan korektif	

Manajemen Yang Benar

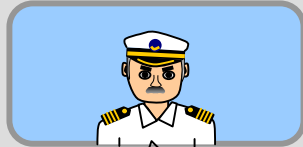
Ketidaksesuaian (Memonitor kemajuan)



Kaptain,
 Bagaimana kinerja officer navigasi yang baru selama melakukan tugas jasanya?
 Masalah ini dikemukakan dalam audit internal yang lalu.



3/O yang baru gabung

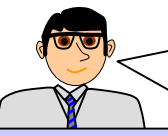


Kapten

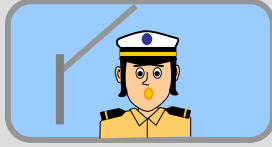
Saya telah mengecek kinerja dia melalui (Ceklis Officer Navigasi yang baru ditetapkan/Newly Engaged Navigating Officer's Checklist) dan telah ditemukan pekerjaan yang memuaskan darinya. Ini dia.

Ceklist Officer Yang baru ditetapkan


Manajemen Yang Salah



~~Kaptain,
 Bagaimana kinerja Officer yang baru ditetapkan dalam melakukan tugasnya?
 Kami tidak mempunyai sejarah pribadinya di file kantor.~~



3/O yang baru



Kapten

~~Saya melaksanakan tugas jaga dengannya tanpa Ceklis tapi tidak ada masalah.~~

Kamu harus menyampaikan laporan kamu dengan menggunakan bukti yang dihasilkan.
 Kapten!
 Dalam hal ini (Ceklis Officer Navigasi yang baru ditetapkan) adalah pernyataan dan menyatakan bahwa ia tepat.

Chapter 02	APA ITU ISM CODE	
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Manajemen Yang Benar

Ketidaksesuaian (Disain pembuatan kapal baru)



Chief, Kenapa engine revolutin lambat pada saat di laut yang berbahaya?
Apakah mungkin ada ketidak-sesuaian.

Baik, saya akan jelaskan.
Itu disebabkan kita mengurangi putaran M/E untuk membersihkan FO service line filter. Sedimen minyak bahan bakar dalam service tank bergerak keatas dalam cuaca buruk dan menyumbat filter.
Lihat gambar "A".



gambar "A"



Manajer Teknis

Chief, Saya kira salah satu penyebabnya adalah tidak bagusnya design tangki. Hampir semua Galangan kapal yang baru menerapkan design pada gambar "A".

Dalam cuaca buruk, kerusakan berikut mungkin terjadi :

1. Aliran balik antara settling dan service tank yang menyebabkannya
2. Kerusakan pada alarm yang berfungsi sebagai pengatur timer delay.
3. Drain valve salah posisinya.
4. Jalannya aliran pada overflow pipe ke double bottom tank harus ditingkatkan.
5. Posisi return pipe dari purifier ke service tank dll.

Kami telah mengeluarkan (Petunjuk standart supervisi kapal yang baru)



gambar "B"


Manajemen Yang Salah

Manajer Teknis!
Tolong modifikasi sistim tangki jika ada suatu kesalahan design.

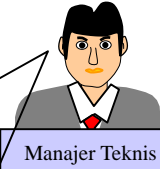
Chief,
Saya tahu solusi yang bagus, tetapi perusahaan tidak bisa menyanggupi modifikasi itu sebab pasaran kapal sangat buruk.

Kamu dapat menghindari masalah dengan melakukan tindakan pencegahan dan membersihkan Strainers lebih sering lagi.

D.P. menilai kekurangan yang dilaporkan sesuai dengan pengamatan yang dilakukan.
Kondisi tu diharapkan dapat dimonitor untuk sementara waktu ini.



C/E




Manajer Teknis

Laporkan segala kekurangan oleh orang yang meminta sebuah (permintaan tindakan korektif/corrective action request) kepada D/P untuk dilakukan koreksi.

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Manajemen Yang Benar

Ketidaksesuaian (Kerusakan pada Pompa Impeller S.W.)




C/E

Mengapa tugboat kita mendapat kerusakan pada Pump S.W.?


Setiap Impeller pada semua pump telah diganti/diperbaharui setiap 3 bulan karena kerusakan cavitation. Itu disebabkan oleh bahannya.

Chief, Saya menerima laporanmu dan (meminta tindakan koreksi/corrective action request) dan saya memahami problem yang kamu hadapi.



Manajer Teknis

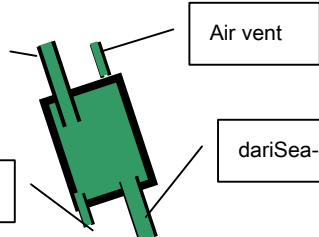
Saya telah datang ke kapal dan telah menemukan masalah berikut ini :



Konsultan

- Banyak kelonggaran pada sand dari sea-chest box, oleh karena itu tangki buffer harus diinstal baru.

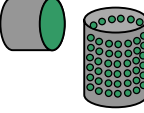
Ke pompa

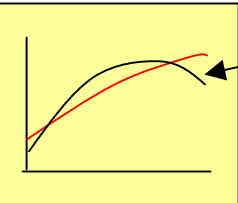


Air vent

Sand blow down


dariSea-chest
- tempat strainer terlalu kecil, tempat strainer harus lebih dari 150% pada ukuran bagian pipa.


- Ketika terlalu penuh, beban (amp) harus disesuaikan dengan delivery valve (mendekati). Jangan dekat dengan katup hisap (suction valve).



Manajemen Yang Salah

~~Ketika menghidupkan pompa sentrifugal. Saya selalu membuka penuh delivery valve dan secara berangsur-angsur membuka suction valve untuk menghindari terjadinya over-load.~~




3/E

Perusahaan perlu mempersiapkan instruksi operasional.

Chapter 02	APA ITU ISM CODE	
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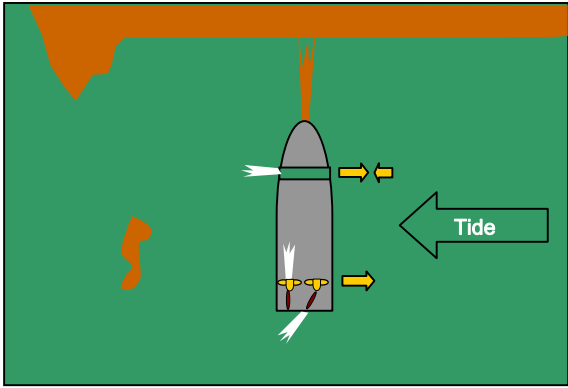
Manajemen Yang Benar

Program posisi dinamis




Kami akan menerima suatu persetujuan disign gambar yang dirancang oleh galangan kapal, yang sesuai untuk dinamika dan program sistim tracking pada gambar "A".

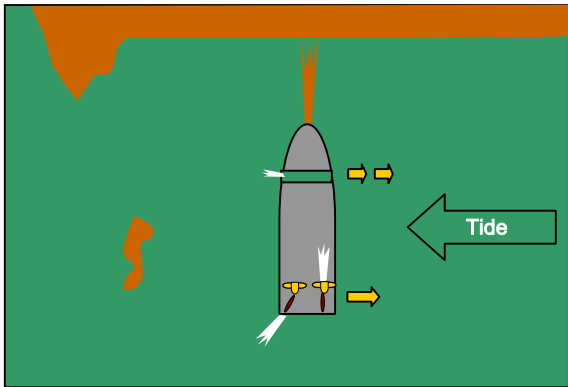
Manajer Proyek




Saya tidak bisa menerima rancangan dari galangan kapal, oleh karena rancangan itu kemungkinan besar propeller menjadi penyebab kerusakan erosi pada dasar pantai dan hilangnya tenaga untuk sistim propultion. Program harus dirubah sesuai gambar "B". (Surat Klaim) ke Galangan kapal dan (permintaan tindakan koreksi/corrective action request) harus dikeluarkan.



Konsultan




Manajemen Yang Salah



~~Galangan kapal ini telah banyak mengeluarkan suction hopper dredger di pasaran. Oleh karena itu kami harus percaya dan menyetujui sistim ini. Kamu tidak ahli dalam bidang dredger.~~

Manajer Proyek

Saya telah menemukan 20 pcs cadangan CPP blade pada saat pemeriksaan dan kapal begitu sering masuk dok untuk mengganti propeller. Kenapa? Kami memerlukan galangan kapal untuk merubah sistim program.




Konsultan

Chapter 02	APA ITU ISM CODE	
Bab 10	Ketidaksesuaian dan permintaan tindakan korektif	

Manajemen Yang Benar

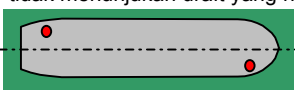
Komputer Permuatan



Konsultan

Suction hopper dredger harus diinstal pada bagian draft sensor di bagian bawah.

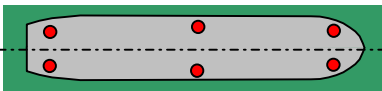
Tapi ada masalah yang menyebabkan sensor tidak menunjukkan draft yang nyata



Yaitu jika terjadi kondisi bengkok, tertarik, dan melengkung.

Jika memuat pasir kedalam hopper, kapasitas maksimum muatan harus ditargetkan sesuai dengan rata-rata pada draft, tetapi ternyata tanda freeboard terbenam ke dalam air (terjadi kelebihan muatan) yang menyebabkan kondisi melengkung dan terjadi ketidakmampuan daya apung.

Jika kapal tenggelam, kamu tidak bisa memperoleh klaim asuransi dan petugas pelabuhan akan menangkap kapalmu dalam kaitannya dengan overload ini.



Komputer pemuatan harus diinstal dengan jenis persetujuan Klas kapal, atau dua komputer tanpa persetujuan tipe.

Draft sensor harus diinstal pada point 6 untuk memastikan draft kapal.

Manajemen Yang Salah

Galangan kapal ini telah mengeluarkan banyak suction hopper dredger di pasaran. Oleh karena itu kami percaya dan harus menyetujui dan mengikuti sistim ini. Kamu tidak ahli dalam bidang dredger



Manajer Proyek

6	6
4	4
2	2
6 M	1 M

Tidak ada draft yang menandai midship.
Perhatikan kondisi ballast.
Midship draft yang nyata adalah 3.3 m tapi komputer menunjukkan 3.5 m.

6	6
4	4
2	2
12M	12M



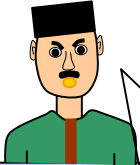
Tidak ada draft yang menandai midship
Pelengkungan yang sempurna menunjukkan kondisi draft midship nyata adalah 12.4 m (diatas draft).

Konsesinya Pemilik akan kehilangan beberapa ratus ton pasir

Chapter 02	APA ITU ISM CODE	
Bab 11	Tim audit dan fungsinya	

Manajemen yang Benar

Apa itu Audit Internal?



Pimpinan

Audit Internal adalah suatu prosedur yang dirancang untuk memferiikasikan perangkat keras dan lunak agar dapat dioperasikan dengan tepat di dalam sistim itu.

Tim Audit awal terdiri dari orang-orang yang ditugaskan oleh D.P.

Audit diharapkan dapat dilakukan di kantor dan di semua kapal yang dioperasikan oleh perusahaan yang meliputi semua orang-orang yang terkait dengan sistim itu.

Fungsi yang paling utama adalah untuk mengkonfirmasi manajemen keselamatan yang diterapkan pada semua kapal.

Jika ditemukan beberapa ketidksesuaian, sistim yang ada harus dimodifikasi untuk meningkatkan manajemen keselamatan.

Staff harus dilatih untuk mengidentifikasi kebutuhan akan tindakan korektif agar dapat mengambil tindakan korektif dan melakukan ferifikasi pada tindakan korektif yang telah diambil.

Audit tidak digunakan untuk mencari kesalahan.

Manajemen Yang Salah



Anak Pimpinan

Pak,
Mr.## telah berbuat kesalahan.
Dia tidak melakukan pekerjaannya.

Agus, hati-hati dengan kata-katamu !
Jika orang-orang takut pada kita mereka akan ragu untuk berterus terang atau melaporkan masalah utama yang mungkin terjadi.
Satu masalah yang timbul bukanlah terletak pada kemampuan pribadi perorangan tetapi fungsi dari perusahaan, sumber daya penting (termasuk sumber daya manusia) harus tersedia, memonitor sistim, pelatihan dll.
Kamu harus melakukan pembicaraan tentang (manajemen tinjauan ulang) dengan manajemen senior?

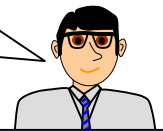
Perjanjian Auditor



Manajer Umum
sebaaqi D.P.

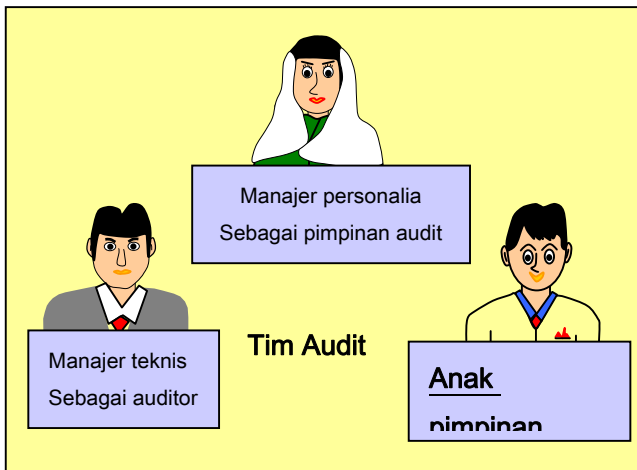
Saya menetapkan Kepala Bagian Personalia untuk memimpin tim audit, bersama dengan manajer Teknis dan si Agus sebagai pengikut audit.

~~Mengapa saya tidak dijadikan sebagai pemimpin Tim atau auditor?
Saya sangat ahli dan tahu banyak tentang manajemen kapal dari pada manajer personalia.~~



Manajer Armada


Manajer Armada,
Tujuan Audit terutama semata-mata untuk mengkonfirmasi bahwa sistim yang ada berfungsi secara efektif untuk menerapkan manajemen secara aman.
Terkadang suatu pandangan seorang ahli suka dibiaskan dan dia tidak mau mendengarkan pendapat orang lain.
Lagi pula sejumlah ketidaksesuaian sudah terjadi di departementmu baru-baru ini.
berdasarkan keadaan ini suatu audit awal oleh orang dari luar departemen adalah lebih baik. Dan kamu harus pula ingat bahwa kamu tidak dapat mengaudit sendiri fungsi milikmu.



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Manajemen Yang Benar


Audit Internal oleh Audit luar perusahaan




Manager
Umum sesuai

Sejak Audit Internal yang lalu banyak terjadi berbagai hal penyimpangan. Saya takut pada sistim ada sesuatu yang salah. Kami telah memutuskan untuk mengugaskan seorang dari luar perusahaan untuk melakukan Audit Internal.


Perusahaan menetapkan yang berpengalaman sangat baik menurut ISO 9000/14000, dengan staff pelatih yang berkualitas untuk bertindak sebagai pimpinan auditor.



Auditor dari luar
perusahaan



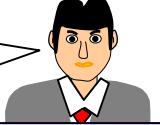
Manajer Teknis
sebagai Auditor



Anak

Manajemen Yang Salah

Dia hanya seorang perempuan !
 Saya tidak mau dia menilai kinerja yang kita miliki.



Manajer Teknis

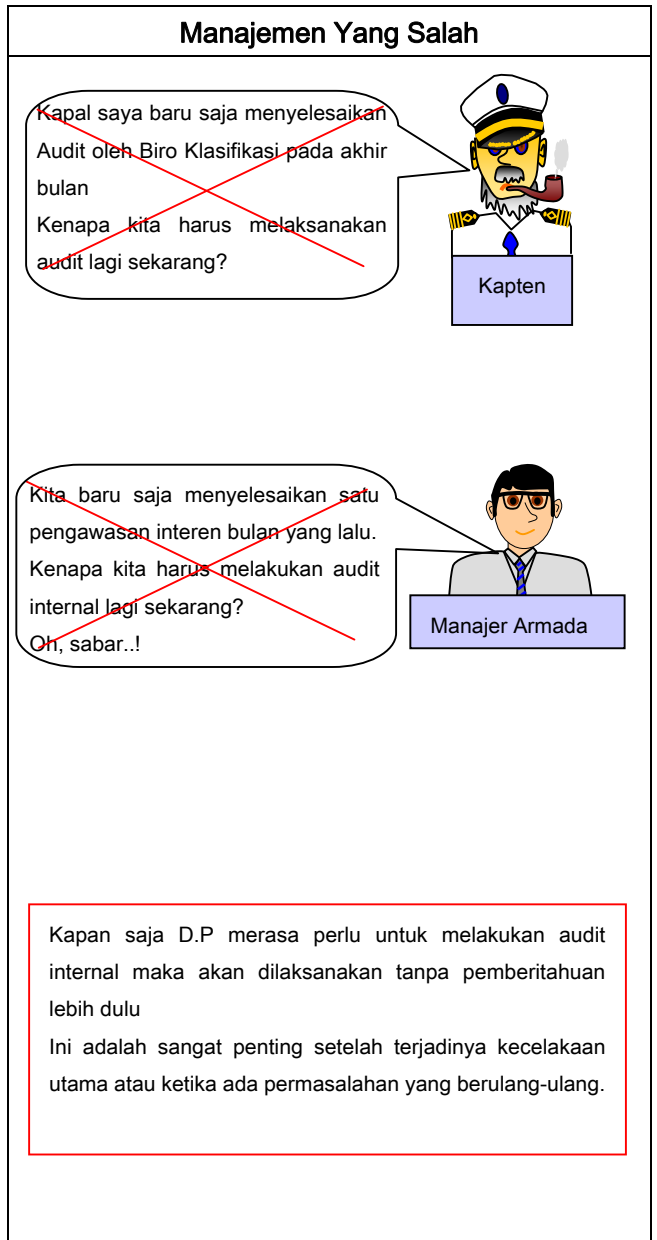
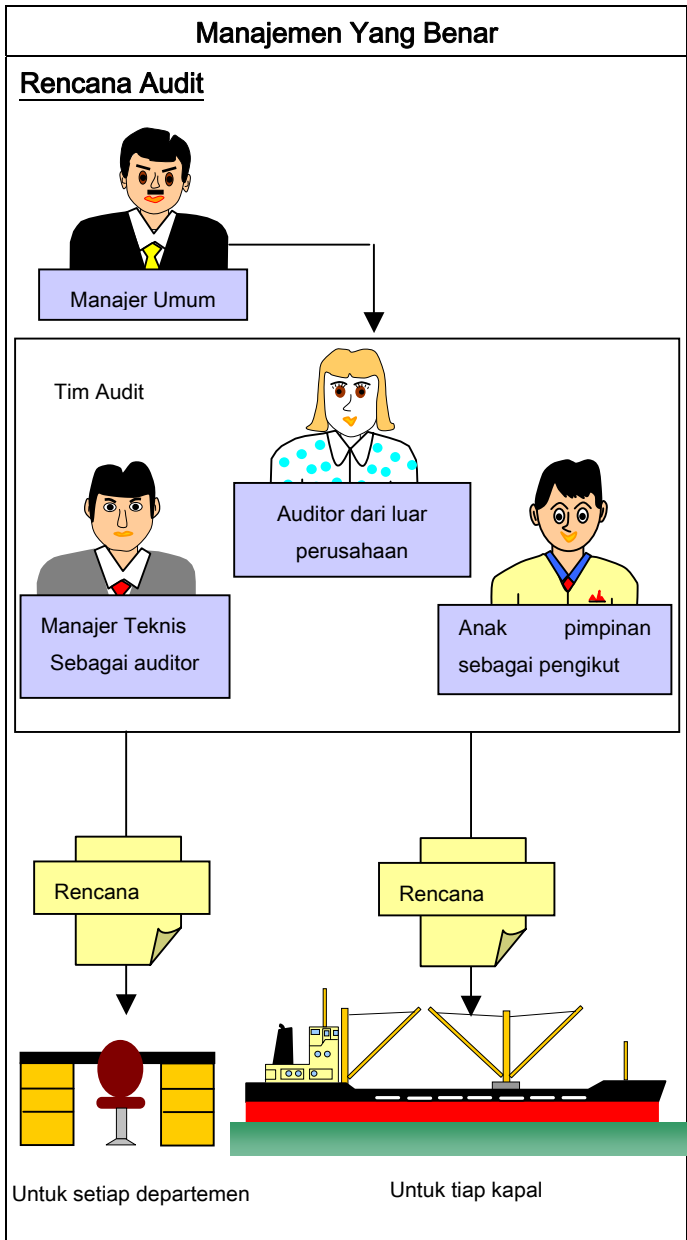
Oh.Tidak.. tidak.. Manajer Teknis!

Audit adalah untuk memferifikasikan sistim perusahaan, bukan untuk mengevaluasi secara pribadi. Sekalipun audit telah dilakukan oleh orang luar perusahaan, audit adalah pengawasan internal perusahaanmu dan dengan demikian dibawah pengawasan D.P. perusahaan kamu.

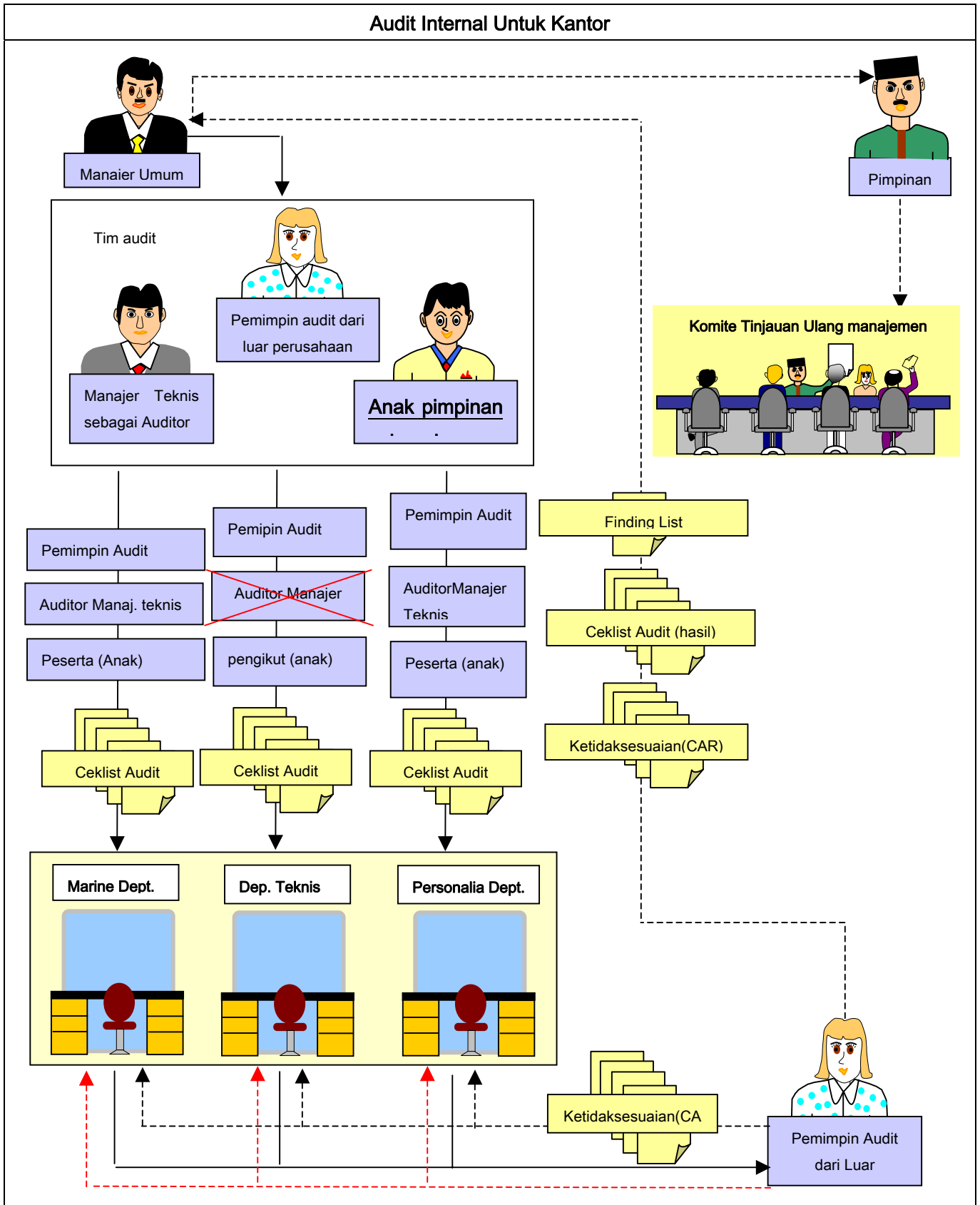
Lagi pula, sekalipun auditor adalah seorang perempuan, dia harus dilatih,dan mempunyai kualitas dan dia harus mengetahui sistim dengan baik. Dia akan mengaudit sistim perusahaan dengan pengamatannya.

Suatu audit dari luar sangat efektif untuk sistim itu sebab seseorang yang menjalankan sistim Tinjauan ulang setiap hari, mereka tidak melihat adanya kekurangan atau terlalu Percaya diri.

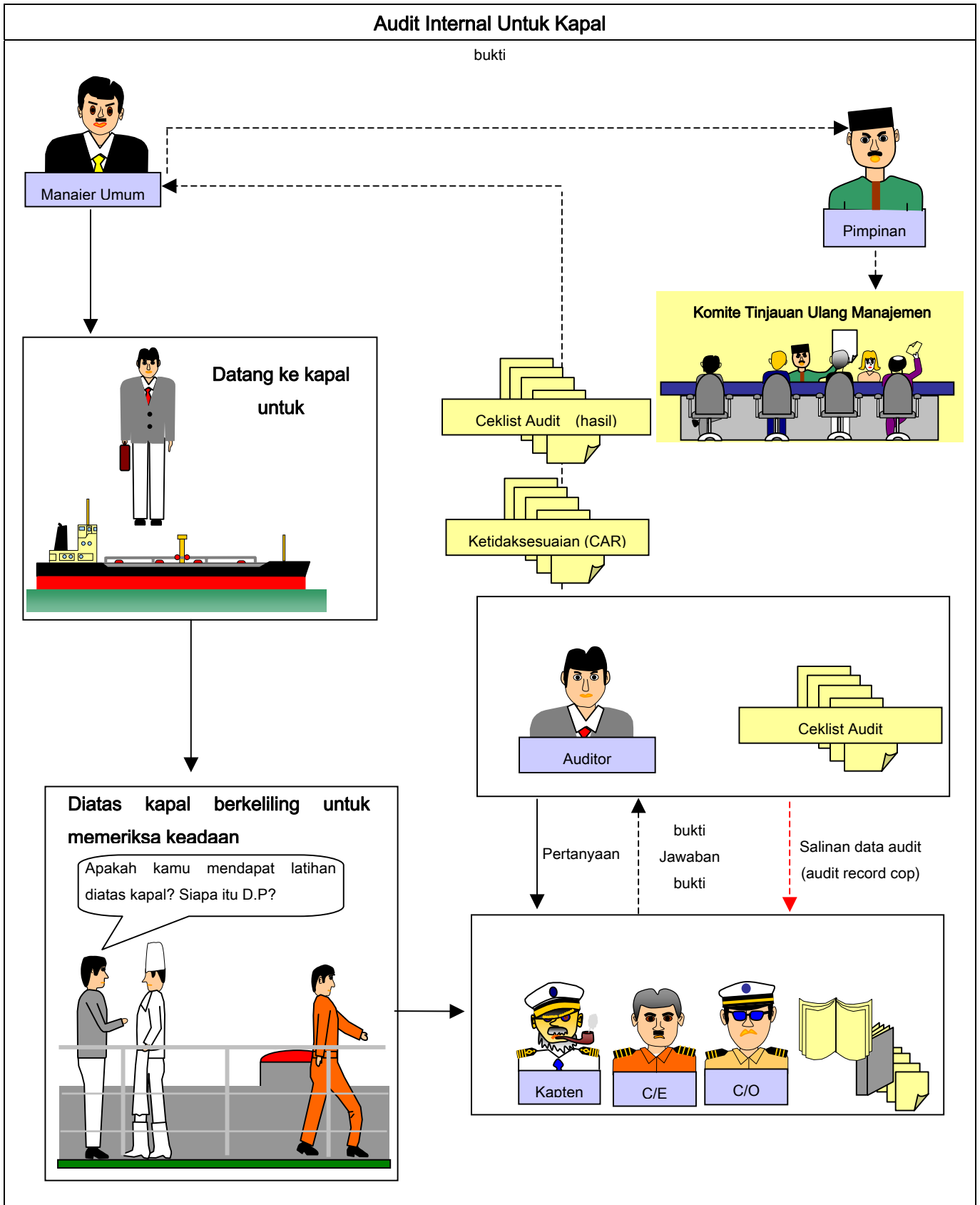
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Administrasi	Adalah Pemerintahan suatu Negara Yang berhubungan dengan Nama Bendera Kapal yang berhak untuk dikibarkan.
Audit	Adalah suatu pengujian yang sistimatis dan independent untuk menentukan apakah aktifitas sistim dan hubungan hasilnya telah mematuhi pengaturan yang direncanakan dan apakah pengaturan ini telah diterapkan secara efektif dan sesuai untuk mencapai sasaran.
Auditee	Adalah Perusahaan atau seseorang yang sedang diaudit.
Auditor	Adalah seseorang yang berkualitas yang memenuhi verifikasi untuk melakukan Audit sesuai dengan ketentuan dalam ISO90002/ISM Code dan yang memenuhi kecakapan pribadi serta hal lainnya yang berhubungan dengan prosedur yang dibutuhkan
Bukti Tujuan	Adalah Informasi kualitatif atau informasi kuantitatif, catatan atau pernyataan dari fakta mengenai keberadaan dan penerapan sebuah unsur sistim, yang didasarkan pada pengamatan, pengukuran atau pengujian yang dapat dibuktikan.
COLREG	Peraturan Internasional untuk pencegahan tabrakan di laut
Data/catatan	Adalah dokumen yang melengkapi bukti sasaran aktifitas yang dilakukan atau hasil yang dicapai.
Defisiensi (Kekurangan)	Adalah tidak terpenuhinya suatu persyaratan yang ditetapkan atau harapan yang layak mengenai sesuatu yang terkait dengan keselamatan.
Dokumen Pemenuhan (DOC-Dokument of Compliment)	Adalah suatu Dokumen yang dikeluarkan kepada sebuah perusahaan yang memenuhi persyaratan ISM Code.
IACS	Asosiasi Biro klasifikasi Internasional.
ILLC	Sertifikat Lambung Timbul Internasional.

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ILO	Organisasi buruh International.
IMO	Organisasi Maritim International
International Safety Management (ISM) Code	Adalah Kode Manajemen Internasional untuk Operasi Keselamatan Kapal dan pencegahan polusi, yang diadopsi oleh Organisasi Maritim Internasional (IMO) dengan resolusi A.741(18).
IOPP	Sertifikat Pencegahan Polusi Minyak International.
ISO9002	<i>Adalah Sistem mutu – model untuk menjamin mutu dalam produksi, instalasi dan pelayanan.</i>
Kantor Cabang	Adalah sebuah kantor yang merupakan bagian dari Perusahaan dibawah kendali perusahaan dan yang diatur oleh sistem yang sama (ISO 9002/SMS)
Kebijakan Mutu	<i>Adalah keseluruhan arah dan tujuan dari suatu organisasi mengenai mutu, yang dinyatakan secara formal oleh manajemen puncak.</i>
v Kejadian	Adalah Suatu peristiwa tanpa penyebab yang jelas atau tak terduga.
Keselamatan	Adalah suatu keadaan dimana resiko yang membahayakan (kepada seseorang) atau kerusakan yang terjadi masih dalam batas yang dapat diterima.
Ketidaksesuaian	Adalah suatu pengamatan dimana bukti sasaran menunjukkan adanya kealpaan/tidak terpenuhinya sesuatu persyaratan yang ditetapkan dalam ISO9002/ISM Code.
Ketidaksesuaian Mayor	Adalah suatu Identifikasi penyimpangan yang mempunyai ancaman serius terhadap personil kapal atau keselamatan kapal atau suatu bahaya yang serius terhadap lingkungan dan memerlukan tindakan korektif dengan segera; ditambahkan pula, tidak cukupnya implementasi secara efektif dan sistematis terhadap ISO9002/ISM Code yang disyaratkan yang dianggap pula sebagai suatu ketidaksesuaian utama.

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Konsesi	Adalah Authorisasi tertulis untuk menggunakan atau melepaskan jasa, perangkat keras, perangkat lunak, atau kombinasi dari keduanya yang tidak sesuai dengan persyaratan yang ditetapkan.
Kontrak	Adalah persyaratan yang disetujui antara seorang supplier dan pelanggan yang pemindahan haknya dengan berbagai cara.
Kualitas	<i>Adalah keseluruhan karakteristik dari suatu entitas yang menekankan pada kemampuan untuk menyatakan kepuasan dan pemenuhan kebutuhan.</i>
Manajemen Keselamatan Manual	Adalah dokumentasi yang digunakan untuk menjelaskan dan menerapkan Sistem Manajemen Keselamatan.
MARPOL MARPOL73/78	Konferensi International mengenai Polusi Laut Protokol 1978 yang berhubungan dengan Konvensi Internasional tentang Pencegahan Polusi dari kapal, 1983.
Mengerjakan kembali (Rework)	Tindakan yang diambil karena sebuah hasil yang tidak sesuai sehingga hal itu dapat memenuhi persyaratan yang ditetapkan.
Near miss	Adalah tidak ada suatu ancaman, tetapi cukup mendekati untuk menyebabkan ancaman.
Observasi	Adalah suatu pernyataan dari fakta yang dibuat selama sebuah sistem audit manajemen dan yang diperkuat oleh bukti sasaran/tujuan. Mungkin juga suatu pernyataan yang dibuat oleh Auditor yang mengacu pada sistem, yang jika tidak diperbaiki mungkin akan mendorong ke arah ketidaksesuaian dimasa yang akan datang.
Organisasi	Adalah Perusahaan, penggabungan/korporasi, Firma, enterprise atau institusi atau bagian dari keduanya, apakah itu perseroan terbatas atau bukan, publik atau pribadi, yang mempunyai fungsi dan administrasi sendiri.

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Organogram	Adalah Tanggung jawab, hak dan hubungannya, yang diatur dalam suatu pola tertentu, dimana suatu organisasi melaksanakan fungsinya.
Penyesuaian	Adalah Pemenuhan terhadap persyaratan yang ditetapkan.
Perbaikan	Tindakan yang diambil karena sebuah hasil yang tidak sesuai sehingga tindakan itu akan memenuhi persyaratan tujuan yang diharapkan meskipun mungkin tidak sesuai dengan persyaratan yang ditetapkan semula.
Perusahaan	Adalah Pemilik kapal atau organisasi lain atau seseorang seperti Manajer, atau Penyewa kapal, yang telah menerima tanggung jawab untuk mengoperasikan kapal dari pemilik kapal dan dalam penerimaan tanggung jawabnya telah menyetujui pengambil alihan tugas-tugas pertanggung jawaban yang ditetapkan dalam ISO9002/ISM Code.
Prosedur	Adalah suatu cara yang khusus untuk melaksanakan suatu aktifitas. Pada umumnya, prosedur telah dibuktikan kebenarannya.
Sertifikat Manajemen Keselamatan	Adalah suatu dokumen yang dikeluarkan untuk sebuah kapal yang menandakan bahwa perusahaan dan manajemen diatas kapal beroperasi sesuai dengan Sistim Manajemen Keselamatan yang diakui (SMS).
Sistim	Adalah sesuatu yang tersusun dan sistim dokumentasi yang memungkinkan bagi personil perusahaan untuk menerapkan secara efektif kebijakan mutu perusahaan & kebijakan keselamatan serta perlindungan terhadap lingkungan. Didalam perusahaan Sistim Manajemen Keselamatan dan/atau sistim Mutu sangat tepat jika diterapkan.
Sistim Manajemen Keselamatan	Adalah sesuatu yang tersusun dan sistim dokumentasi yang memungkinkan personil perusahaan dapat menerapkan secara efektif kebijakan perusahaan mengenai keselamatan dan perlindungan terhadap lingkungan.

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Sistim Manual	Dokumen yang menyatakan kebijakan perusahaan mengenai mutu & keselamatan serta perlindungan terhadap lingkungan dan menggambarkan sistim perusahaan itu.
<i>Sistim mutu</i>	<i>Berarti struktur Organisasi, prosedur, proses dan sumber daya yang dibutuhkan untuk menerapkan manajemen mutu.</i>
Situasi Yang penuh resiko	Adalah Kondisi yang berbahaya, atau resiko yang sedang berjalan.
SOLAS	Konvensi Internasional untuk keselamatan Jiwa di laut.
SOPEP	Shipboard Oil Pollution Emergency Plan/Rencana Darurat Polusi Minyak di atas Kapal.
STCW	Konvensi International mengenai Standart Sertifikasi Pelatihan dan Watchkeeping untuk para pelaut.
Temuan	Adalah Tidak terpenuhinya tujuan atau persyaratan yang ditetapkan oleh perusahaan yang mana telah keluar jalur dari apa-apa yang ditetapkan dalam sertifikasi ISO9002/ISM Code. Hal itu tidak mempengaruhi penerbitan, endorsment/pembaharuan atau pengesahan kembali suatu Dokumen/SMS atau sertifikat lain.
Tindakan Korektif	Adalah mengambil tindakan untuk menghapus/mengeliminasi penyebab suatu ketidaksesuaian yang ada, kerusakan atau situasi lain yang tidak diinginkan agar dapat mencegah terulangnya kembali.
<u>Catatan</u>	<ol style="list-style-type: none"> 1 "Koreksi" mengacu pada perbaikan, mengerjakan kembali atau menambah penyesuaian yang berhubungan dengan adanya suatu ketidak-sesuaian yang terjadi. 2 "Tindakan Korektif" berhubungan dengan penghapusan penyebab ketidaksesuaian itu.
Tindakan pencegahan	Adalah tindakan yang diambil untuk menghapus penyebab suatu ketidaksesuaian yang berpotensi terjadi, kerusakan atau situasi lain yang tidak diinginkan agar kejadian dapat dicegah.

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	DEFINISI	

Tinjauan Ulang Kontrak Adalah kegiatan yang sistimatis yang dilaksanakan oleh Supplier sebelum penandatanganan Kontrak untuk memastikan bahwa Persyaratan mengenai kualitas telah cukup memadai, terbebas dari kerancuan, didokumentasikan dan dapat difahami oleh Supplier/penyalur.

Tinjauan Ulang Manajemen Adalah Evaluasi formal oleh Manajemen Puncak menyangkut status dan sistim yang memadai yang berhubungan dengan kebijakan dan tujuan.

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Bab 00	KEBIJAKAN	

KEBIJAKAN KESELAMATAN DAN PERLINDUNGAN TERHADAP LINGKUNGAN

VERITAS INC. adalah Perusahaan yang telah menetapkan Sistem Manajemen Keselamatan Kapal (Sistim) untuk memastikan kegiatan kapal yang mereka operasikan dapat berjalan secara aman, mencegah terjadinya kecelakaan pada jiwa seseorang atau kematian dan menghindari kerusakan pada property dan pada lingkungan laut.

Sasaran/tujuan perusahaan adalah untuk:

- 1) Menyediakan praktek kerja secara aman dalam pengoperasian kapal dan dalam lingkungan kerjanya;
- 2) Menetapkan perlindungan keselamatan terhadap semua resiko yang telah diidentifikasi;
- 3) Secara terus menerus meningkatkan keterampilan manajemen keselamatan bagi personil di darat dan diatas kapal, termasuk melakukan persiapan dalam menghadapi keadaan darurat diatas kapal mengenai keselamatan dan perlindungan lingkungan yang keduanya saling terkait.

Sistim mengikuti peraturan dan aturan wajib yang diperintahkan; serta Kode yang diterapkan, petunjuk dan sandart yang direkomendasikan oleh Biro Klasifikasi dan organisasi industri maritim yang dapat diperhitungkan.

Perusahaan telah menetapkan tujuan/sasaran dengan cara :

- a) Menetapkan Sistem Manajemen Keselamatan untuk menyelaraskan dengan Kode Manajemen Keselamatan Internasional yang disyaratkan.
- b) Mengikuti prosedur dokumen perusahaan dan melakukan verifikasi terhadap aktifitas yang berhubungan dengan prosedur itu;
- c) Menjaga standart yang tinggi terhadap kesadaran keselamatan, disiplin dan tanggung jawab dalam berbagai model pelatihan dan latihan;
- d) Secara terus menerus meninjau ulang sistim, semua aturan wajib, peraturan dan petunjuk yang relevan bagi kapal-kapal perusahaan.

Jenis Kapal yang diatur di dalam katagori itu adalah : **kapal Kargo (Muatan Umum –General Cargo) & Angkutan muatan curah (Bulk Carrier).**

Kapal akan dioperasikan oleh perusahaan sesuai dengan Dokumen pemenuhan yang relevan untuk jenis itu.

Saya mengemban tanggung jawab pokok untuk menerapkan, memelihara, dan meningkatkan sistim, dan saya telah menetapkan **Manajer Umum Armada** sebagai **Orang yang Ditunjuk** yang bertanggung jawab terhadap sistim itu. Perusahaan memastikan bahwa sumber daya yang cukup dan pendukung dasar di darat telah diberikan kepada Orang Yang ditunjuk untuk menyelesaikan tugasnya sesuai

Chapter 02	ISM Manual	
Bab 00	KEBIJAKAN	

ketetapan.

Kebijakan perusahaan ini dimaksudkan supaya sistim dapat diterapkan dan saya menetapkan semua personil perusahaan, baik di darat maupun diatas kapal agar dapat mengikuti kebijakan yang diuraikan diatas.

Sistim telah diterapkan pada xxxxxxxxxx.

K. Sakaguchi, **Pimpinan**
VERITAS INC.

Chapter 02	ISM Manual	
Bab 01	TINJAUAN ULANG MANAJEMEN	

1.1 Tujuan/Sasaran

Untuk memastikan bahwa sistim akan menentukan secara bertahap apakah sebuah struktur dan sistim manajemen yang efektif telah sesuai dan apakah telah diterapkan di kantor maupun diatas kapal.

Sistim ditinjau ulang untuk menentukan dengan sendirinya apakah efektif dan relevan.

1.2 Tanggung Jawab

Pimpinan dan **Orang yang ditunjuk** bertanggung jawab untuk membuat jadwal tinjauan ulang manajemen terhadap pedoman Manajemen Keselamatan secara berselang sedikitnya sekali setahun atau kapan saja apabila dirasa perlu karena keadaan khusus.

1.3 Peserta

Pimpinan menjadi pemimpin dari Komite Tinjauan Ulang, dan **Orang yang ditunjuk** berfungsi sebagai sekertarisnya, anggota lain yang dianggap tepat oleh **Pimpinan** diajak untuk ikut serta dalam tinjauan ulang agar dapat membantu dalam memberikan pertimbangan.

1.4 Tinjauan Ulang Manajemen

Pimpinan, dibantu oleh **Orang yang ditunjuk**, akan menyelesaikan Tinjauan Ulang Manajemen terhadap kinerja sistim secara menyeluruh termasuk laporan dari Kapten Kapal dan hasil dari audit dalam pengoperasian sistem tersebut dalam rangka mengevaluasi dan meningkatkan efektifitasnya menurut prosedur "Bagaimana cara meninjau ulang Sistim Manajemen "(O-0101).

Hasil dari Tinjauan Ulang Manajemen akan dicatat dalam "Hasil Tinjauan Ulang Manajemen"(O-0101-RR) dan digunakan untuk meningkatkan efektifitas dalam pengoperasian sistim yang memadai.

Pada saat melakukan perjanjian manajemen kapal, perusahaan meminta pemilik kapal untuk melaporkan penandatanganan perjanjian tersebut kepada bagian Administrasi, dan menyediakan sebuah salinannya kepada perusahaan sebagai arsip.

Hal tersebut dijamin selama penandatanganan Kontrak manajemen dan dikonfirmasi kebenaran pada setiap tinjauan ulang manajemen.

1.5 Agenda

Agenda untuk pertimbangan-pertimbangan mengenai tinjauan Ulang Manajemen meliputi hal-hal berikut ini, tetapi tidak terbatas pada hal tersebut ;

(A) Hasil-hasil Penerapan Sistim :

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Bab 01	TINJAUAN ULANG MANAJEMEN	

- 1) Kebijakan dan Tujuan Perusahaan;
- 2) Hasil Penyelidikan & Analisa kejadian, situasi yang berbahaya dan Near-Miss;
- 3) Pemenuhan sistim yang ada;
- 4) Pengamatan sistim yang ada/Bench marking;
- 5) Laporan Audit Eksternal;
- 6) Laporan Audit Internal;
- 7) Tinjauan Ulang mengenai program pemeliharaan, termasuk permesinan dan peralatan penting;
- 8) Penanggalan Tahunan;
- 9) Tinjauan Ulang Kapten dan laporan mengenai kekurangan yang ditemukan dalam sistim dll.

(B) Lain-lain;

- 1) Perubahan ke ISM Code.
- 2) Perubahan mengenai aturan dan peraturan;
- 3) Perjanjian Manajemen Kapal;
- 4) Usulan pengembangan teknologi;
- 5) Rekomendasi mengenai Undang-undang, survey-survey klasifikasi;
- 6) Penetapan untuk menerapkan perubahan;
- 7) Laporan lanjutan;
- 8) Hasil evaluasi Agen Pengawakan;
- 9) Penetapan Tanggal sementara untuk Tinjauan Ulang berikutnya, dll.

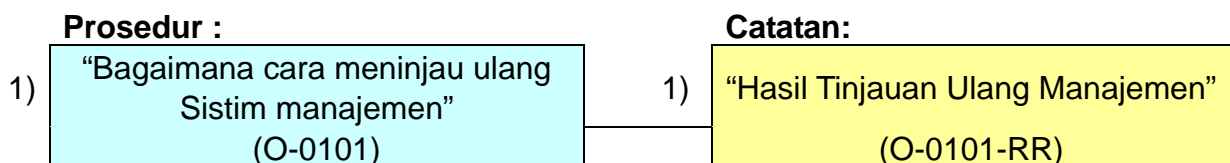
1.6 Catatan

Catatan-catatan tinjauan ulang akan didokumentasikan dan dijaga oleh **Orang yang ditunjuk**. Semua ini akan dibagikan ke personil yang tepat, jika perlu, berdasarkan pertimbangan-pertimbangan.

1.7 Distribusi

Perbaikan, Perubahan dan pembatalan (jika ada), pada dokumentasi melalui Tinjauan Ulang sistim akan di catat dalam “penambahan/revisi/laporan pembatalan “(O-0301-PC) dan dibagikan oleh **Orang yang ditunjuk** secara tepat.

1.8 Dokumen Referensi



Chapter 02	ISM Manual	
Bab 02	STRUKTUR ORGANISASI MANAJEMEN	

2.1 Tujuan/sasaran

Untuk menetapkan dan mendokumentasikan Tanggung jawab, hak dan hubungan timbal balik dari semua personil yang mengatur, melaksanakan dan memeriksa pekerjaan yang berhubungan dengan itu, dan yang mempengaruhi keselamatan dan pencegahan polusi.

2.2 Ruang Lingkup Aplikasi

Prosedur yang terdapat dalam Bab ini diharapkan dapat diikuti oleh anggota dari seluruh Departemen di dalam perusahaan dan semua personil yang berlayar di laut. Sistim diharapkan dapat diterapkan dan diikuti oleh semua kapal yang dioperasikan oleh perusahaan, apakah itu mereka miliki sendiri, mengatur kapal lain atau mencarternya.

2.3 Organisasi

Bab ini menguraikan struktur manajemen di dalam perusahaan dan hubungan yang ada antara Kapten kapal dengan stafnya, yang dikendalikan oleh perusahaan, dan antara staff kapal dan para rekan kerjanya di darat.

Juga menguraikan secara singkat peran kunci personil di darat maupun dikapal dan memberi penjelasan mengenai ruang lingkup tanggung jawab dan hak dari orang-orang itu.

Hubungan timbal balik antara personil ditunjukkan pada organogram dalam "Peta/table Organisasi diatas kapal" dan "Tabel/peta Organisasi kantor ".

2.4 Tanggung jawab dan Hak (di Darat)

2.4.1 Pimpinan

Pimpinan perusahaan mempunyai tanggung jawab pokok untuk mengatur dan menerapkan SMS. Tanggung jawabnya meliputi hal-hal berikut ini tetapi tidak terbatas pada hal tersebut yaitu:

- 1) Menyediakan semua sumber daya yang diperlukan (termasuk personil) untuk mengatur dan menerapkan sistim;
- 2) Menetapkan dan menugaskan personil yang tepat (Orang yang Ditunjuk) untuk mengatur dan menerapkan sistim. Dalam pelaksanaannya Ia akan memastikan bahwa pendukung dasar di darat cukup tersedia bagi Orang Yang ditunjuk untuk menyelesaikan tugas-tugasnya secara efektif.
- 3) Meninjau ulang sistem untuk mengevaluasi dan meningkatkan efektifitasnya;
- 4) Menetapkan suatu Tim tanggap darurat (Emergency Response Team) dan menetapkan seorang eksekutif dengan hak penuh untuk menerapkan prosedur yang ada yang diperlukan untuk menanggapi suatu keadaan darurat.

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2.4.2 Orang Yang ditunjuk(Designated Person)

Orang yang ditunjuk bertanggung jawab untuk memastikan pengoperasian secara aman pada setiap kapal dan untuk menyediakan suatu mata rantai antara perusahaan dengan yang ada diatas kapal. Ia melaporkan secara langsung kepada Pimpinan berbagai hal yang berkenaan dengan pemeliharaan dan kegiatan SMS.

Seorang **Manajer Umum Armada** akan melaksanakan tugas sebagai **Orang yang ditunjuk** dalam perusahaan itu. Dan **Seorang Manajer Teknik akan mengambil alih tugas sebagai Orang yang ditunjuk jika Manajer Umum Armada tidak ada.**

Hak dan Tanggung jawabnya meliputi :

- 1) Mempersiapkan anggaran untuk mengatur, memonitor, memelihara dan mengendalikan SMS;
- 2) Menerapkan SMS meliputi semua dokumentasi yang disetujui dengan menerapkannya, meninjau ulang, mengembangkan, mengganti atau membatalkannya jika dianggap perlu. (lihat dokumen seksi pengendalian secara rinci dalam pedoman ini);
- 3) Mengatur semua dokumen yang dikendalikan;
- 4) Mengevaluasi efektivitas SMS, dan melaporkan kekurangan yang timbul dalam sistim kepada Pimpinan serta melakukan tindakan perbaikan sesuai ketetapan;
- 5) Menjelaskan efektivitas terhadap tindakan perbaikan;
- 6) Mengatur dan menerapkan pengawasan intern dan menganalisa hasil yang diperoleh;
- 7) Memastikan kerjasama yang erat antara personil di darat dan di atas kapal sebagai sebuah mata rantai dan untuk menyediakan sumber daya yang cukup dan pendukung dasar di darat untuk kapal-kapal.
- 8) Memonitor aspek keselamatan dan pencegahan polusi terhadap pengoperasian setiap kapal dan menerapkan pendukung dasar di darat.

2.4.3 Manajer Umum Armada

Manajer Umum Armada adalah **Orang yang ditunjuk** perusahaan **Manajer Umum Armada** bertanggung jawab kepada **Pimpinan** untuk mengamankan dan mengawasi secara cermat menyangkut pengoperasian kapal, personil dan departemen teknis.

Para manajer departemen ini melaporkan secara langsung kepadanya.

Manajer Umum Armada mempunyai tanggung jawab menyeluruh mengenai semua aspek manajemen terhadap pengoperasian kapal oleh perusahaan. Tugas-tugasnya meliputi hal-hal berikut ini, tetapi tidak terbatas pada hal tersebut yaitu:

- 1) Mengawasi semua aspek navigasi keselamatan dan pengoperasian semua kapal yang dijalankan oleh perusahaan;

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- 2) Mengatur pemeriksaan dan melakukan survey terhadap kapal-kapal sebagaimana diperlukan;
- 3) Menyiapkan “Rencana darurat di atas kapal” untuk menangani semua peristiwa yang mungkin terjadi tidak terduga dan mengaturnya serta mengendalikan “Tim Tanggap Darurat” yang dibuat untuk menanggapi peristiwa kecelakaan pelayaran;
- 4) Mengendalikan total anggaran manajemen kapal;
- 5) Mendelegasikan fungsi pekerjaan pada tingkat yang tepat mengenai hak dan tanggung jawabnya sesuai dengan pengalaman dan kualifikasi personil dalam mengoperasikan kapal secara aman, efisien dan ekonomis dalam armada perusahaan;
- 6) Melakukan pengawasan terhadap isi semua dokumen yang dikendalikan.

2.4.4 Manajer Operasi

Tugas-tugas dan Tanggung jawab **manager operasi** meliputi hal-hal dibawah ini, tetapi tidak terbatas pada hal tersebut yaitu:

- 1) Mengkoordinir dan memonitor kemajuan pelayaran yang dilakukan oleh kapal-kapal yang dioperasikan oleh perusahaan. Menetapkan bahwa pada akhirnya kapal telah dilengkapi dengan informasi yang lebih akurat mengenai instruksi pelayaran, tabel/peta, dan publikasi dll. Sehubungan dengan hal ini maka kapal-kapal dan pola perdagangan yang akurat harus dapat diperhitungkan sesuai perencanaan.
- 2) Memastikan bahwa semua kapal telah dilengkapi dengan informasi yang akurat yang berhubungan dengan aspek pelayaran pada pengoperasiannya. Hal ini akan meliputi verifikasi pada sistim navigasi, prosedur-prosedur dan peralatan;
- 3) Mengikuti perkembangan dan peraturan perundang-undangan yang berkembang yang berhubungan dengan Navigasi keselamatan dan perlindungan terhadap lingkungan dan memulai sistim yang tepat untuk memastikan bahwa perusahaan dan kapalnya selalu beroperasi berdasarkan hukum yang berlaku dan dalam parameter yang diinginkan ;
- 4) Menyusun data yang berhubungan dengan angkutan dan penanganan muatan yang berbahaya dan muatan khusus, serta memberikan informasi untuk kapal-kapal.
- 5) Menyusun dan mengeluarkan amandemen untuk “Tugas-tugas dan tanggung jawab dari personil dalam departemen pelayaran” (O-0201);
- 6) Mendukung personil kantor untuk dilibatkan dalam pengoperasian kapal dan fungsi-fungsi manajemen;
- 7) Memudahkan Audit Internal didalam kantor maupun di atas kapal menurut perencanaan dari **Orang yang ditunjuk**;
- 8) Menyediakan pelatihan yang pantas dan cukup mengenai SMS untuk semua personil di dalam kantor;

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- 9) Membantu **Manajer Umum Armada** dalam menyiapkan “Perencanaan kemungkinan terhadap kecelakaan “ mengatur dan mengendalikan “Tim-tim Darurat “;
- 10) Mendistribusikan semua dokumen yang dikendalikan.

2.4.5 Manajer Teknis

Tugas-tugas dan tanggung jawab **Manajer Teknis** meliputi hal-hal dibawah ini, tetapi tidak terbatas pada hal tersebut :

- 1) Menetapkan, meninjau ulang, merubah dan bila perlu membatalkan prosedur yang berhubungan dengan pemeliharaan sebuah kapal;
- 2) Mengumpulkan data yang menyangkut peralatan yang digunakan untuk mencegah polusi dengan maksud untuk meningkatkan kinerja yang akan dicapai;
- 3) Mengawasi kemajuan dan perundang-undangan yang berkembang yang berhubungan dengan pengoperasian secara aman terhadap peralatan-peralatan kapal dan perlindungan terhadap lingkungan untuk pemenuhan secara berkelanjutan;
- 4) Menyediakan pedoman untuk personil kapal dalam mengoperasikan kapal dan peralatan mereka sebagaimana yang ditetapkan;
- 5) Menyediakan pelatihan yang pantas dan cukup serta latihan-latihan dalam SMS untuk personil kapal.
- 6) Memastikan bahwa pengoperasian kapal berdasarkan undang-undang dan menurut parameter yang diinginkan;
- 7) Mengusahakan agar kebutuhan gudang/stores kapal, minyak bahan bakar, minyak pelumas dan peralatan gear dapat dipenuhi.

2.4.6 Manajer Personalia

Tugas-tugas dan tanggung jawab **Manajer Personalia** meliputi hal-hal berikut ini, tetapi tidak terbatas pada hal tersebut yaitu :

- 1) Semua masalah yang berhubungan dengan ketenaga-kerjaan dan kesejahteraan bagi personil kapal;
- 2) Menyediakan pelatihan yang pantas dan cukup dalam penerapan SMS untuk semua personil diatas kapal;
- 3) Menerapkan Semua aspek promosi, bonus dan masalah prosedur kedisiplinan untuk personil yang berlayar di laut;
- 4) **Menilai fungsi dan kinerja para agen pengawakan.**

2.5 Tanggung jawab dan Otoritas (kapal)

2.5.1 Kapten

(1) Hak Kewenangan lebih Kapten;

Kapten mempunyai perintah secara penuh menyangkut kapal dan mempunyai hak

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penuh terhadap semua aspek selama pengoperasian. Meskipun terdapat hal-hal lain atau instruksi-instruksi lain dalam pedoman ini, kapten akan melakukan beberapa tindakan, dalam pengambilan keputusannya, mementingkan perlindungan terhadap jiwa, property dan lingkungan.

Kapten mempunyai hak kewenangan lebih dan bertanggung jawab untuk membuat keputusan berkenaan dengan keselamatan dan pencegahan polusi dan dapat meminta bantuan kepada perusahaan bila dianggap perlu.

Kapten mempunyai hak berdasarkan hukum terhadap semua orang di atas kapal.

Kapten bertanggung jawab secara penuh terhadap kelaikan laut dan keselamatan, pengoperasian kapal secara efisien dan ekonomis, serta terhadap keselamatan bagi semua personil, muatan dan peralatan di atas kapal.

Kapten tidak akan merubah jalur perdagangan kapal tanpa memperoleh instruksi dari perusahaan kecuali dalam keadaan darurat.

Kapten tidak harus meninggalkan kapal pada saat melakukan pelayaran tanpa alasan yang tepat.

Kapten harus menyatakan adanya fakta dalam log-book dan melaporkannya secara rinci kepada perusahaan, pada saat melakukan hak kewenangan lebih untuk membuat keputusan, ia harus memberikan prioritas bagi keselamatan dan pencegahan polusi.

(2) Menerapkan kebijakan perusahaan;

Dalam melaksanakan tanggung jawabnya kapten harus memastikan bahwa kapal dioperasikan menurut ketentuan hukum yang berlaku dan kerangka peraturan yang berada dibawahnya, sistim ini berdasarkan pada kebijakan perusahaan, instruksi perusahaan dan ketaatan yang wajib dilaksanakan bagi pelaut menyangkut kecakapan pelaut yang tepat.

(3) Memotifasi anak buah kapal dalam mengamati kebijakan itu;

Kapten adalah orang yang bertanggung jawab terhadap sistim yang sedang dijalankan di laut, dan melakukan pemeriksaan, pengawasan terhadap pelatihan, dan memotifasi personil kapal agar memahami tentang efektifitas sistim yang disiapkan dalam mendokumentasikan pelatihan di atas kapal.

(4) Memberi perintah dan instruksi yang tepat;

Kapten memberi mereka instruksi yang tepat dan jelas sebagaimana yang dibutuhkan untuk menjalankan kebijakan perusahaan mengenai manajemen keselamatan dan pemeliharaan lingkungan.

Seorang Kapten adalah wakil dari perusahaan, dan keputusannya serta tindakannya dapat terikat pada perusahaan, Dia mengemban tugas dalam tindakannya dan melakukan fungsi terhadap jabatannya dalam mengambil keputusan terbaiknya sepanjang waktu.

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(5) Membuktikan bahwa persyaratan yang ditetapkan telah diamati;

Kapten juga bertanggung jawab untuk menjaga agar perusahaan menyadari adanya kerusakan-kerusakan yang ditemukan pada struktur yang ada di kapal, permesinan, peralatan dan masalah-masalah terkait yang mungkin mempengaruhi operasi keselamatan atau yang mungkin mengakibatkan terjadinya resiko terhadap polusi.

Dimana saja atau kapan saja, Ia dapat meminta bantuan kepada perusahaan, salah satunya dari staff teknis perusahaan atau dari kontraktor luar, untuk memastikan resolusi/perbaikan.

(6) Meninjau Ulang sistim ; dan

Kapten juga bertanggung jawab untuk meninjau ulang sistim (di atas kapal) untuk standart mutu, manajemen keselamatan terhadap pengoperasian sistim dan kapal, serta mencegah polusi terhadap lingkungan sekali setahun sebelum menerima audit internal diatas kapal dan mencatatnya dalam "Hasil tinjauan ulang Kapten" (S-0201-RR), kemudian melaporkannya kepada perusahaan.

Jika ada kecacatan prosedural yang timbul, maka diharapkan melaporkannya kepada orang yang ditunjuk dan Manajer Umum Armada yang akan mengambil langkah segera untuk memperbaiki situasi tersebut sesuai dengan "Tindakan Perbaikan ketidak-sesuaian" (OS-1001).

(7) Pendelegasian Tanggung jawab Kapten

Kapten dapat mendelegasikan tanggung jawabnya kepada anggota awak kapal yang tepat seperti Chief Officer, Chief Engineer atau Operator Radio, yang dinyatakan dibawah ini:

- 1) Navigasi kapal;
- 2) Kepedulian dan pengendalian semua dokumen manajemen;
- 3) Mengoreksi segala kecacatan yang dirasakan dalam sistim manajemen kapal dan melaporkan kecacatan itu kepada orang yang ditunjuk menurut "Tindakan ketidak-sesuaian dan Perbaikan" (MANUAL -10).
- 4) Menetapkan pantas tidaknya kapal melakukan kewajibannya berdasarkan perjanjian;
- 5) Mentaati persyaratan bisnis yang khusus dan mendesak ;
- 6) Memastikan bahwa tidak satupun dari operasi kapal melanggar peraturan yang berhubungan dengan perlindungan terhadap lingkungan;
- 7) Memastikan keselamatan dan kesehatan bagi personil diatas kapal;
- 8) Bertugas sebagai pemimpin terhadap keselamatan diatas kapal dan komite kesehatan.

(8) Lain-lain

Kapten bertanggung jawab untuk dan harus memberi perhatian khusus kepada,

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pengoperasian kapal secara ekonomis. Dia akan memastikan bahwa perbekalan, gudang kapal, spare gear dan peralatan yang ada tidak disia-siakan dan inventaris yang berlebihan tidak dipertahankan diatas kapal.

Kapten akan berusaha keras untuk menjaga biaya-biaya seminimal mungkin dan akan memantau pimpinan yang memberikan overtime dan pembayaran kelebihan overtime hanya dilakukan pada saat keadaan yang diperintahkan.

Kapten bertanggung jawab terhadap ketelitian, pengiriman tepat waktu terhadap semua surat menyurat, catatan, buku-buku harian dan dokumentasi yang dibutuhkan oleh perusahaan, Pencarter, Perusahaan ekspedisi, Penguasa Pelabuhan atau para agen pemerintah yang berhubungan dengan urusan kapal.

2.5.2 Chief Officer

- 1) Chief Officer sebagai kepala departemen Dek dan sebagai petugas yang berwenang menggantikan Kapten pada saat tidak ada.
- 2) Dia membantu Kapten dalam tugas pemeliharaan dan operasi SMS Kapal.
- 3) Sebagai Petugas eksekutif pertama dari kapten di atas kapal, Chief Officer bertanggung jawab untuk melaksanakan tugas sehari-hari berdasarkan beberapa instruksi atau perintah yang diberikan kepadanya oleh kapten yang berhubungan dengan departemen Dek dan melakukan koordinasi dengan departemen Mesin.

2.5.3 Chief Engineer

- 1) Kepala Kamar mesin, dibawah perintah kapten adalah sebagai kepala Departemen Mesin dan atasan dari anggota staff mesin di atas kapal.
- 2) Dia bertanggung jawab kepada Kapten dan kepada perusahaan melalui kapten mengenai hal administrasi, pengawasan dan operasi keselamatan secara ekonomis pada departemennya, yang menyangkut aspek teknis pada kapal.
- 3) Dia juga bertanggung jawab terhadap tenaga penggerak mesin dan permesinan bantu dan jasa teknis lainnya termasuk pemeliharaan (Engine dan Dek) menurut prosedur yang didokumentasikan.

2.5.4 Operator GMDSS

- 1) Operator GMDSS melaporkan secara langsung kepada kapten dan bertanggung jawab kepada kapten mengenai kepemimpinan dan kinerjanya, pengoperasian dan pemeliharaan stasiun radio.
- 2) Pada saat diperlukan oleh kapten dia membantu sebagai fungsi kepala keuangan dan menjalankan serta memelihara SMS kapal.
- 3) Ketidak-hadiran operator radio diatas kapal dalam kewajibannya terhadap GMDSS, maka personil yang tepat akan mengambil alih tanggung jawab dan tugas-tugas dibawah kendali kapten.

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- 4) Orang ketiga yang harus memegang surat ijin penting selain kapten diatas kapal.
- 5) Terutama pada saat penurunan awak kapal yang memegang surat ijin, kapten harus berhati-hati dalam mengganti anak buah kapal yang baru itu harus dengan yang memiliki surat ijin.
- 6) Kepemilikan surat ijin dimasukan kedalam sebuah log-book radio.

2.6 Tanggung jawab dan wewenang (komite atau Tim)

2.6.1 Komite keselamatan dan kesehatan di atas kapal

- 1) Komite keselamatan dan kesehatan di atas kapal diharapkan dapat dibentuk pada semua kapal dengan kapten sebagai pimpinannya.
- 2) Sistim ditinjau bersama-sama dengan Kapten dan hasilnya akan dilaporkan kepada perusahaan oleh Kapten.
- 3) Komite itu akan berfungsi menurut prosedur yang didokumentasikan dalam "Komite keselamatan dan kesehatan di atas Kapal" (S-022).

2.6.2 Tim tanggap Darurat Dasar di darat (Shore based Emergency Response Team)

- 1) Dalam kejadian tumpahan minyak, luka-luka personil yang serius atau keadaan darurat lain seperti benturan, kebakaran, ledakan, terdampar, kegagalan dalam lambung kapal, atau gangguan mekanik utama yang terjadi di atas kapal sebuah perusahaan perkapalan, maka Tim tanggap darurat harus memobilisasi sesuai dengan prosedur yang didokumentasikan dalam "Prosedur tanggap darurat perusahaan " (O-0801).
- 2) **Manajer Umum Armada** memimpin Tim tanggap darurat dan menerapkan prosedur perencanaan yang mungkin terjadi.
- 3) Anggota dari Tim tanggap darurat memberikan prioritas pada suatu situasi darurat dan menunda semua aktivitas lain yang mungkin bertentangan dengan tugas mereka sebagai anggota Tim tanggap darurat sampai mereka dibebaskan dari fungsi itu oleh **Manajer Umum Armada**.

2.6.3 Tim Audit Internal

Sebuah tim pengawasan intern sebaiknya dibentuk dan akan berfungsi sesuai dengan prosedur yang didokumentasikan dalam manual -11.

2.6.4 Komite Tinjauan Ulang

Sebuah Komite tinjauan ulang sebaiknya dibentuk dan berfungsi sesuai dengan Manual-01.

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2.7 Dokumen referensi

Dokumen-dokumen dibawah ini dapat digunakan untuk melaksanakan aktifitas ini.

Prosedur:

- 1) "Tugas dan tanggung jawab personil darat" (O-0201);
- 2) "Tugas dan tanggung jawab personil Kapal" (S-0201);
- 3) "Komite keselamatan dan kesehatan di atas Kapal" (S-0202);
- 4) "Prosedur Tanggap Darurat Perusahaan" (O-0801);
- 5) "Tim Audit dan Fungsinya" (MANUAL-11)

catatan:

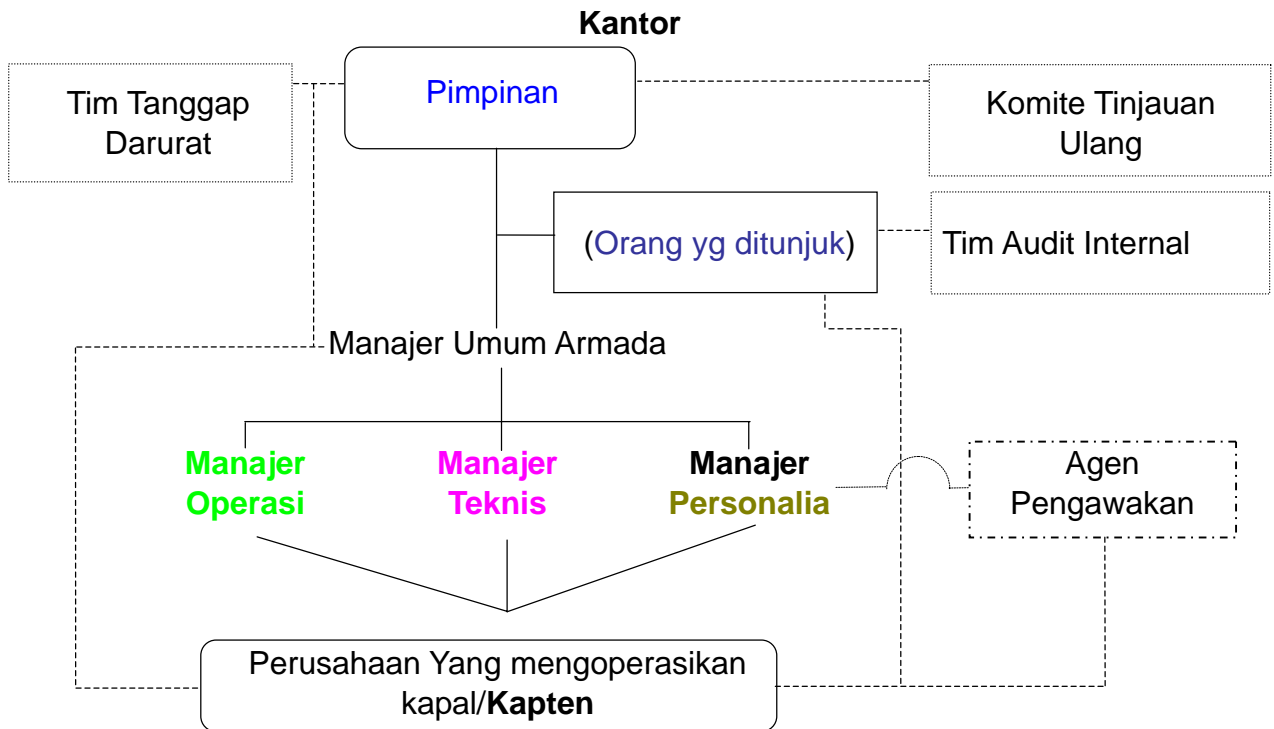
- 1) "Hasil Tinjauan Ulang Kapten" (S-0201-RR)

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2.8 Organogram

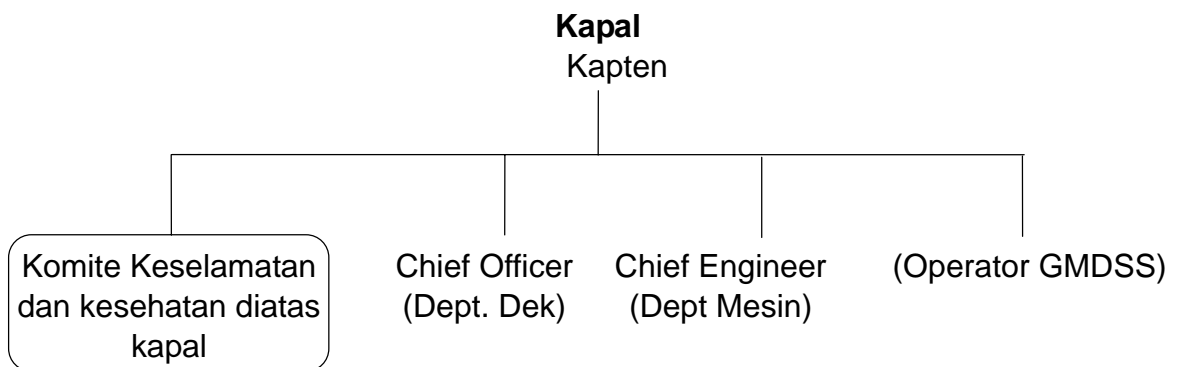
2.8.1 Tabel Organisasi Kantor

Berikut ini Tabel Organisasi yang biasanya menggambarkan hirarki perusahaan.



2.8.2 Tabel Organisasi di atas kapal

Berikut ini Tabel Organisasi yang biasanya menggambarkan hirarki di atas kapal.



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3.1 Sasaran/Tujuan

Untuk memastikan bahwa semua dokumen, yang membentuk bagian dari sistim, telah disiapkan, dikeluarkan, dijaga, dirubah, diperbaiki atau dibatalkan sesuai dengan prosedur yang ditetapkan.

Sistim dan semua dokumentasi yang terkait ditetapkan dalam Bahasa Inggris yaitu suatu bahasa yang cukup dipahami oleh kedua belah personil yang berada di darat maupun di atas kapal untuk memenuhi tugas-tugas mereka.

Meskipun, pada dasarnya dokumentasi acuan dikeluarkan dalam bahasa Jepang.

3.2 Dokumentasi Manajemen Keselamatan

3.2.1 Sistim Dokumentasi terdiri atas :

- 1) Kebijakan Perusahaan (KEBIJAKAN);
- 2) Pedoman Manajemen Keselamatan (MANUAL-000);
- 3) Prosedur Manajemen Keselamatan;
- 4) Catatan Manajemen Keselamatan;
- 5) **Aturan perusahaan, Peraturan dan instruksi yang berlaku;**
- 6) Surat-surat resmi; masalah umum, dll.
- 7) Pedoman dari pabrik Peralatan;
- 8) Gambaran secara Teknis; Perencanaan yang sudah jadi, dll.
- 9) Buku-buku Manajemen;

Hal Ini meliputi semua dokumen yang digunakan dalam pengoperasian sistim dan dimasukkan dalam daftar "Index Buku-buku Manajemen Keselamatan" (OS-0304).

3.2.2 Prioritas Dokumen

Dokumen-dokumen yang terdapat dalam faragraf (1) sampai (4) diatas telah menjadi acuan dalam prioritas pelaksanaannya.

3.3 Penetapan, Revisi dan Pembatalan

Semua departemen bertanggung jawab pada sistim yang dioperasikannya.

Mereka bertanggung jawab terhadap isi dari dokumen dan oleh karena itu diperlukan persiapan, melakukan konfirmasi secara cukup dan kemudian menyediakannya bagi **Orang yang ditunjuk** berdasarkan pernyataan untuk melakukan tindakan selanjutnya.

"Kebutuhan untuk merubah" suatu dokumen yang ada, atau "mengajukan" sebuah dokumen baru akan diidentifikasi melalui proses yang diuraikan dalam Bagian 3.3.

Pada saat identifikasi, usaha penyesuaian harus dibuat oleh Departemen awal untuk merumuskan, merubah dan melaporkannya kepada **orang yang ditunjuk** untuk tindakan lebih lanjut.

Orang yang ditunjuk bertanggung jawab kepada **Pimpinan** untuk mengeluarkan, mengganti dan membatalkan semua dokumentasi. Dia juga bertanggung jawab untuk

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mencetak dokumentasi sesuai kebutuhan.

Orang yang ditunjuk dapat mengawasi tindakan perubahan dalam keadaan yang berikut ini :

- 1) Ketika perubahan telah dibuat terhadap Kebijakan Manajemen Keselamatan atau ketika prosedur/instruksi yang ada berjalan tidak memadai;
- 2) Ketika kekurangan atau kerancuan ditemukan atau dilaporkan dalam dokumentasi yang ada;
- 3) Pada saat konvensi perundang-undangan Nasional maupun Internasional, aturan-aturan atau petunjuk telah diaktifkan, dirubah, digantikan atau dibatalkan;
- 4) Pada saat menganalisa kejadian, mengalami gangguan atau kekurangan pada beberapa kapal atau kinerjanya yang menentukan bahwa perubahan itu penting untuk pengadaan dokumentasi;
- 5) Ketika ketidaksesuaian dalam sebuah audit internal telah menandakan kekurangan didalam dokumentasi;

Prosedur pengendalian pengeluaran dan perubahan terhadap dokumentasi.

3.4 Pembuatan Dokumentasi

- 1) **Orang yang ditunjuk** akan menginstruksikan berbagai manajer departemen untuk menyiapkan dokumentasi yang relevan dan tepat sesuai dengan prosedur kepatuhan bagi manajer Perusahaan.
- 2) Seseorang diinstruksikan untuk menyiapkan draft dokumen asli yang akan disampaikan kepada **Manajer Umum Armada** yang isinya akan didiskusikan dengan manajer departemen lain dan oleh mereka, disetujui beberapa perubahan penting. Hal ini akan disampaikan kepada **Orang yang ditunjuk**
- 3) **Orang yang ditunjuk** akan memverifikasikan dan menyetujui draft akhir yang akan menjadi efektif/berlaku setelah Pimpinan atau dirinya menyetujui hal itu.

3.5 Tinjauan Ulang tahunan pada Pedoman SMS

- 1) **Pimpinan** dan **orang yang ditunjuk** akan meninjau ulang Pedoman SMS secara berkala, pada interval sekurang-kurangnya sekali setahun dan mengevaluasi efisiensi atau pada saat diperlukan melakukan pertimbangan-pertimbangan yang diuraikan dalam bagian 3.3.
- 2) **Orang yang ditunjuk** akan mencatat hasil tinjauan ulang, perubahan, pembatalan dalam "Catatan Revisi" (O-0301-RR) dan kemudian mencatat penempatannya dalam "Laporan Penambahan/Revisi/Pembatalan" (O-0301-PC).

3.6 Pengendalian Dokumentasi di dalam kantor

Semua dokumentasi yang mencakup sub bagian ini akan dijaga oleh seseorang yang bertanggung jawab yang ditandai dalam catatan tambahan pada "Catatan dokumen Manajemen Keselamatan" (OS-0302) dan dalam "Daftar Distribusi" (O-0301-LD).

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Seseorang bertanggung jawab untuk mengkoordinir penetapan, pembatalan dan perubahan pada dokumen dibawah kendalinya, dan akan mempertahankan semua naskah asli dan naskah induk dalam waktu sekurang-kurangnya 5 tahun.

3.6.1 Petugas Distribusi (Manajer Operasi)

Petugas Distribusi (Manajer Operasi) akan bertanggung jawab kepada Orang yang ditunjuk untuk :

- 1) Membagikan dokumen kepada orang yang tepat (pemegang dokumen) sesuai dengan "Prosedur pengendalian dokumen" (O-0301);
- 2) Menjaga salinan dokumentasi induk dalam keadaan dan kondisi yang baik;
- 3) Menempatkan dokumen yang digantikan dengan amandemen yang diterima secepat mungkin dan mencatat perubahannya secara tepat;
- 4) Memeriksa semua dokumen dibawah pengawasannya sedikitnya sekali setahun untuk memferifikasikan kecocokan penggunaannya dan melaporkan keadaan ini kepada Orang yang ditunjuk.

3.7 Pengendalian Dokumentasi diatas kapal

3.7.1 Sistim dokumentasi terdiri atas:

Pemeliharaan dan manajemen dokumentasi di atas kapal, yang akan disesuaikan dengan prosedur yang diuraikan dalam "Prosedur Pengendaian Dokumen Kapal" (S-0301).

3.7.2 Pemeliharaan Catatan Manajemen di atas Kapal

Semua Catatan dijaga di atas kapal, yang berhubungan dengan pengoperasian kapal dan personilnya yang tersusun dalam "Index catatan Manajemen Keselamatan" (OS-0303).

3.8 Pemeliharaan Dokumen diatas Kapal

- 1) Orang yang ditunjuk memberitahu Kapten kapal mengenai periode penyimpanan sesuai daftar "Index Catatan Manajemen Keselamatan" (OS-0303) dan sesuai penjelasan pada setiap dokumentasi yang akan disimpan diatas kapal.
- 2) Hal ini sesuai ketentuan hukum untuk penyimpanan dokumen.
- 3) Periode penyimpanan dokumen untuk tiap dokumen yang dipegang, ditunjukkan dalam "Prosedur Pengendalian Dokumen di atas Kapal" (S-0301).
- 4) Kapten atau orang yang ditunjuknya bertanggung jawab untuk menyimpan secara aman, memelihara dan memperbaharui dokumentasi kapal. Dan Nama-nama orang yang dibagikan dokumen ini akan di catat/didata.
- 5) Dokumen yang dibatalkan akan dimusnahkan atau ketika diperintahkan, untuk kembali ke dokumen utama yang ditunjuk (Lihat "Catatan Dokumen Manajemen Keselamatan" (OS-0302).).

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- 6) Dokumentasi sistim akan dipegang oleh Kapten sesuai daftar dalam “Index Catatan Manajemen Keselamatan” (OS-0303) dengan referensi “Catatan Dokumen Manajemen Keselamatan” (OS-0302).
- 7) Atas kebijaksanaan dari Kapten beberapa dokumen baru atau yang dirubah mungkin menjadi pokok persoalan yang harus diperhatikan oleh para officer. Hal pendistribusian akan dicatat dalam “Buku Besar Pengeluaran dokumen Kapal “(S-0301-LI).

3.9 Tinjauan Ulang

Setiap tahun Kapten akan menegaskan bahwa pedoman Sistim dan dokumentasi yang terkait telah sesuai, Dokumen yang digunakan itu sah dan bila diperlukan beberapa tindakan, maka diberitahukan kepada **Orang yang ditunjuk** mengenai rinciannya secara tepat.

3.10 Kerahasiaan

3.10.1 Semua Personil

Pimpinan akan mengeluarkan petunjuk-petunjuk kepada semua personel didarat dan yang berlayar di atas kapal, melarang mereka untuk menunjukkan dokumen perusahaan kepada orang ketiga tanpa alasan yang tepat.

Mereka tidak boleh meminjamkan, menyalin, atau mengakses dokumen perusahaan tanpa ijin yang sah.

“**RAHASIA PERUSAHAAN**” ditandai merah pada jilid dokumen yang berisi kebijakan perusahaan.

Semua personil perusahaan diharapkan dapat mempertahankan ketetapan kerahasiaan ini.

Ketika dokumen seperti itu dikeluarkan kepada orang luar, ijinnya diharapkan dapat diperoleh dari **Orang yang ditunjuk**, dan dokumennya harus dikuasakan “UNCONTROLLED”.

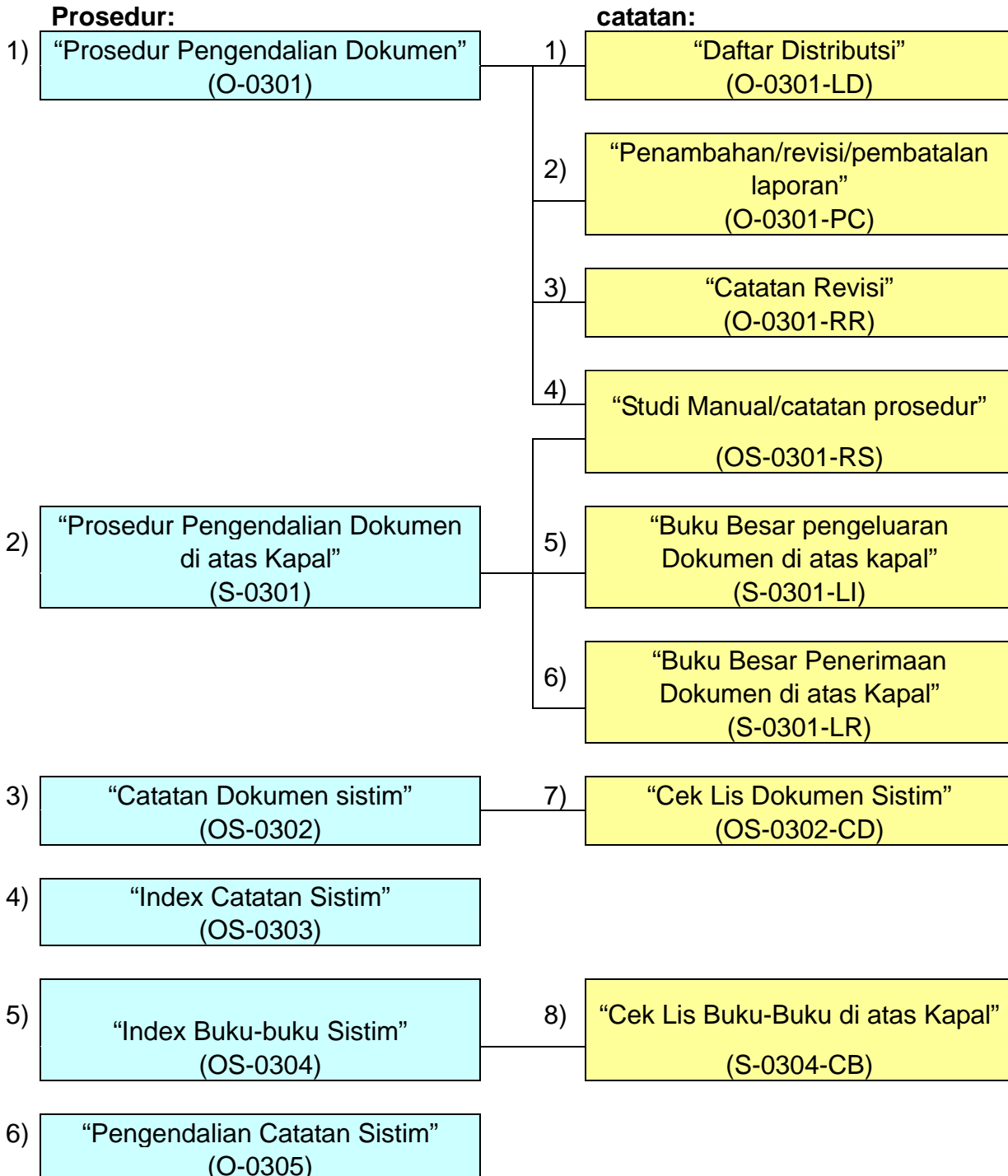
3.10.2 Dokumen Kapal dalam penyelesaian Carter /Penjualan

Pada saat akhir suatu Bareboat atau lamanya waktu Carter, atau dalam penjualan kapal, Kapten memastikan bahwa semua dokumen sistim manajemen perusahaan dipindahkan dari kapal dan dikembalikan ke kantor pusat.

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3.11 Dokumen Referensi

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4.1 Sasaran/Tujuan

Untuk memastikan bahwa kebijakan yang ditetapkan oleh perusahaan mengenai masalah tenaga kerja diatas kapal melalui Kontraktor pengawakan, telah diikuti.

4.2 Ruang Lingkup

Prosedur ini berlaku bagi semua penerimaan pegawai, untuk kapal yang dimiliki sendiri dan kapal lain yang diatur oleh perusahaan.

4.3 Prosedur

Manager Personalia menerima tanggung jawab mengenai masalah tenaga-kerja untuk semua personil kapal.

4.3.1 Personil yang disediakan oleh para agen Pengawakan.

Semua masalah yang berhubungan dengan tenaga kerja sub-kontraktor personil kapal, akan disesuaikan menurut bagiannya secara tepat pada “Kondisi Tenaga Kerja Awak kapal” (O-0401). Masalah ini akan meliputi hal-hal dibawah ini, tetapi tidak terbatas pada hal tersebut yaitu :

- 1) Gaji, Ongkos perjalanan pulang dan pergi ke kapal, interval pembayaran;
- 2) Waktu kerja, pemberian liburan;
- 3) Berbagai hal yang berkenaan dengan keselamatan dan kesehatan;
- 4) Pensiun, Asuransi dan Union subscriptions/pembayaran serikat kerja.
- 5) Pengenalan terhadap SMS Perusahaan secara tepat pada jabatannya bagi anggota yang bergabung.

Kecuali dalam keadaan yang luar biasa, tenaga kerja dalam beberapa kapal akan diatur melalui persetujuan dari Agen Pengawakan.

4.3.2 Ketenaga kerjaan Langsung

Beberapa Personil kapal secara langsung direkrut oleh perusahaan yang akan dipekerjakan sesuai dengan bagiannya yang ditetapkan pada “Kondisi Tenaga Kerja awak kapal” (O-0401).

4.4 Syarat-syarat ketenaga-kerjaan

Semua personil kapal akan dipekerjakan berdasarkan bentuk perjanjian yang disetujui oleh pendaftaran bendera kapal pada kapal tertentu.

Semua Officer akan dipekerjakan menurut bentuk standart kontrak yang telah disetujui antara kontraktor pengawakan dan perusahaan.

Sebagai tambahan, semua anak buah kapal akan dipekerjakan menurut perjanjian yang telah diterima oleh serikat kerja mereka.

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4.5 Persetujuan Pengawakan

Pemenuhan persetujuan antara perusahaan dan kontraktor pengawakan secara konstan akan dimonitor oleh perusahaan sesuai dengan “Kondisi Pengawakan” (O-0402) dan beberapa hal dari itu akan menjadi perhatian bagi kontraktor secepatnya.

Bantuan akan disediakan untuk kontraktor pengawakan (ketika diminta) untuk memenuhi syarat-syarat Persetujuan.

Persetujuan akan ditinjau ulang tiap tahun dan diamandemen sesuai kebutuhan. Tinjauan ulang meliputi aspek berikut ini tetapi tidak terbatas pada aspek tersebut dan hasilnya akan dicatat dalam “Catatan Evaluasi Agen Pengawakan/manning Agency Evaluation Record” (O-0402-RE):

- a) **Kemampuan Manajemen –**
Akan menganalisa kinerja tahun sebelumnya dengan hal yang seharusnya diberikan kepada sejumlah pekerja dan pertukaran pegawai yang telah dipekerjakan dikapal-kapal.
- b) **Kemampuan jaminan mutu –**
Yang akan menilai prosedur mutu agar sesuai dalam sistim agen pengawakan;
- c) **Layanan Manajemen –**
Yang akan menilai dan meninjau ulang kemampuan kantor dan komunikasi dari Agen;
- d) **Sistim Pelatihan –**
Yang akan menilai sistim, bahwa sistim telah sesuai untuk melatih personil yang berlayar di laut agar dapat memenuhi persyaratan dan sistim yang dimiliki perusahaan.

4.6 Pemilihan Personil Diatas Kapal

Personil kapal melakukan perjanjian yang akan disetujui antara kontraktor pengawakan dengan perusahaan

Rincian mengenai semua personil kapal yang dijadwalkan akan bergabung diatas kapal sebuah perusahaan, akan disediakan oleh kontraktor pengawakan bersama dengan “Cek Lis Tenaga Kerja Pelaut/Seafarers Employment Check List “(O-0401-CE) kepada Perusahaan agar dapat disetujui sebelum pertemuan mereka.

Perusahaan akan memastikan bahwa kontraktor pengawakan menyediakan personilnya yang berkualitas secara penuh untuk mengawaki kapalnya.

Rincian prosedur ini telah tercakup dalam Perjanjian Pengawakan antara perusahaan dan Kontraktor pengawakan.

Perusahaan mempunyai hak untuk menolak perjanjian, atau meminta pembatalan bagi, beberapa Officer atau anak buah kapal untuk beberapa kapal.

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4.7 Kinerja atau Perilaku yang kurang memuaskan

Ketika seorang anak buah kapal tidak mampu melaksanakan tugas, yang telah ia janjikan, atau mempunyai perilaku yang tidak memuaskan, Kapten akan mengambil prosedur-prosedur :

- 1) Kapten, bersama-sama dengan kepala departemen yang berhubungan dengan itu, akan menyelidiki permasalahan dan menyampaikan suatu laporan kepada **Manajer Personalia** yang ditandatangani oleh dirinya dan Kepala departemen.
- 2) Laporan ini juga harus berisi beberapa pernyataan yang dibuat oleh orang yang berpengaruh.
- 3) **Manajer Personalia** akan menyampaikan laporan berikut dengan penjelasannya kepada kontraktor Pengawakan. Masalah ini kemudian akan dibahas oleh perwakilan perusahaan dan kontraktor pengawakan setelah kesimpulan ditetapkan dan diambil tindakan yang tepat.
- 4) **Manajer Personalia** akan mencatat hasil penyelidikan dalam "Catatan Penilaian Officers/Officer Assesment Record" (OS-0403-RO) dan pada "Catatan Penilaian Awak Kapal/Crew Assesment Record" (OS-0403-RC).
- 5) Masalah ini akan dipertimbangkan secara seksama ketika kontrak dengan Agen Pengawakan telah tiba waktunya untuk perpanjangan.

4.8 Pemilihan Personil

Manajer Personalia akan memastikan bahwa kapal diawaki dengan baik dan sesuai dengan skala keselamatan pengawakan nasional dengan mempertimbangkan catatan evaluasi kinerja personil dimasa lalu.

Ia akan memastikan bahwa agen pengawakan telah menyediakan personil yang :

- 1) Memiliki Ijazah yang tepat dan berkualitas;
- 2) Mempunyai pengalaman berlayar yang cukup di dalam Klas kapal yang mereka miliki;
- 3) Telah lulus sebuah ujian kesehatan yang terbaru;
- 4) Pandai dalam berbahasa Inggris sesuai dengan posisinya/rank.

Keutamaan, Kapten adalah :

- 1) Memenuhi syarat secara tepat untuk memerintah;
Hal ini diharapkan dapat dibuktikan oleh Manajer Personalia sebelum menugaskannya dengan referensi sebagai berikut :
 - a) Sertifikat & Licenses of competency (kebenaran dan keasliannya) dengan mempertimbangkan bendera kapal, GT, karakteristik, bentuk muatan, dll, Termasuk STCW yang dibutuhkan;
 - b) Pengalaman berlayar sebelumnya;
 - c) Data kinerja yang lalu, juga dari perusahaan lainnya, bila ada.
- 2) Secara penuh mengenal SMS Perusahaan;

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Latihan pada saat pertemuan pendahuluan atau pengarahan singkat bagi Kapten dan Chief Engineer harus dilaksanakan termasuk SMS perusahaan di kantor pusat perusahaan melalui kerjasama dari para Manajer perusahaan atau dengan cara lain, yang hasilnya kemudian akan dicatat.

3) Memberikan dukungan penting agar tugas-tugas Kapten dapat dilakukan secara aman.

Perusahaan memastikan bahwa dukungan diberikan kepada kapten agar dia dapat menyelesaikan tugasnya dengan tepat sebagaimana ditetapkan dalam sistim.

: Yang diperlukan.

4.9 Penilaian Personil

Menurut suatu prosedur “Petunjuk Penilaian Awak Kapa/Crew Assesment Guidelines” (OS-0403), Perusahaan akan mengakses kinerja semua personil kapal diatas kapal, termasuk Kapten.

Perusahaan akan membutuhkan penilaian dari Kapten secara teratur yang ditujukan bagi Officer dan anak buah kapal yang berlayar di atas kapal.

Dan Perusahaan akan mengakses penilaian ini, dan hasilnya digunakan untuk memonitor kinerja para personil itu.

Hanya Penilaian terhadap Kapten yang akan dilaksanakan oleh Manajer Personalia dan Manajer departmen lain.

4.10 Pemeriksaan Kesehatan

Adalah kebijakan perusahaan bahwa semua anggota Awak Kapal harus menjalani suatu pemeriksaan kesehatan tahunan.

Pada akhirnya, diperlukan kontraktor pengawakan yang akan mengurus pemeriksaan kesehatan untuk semua pelaut yang berlayar dikapal perusahaan, pada jarak waktu yang tidak melebihi setiap pereode waktu sebelumnya.

Rincian ini termuat dalam Perjanjian Pengawakan antara perusahaan dengan kontraktor pengawakan.

4.11 Daftar Awak kapal

Daftar awak kapal terbaru, menunjukan semua orang yang bertugas diatas kapal yang sedang berlayar dari suatu pelabuhan, yang akan diatur pada masing-masing kapal di dalam perusahaan.

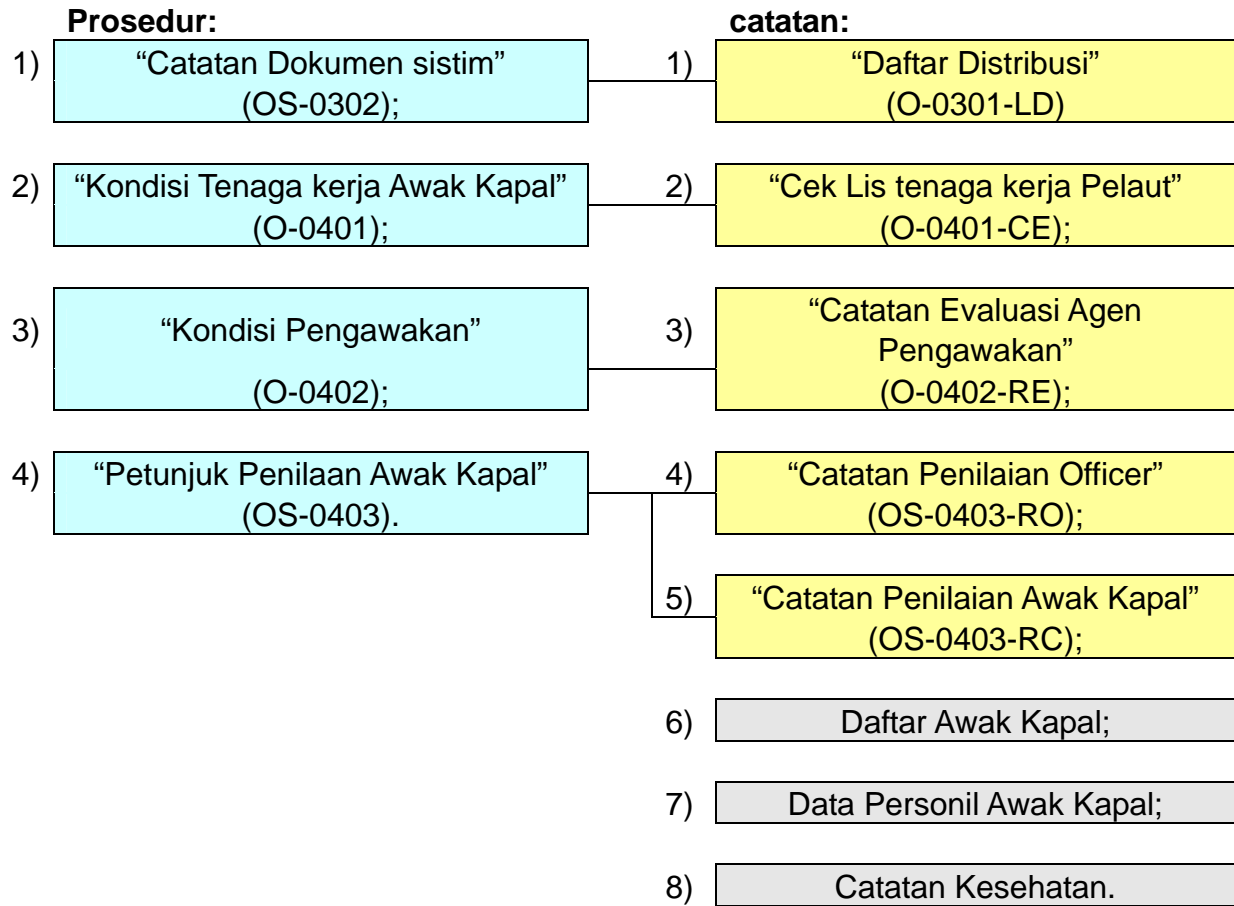
4.12 Data Personil

Manajer Personalia bertanggung jawab terhadap semua awak kapal dan aspek-aspek yang berhubungan dengan personil kapal.

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4.13 Dokumen Referensi

Dokumen yang berikut ini akan digunakan untuk menyelesaikan aktivitas ini.



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5.1 Sasaran/Tujuan

Untuk menguraikan secara singkat instruksi yang telah dibentuk untuk memastikan bahwa kapal yang dioperasikan oleh perusahaan telah menjalankan navigasi, melaksanakan operasi muatan, dan atau memindahkan minyak dan material lain yang berbahaya bila ada, secara aman, yang tidak menyebabkan polusi lingkungan. Perusahaan mencari cara untuk menyediakan suatu lingkungan kerja yang aman bagi semua personil, untuk memastikan suatu metode yang efisien dan aman untuk mengangkut barang-barang serta memastikan bahwa operasinya jangan sampai menimbulkan bahaya yang tidak perlu terhadap orang lain, tempat-tempat atau terhadap suatu benda/barang.

5.2 Ruang Lingkup Aplikasi

Instruksi ini berlaku bagi semua prosedur operasional yang dijalankan diatas kapal-kapal yang dioperasikan oleh perusahaan.

5.3 Prosedur Operasional

Semua prosedur operasional yang dijelaskan dalam Bab ini, terperinci dalam "Prosedur Operasional di atas Kapal/Shipboard Operation Procedures" (S-0501 W,P,D)

5.4 Tanggung Jawab dan Wewenang

Tugas-tugas, tanggung jawab dan wewenang yang berhubungan dengan semua personil diatas kapal terperinci dalam "Struktur Organisasi Manajemen di Darat dan di Atas Kapal/Management Organisation Structure Ashore and on the ship" (MANUAL -02) serta Tugas-tugas dan tanggung jawab personil Awak Kapal/Duties and Responsibilities of Shipboard Personnel" (S-0201).

5.5 Navigasi di Laut dan di Pelabuhan

Perusahaan telah mengembangkan prosedur yang berikut ini agar dapat dipatuhi, di Pelabuhan atau di Laut:

- 1) Perencanaan Pelayaran;
- 2) Navigasi di alur sempit dan di perairan yang ramai/padat;
- 3) Navigasi dalam penglihatan terbatas;
- 4) Navigasi dalam cuaca yang buruk;
- 5) Latihan pemeliharaan dan manoeuvring;
- 6) Posisi Pengaturan pada waktu yang ditetapkan;
- 7) Pemanduan Kapal;
- 8) Relieving; relinquishing and Penjagaan;
- 9) Peraturan Tetap;
- 10) Pengoperasian peralatan navigasi;

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- 11) Koreksi Tabel/peta;
- 12) Karakteristik Manoeuvring ;
- 13) Organisasi Anjungan; dan
- 14) Pelayaran di daerah dingin.

Semua prosedur pelayaran akan dilaksanakan menurut instruksi yang diuraikan dibawah ini.

5.5.1 Persiapan Meninggalkan Pelabuhan

- 1) Kapten akan menerapkan instruksi terperinci dalam “Prosedur Operasi Kapal/Shipboard Operation Procedure” (S-0501 W.P.D).
- 2) Personil Kapal akan mengikuti perintah Kapten yang terperinci dalam “Prosedur Operasi Kapal/Shipboard Operation Procedures” (S-0501 W.P.D).

5.5.2 Persiapan Kedatangan di Pelabuhan

- 1) Kapten akan menginstruksikan personil kapal untuk memulai persiapan sebelum kedatangan sedikitnya dua hari sebelum kedatangan di pelabuhan terdekat. Instruksi ini terperinci dalam “Prosedur Operasi Kapal/Shipboard Operation Procedures” (S-0501 W.P.D).
- 2) Pada saat terjadi kekurangan atau ketidaksesuaian yang timbul, tindakan yang akan diambil yaitu mengoreksi kerusakan sebelum kedatangan di pelabuhan.
- 3) Jika hal ini tidak memungkinkan, maka Kapten memberi tahu Agen tentang segala kecacatan/kerusakan yang dapat mempengaruhi efisiensi navigasi kapal, juga melaporkan hal itu kepada perusahaan.
Ia akan meminta beberapa dukungan dari darat yang mungkin diperlukan
- 4) Second Officer akan memeriksa kondisi dari semua peralatan navigasi dan mengkonfirmasi bahwa semua Publikasi Navigasi telah diperbaharui sebelum kedatangan dan melaporkannya kepada Kapten yang terperinci dalam “Prosedur Operasi Kapal/Shipboard Operation Procedures” (S-0501 W.P.D).
- 5) Chief Engineer akan memeriksa kondisi dari semua Propulsi dan peralatan Aux. sebelum kedatangan dan melaporkannya kepada Kapten yang terperinci dalam “Prosedur Operasi Kapal/Shipboard Operation Procedures” (S-0501 W.P.D).

5.5.3 Memasuki dan meninggalkan Pelabuhan

Ketika semua pengecekan telah dijalankan sesuai dengan manual 5.5.1 dan 5.5.2 diatas, Kapten akan memberi perintah untuk memulai prosedur kedatangan atau keberangkatan sesuai ketetapan dan sesuai rincian dalam “Prosedur Operasi Kapal/Shipboard Operation Procedures” (S-0501 W, P, D).

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5.5.4 Penjagaan di Laut

- 1) Setelah kapal berada di pelabuhan, operasi kapal disesuaikan dengan kebutuhan pada saat itu, Kapten mengakhiri prosedur pelayaran dan menata penjagaan perjalanan laut. Instruksi terperinci dalam “Prosedur Operasi Kapal/Shipboard Operation Procedures” (S-0501 W, P, D).
- 2) Kapten akan selalu mengatur penjagaan anjungan sedemikian rupa sehingga komposisi penjagaan akan terus menerus sesuai dan tepat pada keadaan dan kondisi yang umum. Dia juga akan memastikan bahwa penjagaan engineering telah di atur menurut instruksi Chief Engineer.
- 3) Kapten akan memastikan bahwa salinan dari semua komunikasi dan perintah yang berhubungan dengan lintasan perjalanan kapal secara aman dan manouvernnya telah disimpan dalam file.
- 4) Penggunaan radio VHF akan disesuaikan dengan instruksi untuk “Prosedur Komunikasi Radio/Radio Communication Procedures” (S-0505).

5.5.5 Penjagaan di Pelabuhan

- 1) Setelah kedatangan di pelabuhan, penjagaan akan di atur menurut “Prosedur Operasi Kapal-Prosedur Penjagaan” (S-0501 P0).
- 2) Officer yang berjaga atau Officer yang berwenang akan mematuhi ketetapan dari “Prosedur Operasi Kapal-Prosedur Penjagaan” (S-0501 P) yang behubungan dengan pemeliharaan catatan dan penyelesaian pembukuan Log Book.
- 3) Semua komunikasi dengan otoritas di darat mencakup kantor Syahbandar akan di data dalam “Buku catatan Komunikasi Darat” yang dimiliki kapal.

5.6 Operasi Muatan/Cargo

Perusahaan telah mendokumentasikan prosedur muatan “Prosedur Penanganan Muatan Kapal” (S-0503) berdasarkan pada petunjuk industri dan praktek industri yang telah dibuat.

Yang meliputi hal-hal sebagai berikut :

- 1) Operasi sebelum muat, Cek keselamatan dan peralatan;
- 2) Tugas-tugas Watch keeping;
- 3) Prosedur Darurat;
- 4) Tangki dan persiapan penanganannya;
- 5) Pemuatan, pembongkaran dan operasi pemindahan;
- 6) Rencana pemeliharaan muatan dan Pengembangannya;
- 7) Ballasting;
- 8) Penanganan dan penyimpanan muatan rutin;
- 9) Penanganan muatan khusus (termasuk muatan yang didinginkan);
- 10) Mengontrol tumpahan minyak dan material yang berbahaya;

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11) Pengendalian kerugian.

5.7 Pengoperasian Engine Room

Perusahaan harus mengembangkan prosedur yang berikut untuk personil kamar mesin agar dipatuhi di dalam pelabuhan atau di laut.

Semua itu didokumentasikan dan terdapat dalam “Prosedur Operasi Kapal” (S-0501 W, P, D).

- 1) Watchkeeping;
- 2) Operasi Mesin Induk;
- 3) Operasi Auxiliary plant ;
- 4) Manoeuvring;
- 5) Transfer Minyak Bahan bakar dan perawatannya.

5.8 Penanganan Muatan

Semua operasi penanganan muatan di atas kapal dapat dikerjakan menurut “Prosedur Penanganan Muatan Kapal” (S-0503).

Chief Officer bertanggung jawab kepada Kapten untuk semua masalah mengenai muatan, ruang muatan, cargo gear dan operasi muatan.

Meliputi hal dibawah ini, tetapi tidak terbatas pada hal tersebut yaitu :

- 1) Pelatihan dan pengawasan terhadap semua personil yang terlibat dalam beberapa tugas yang berhubungan dengan beberapa aspek muatan;
- 2) Mempersiapkan semua ruang muatan;
- 3) Merencanakan muatan dan mengkalkulasi penyimpanan barang;
- 4) Menjaga stabilitas dan mengkalkulasi tekanan serta memastikan muatan tidak melebihi parameter yang aman;
- 5) Mengawasi operasi muatan dan personil kapal maupun darat yang terlibat dalam pekerjaan muatan;
- 6) Menyediakan instruksi tertulis untuk Officer Dek yang jaga yang berhubungan dengan operasi muatan;
- 7) Mempersiapkan dan memelihara semua catatan muatan;
- 8) Melaksanakan semua tindakan pencegahan yang penting terhadap keselamatan dan peraturan yang berhubungan;
- 9) Melaksanakan semua tindakan pencegahan polusi yang relevan;
- 10) Memastikan bahwa semua muatan dikerjakan dan dimuat dengan baik serta Mencegah kerusakan dan pencemaran dengan berbagai cara;
- 11) Memastikan bahwa muatan diatur berdasarkan kondisi yang benar sepanjang perjalanan;
- 12) Memastikan bahwa muatan dapat dibuang kelaut (jika diharuskan) dalam keadaan darurat; menilai beberapa kerusakan pada muatan dan membuat suatu laporan menyeluruh mengenai penyebab di atas;
- 13) Menilai dan melaporkan kerusakan yang disebabkan oleh buruh pelabuhan dan mengambil tindakan penting secara tepat;
- 14) Mencegah pencurian muatan.

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5.9 Operasi dalam keadaan khusus

Prosedur operasi untuk menangani keadaan khusus terperinci dalam “Operasi khusus Kapal”(S-0502) & “Prosedur Keamanan dan format Laporan” (S-0502 catatan tambahan).

5.9.1 Navigasi dalam keadaan Bahaya

- 1) Navigasi dalam jarak penglihatan terbatas (kurang dari 3 miles nautika);
- 2) Officer yang bertanggung jawab dalam penjagaan navigasi menerapkan instruksi yang terperinci dalam “Operasi khusus Kapal” (S-0502) secepat mungkin agar keadaan itu dapat diketahui dengan jelas bahwa jarak penglihatan sedang memburuk atau mulai memburuk. Kapten akan mengambil langkah-langkah apapun dan ia mempertimbangkan hal penting untuk tindakan tambahan yang dilakukan oleh Officer dalam penjagaan.
- 3) Navigasi dalam cuaca buruk (Angin dalam kecepatan pada skala Beaufort berkekuatan 6 (22-28 knots) dan Ombak yang lebih tinggi dari 4 Skala Ombak);
- 4) Officer yang bertanggung jawab pada penjagaan navigasi menghubungi Kapten secepat mungkin mengenai buruknya cuaca dan menerapkan instruksi yang terperinci dalam “Operasi Khusus Kapal” (S-0502).
- 5) Navigasi pada Alur sempit atau perairan ramai/padat.
- 6) Officer yang bertugas dalam penjagaan Navigasi menghubungi Kapten sedikitnya 30 menit sebelum kedatangan kapal di titik pusat dimana perhatian navigasi perlu ditingkatkan, kecuali jika Kapten memberi perintah khusus untuk memanggil lebih awal. Instruksi sepenuhnya terperinci dalam “Operasi Khusus Kapal” (S-0502).
- 7) Lain-lain
 - a) Memastikan integritas watertight;
 - b) Keselamatan Navigasi mencakup koreksi tabel/peta dan publikasi nautika;
 - c) Operasi Pengisian bahan bakar dan pemindahan minyak di pelabuhan;
 - d) Menjaga Stabilitas Informasi;
 - e) Mengontrol/mengendalikan anjungan;
 - f) Menjaga Keamanan Kapal;
 - g) Mengambil tindakan penting sesuai dengan instruksi yang terperinci dalam “Prosedur Keamanan dan Format Laporan” (S-0502 catatan tambahan). Termasuk Kejadian dibawah ini :
 - i.) Adanya penumpang gelap/refugees
 - ii.) Perampokan/pembajakan
 - iii.) Penahanan/penangkapan.
 - iv.) Situasi peperangan lokal

Penjagaan Anjungan, Engine Room dan radio akan dilakukan menurut instruksi yang

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terperinci dalam “Operasi Khusus Kapal” (S-0502).

Persyaratan jaga tambahan ini akan diatur sampai Kapten memutuskan bahwa keadaan tidak lagi memerlukan prosedur penjagaan tambahan.

Memasukan apa-apa yang telah dibuat ke dalam Log Book Dek, Log Engine Room pada saat keadaan membutuhkan prosedur operasi khusus diatas kapal harus dijalankan atau diperlonggar.

5.9.1.2 Operasi Pengisian Bahan Bakar Minyak di dalam Pelabuhan dan Pemindahan minyak

Ketika mengisi atau menguras minyak bahan bakar atau minyak pelumas, prosedur akan dilaksanakan atas dasar perintah dari Chief Engineer yang terperinci dalam “Prosedur untuk Pengisian/Pemindahan Minyak” (S-0603) dan juga sesuai dengan prosedur yang diuraikan dalam Perencanaan penanganan Polusi Minyak di atas Kapal (Shipboard Oil Pollution Plan-SOPEP).

5.9.1.3 Koreksi Tabel/peta dan Publikasi Nautika

Kapten akan memferifikasi dan mengkonfirmasi bahwa table/peta telah dikoreksi atau dijaga dengan baik sebelum keberangkatan kapal.

- 1) Perusahaan bertanggung jawab untuk mendapatkan semua informasi penting untuk operasi kapal, seperti pemberitahuan kepada Pelaut, dan dengan segera mentransfer informasi ke kapal yang dioperasikan oleh perusahaan.
- 2) Second Officer bertanggung jawab kepada Kapten untuk mengoreksi dan menjaga kelengkapan tabel/peta dan pustaka dalam publikasi Nautika kecuali dokumen yang di jaga oleh Third Officer dan Operator Radio.
- 3) Koreksi tabel/peta akan dicatat di bagian kiri bawah pada table/peta dan dalam “Laporan Koreksi Tabel/Peta Nautika” (S-0701-PC).
- 4) Hasil koreksi diharapkan dapat diberikan kepada Kapten untuk ferifikasi dan ditanda tangani.
- 5) Kapten akan memferifikasikan hasil koreksi itu yang telah diterapkan dan ditanda-tangani

5.10 Pergantian Awak Kapal

Sejak Awak Kapal bergabung di atas kapal, maka mereka akan melaporkan kedatangannya kepada Kapten dengan segera. Mengacu pada prosedur yang terperinci dalam “Tugas dan Tanggung jawab Personil Kapal” (S-0201).

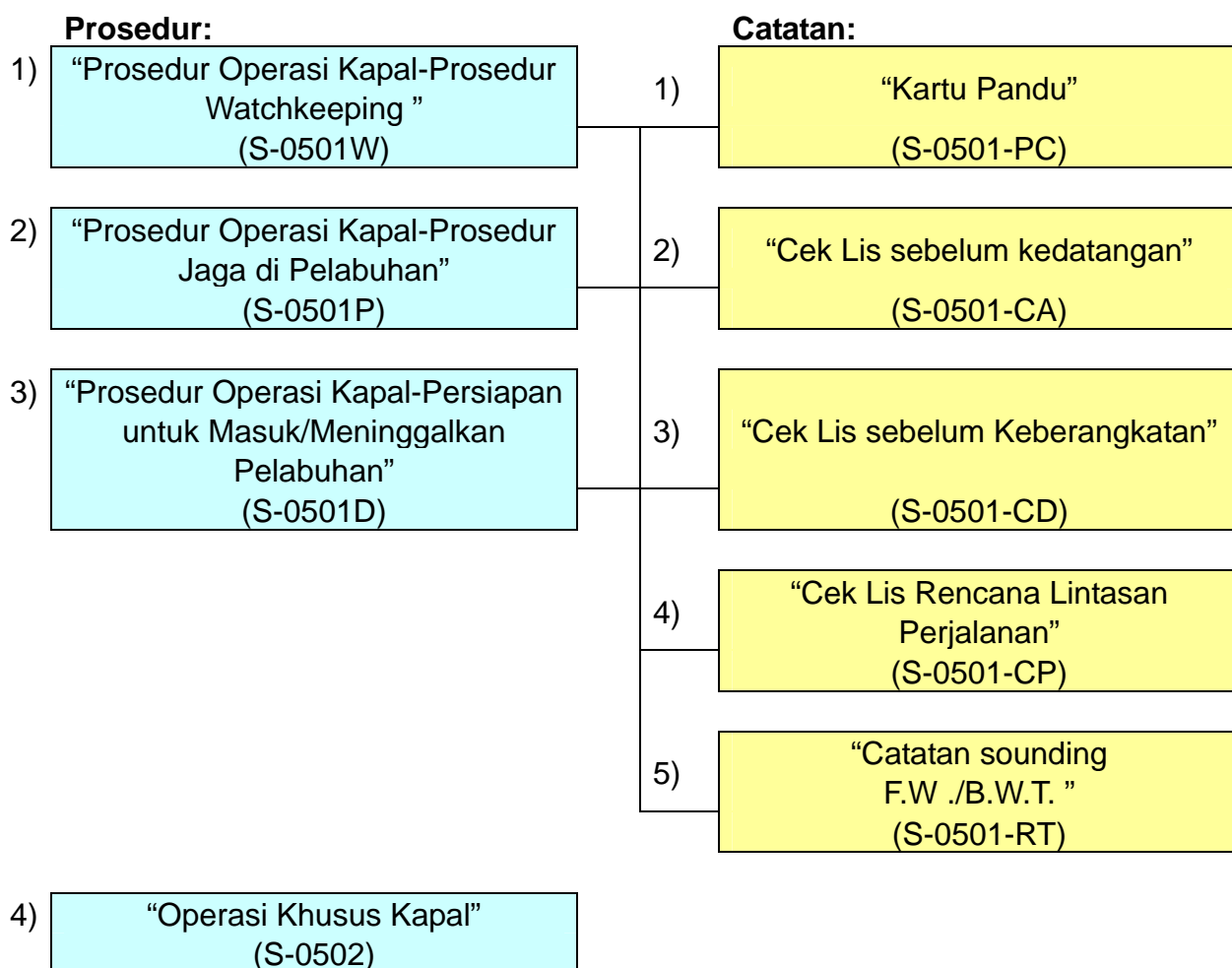
- 1) Pada saat menemui Kapten, Awak kapal yang bergabung akan menyerahkan semua sertifikat asli yang diperlukan, Ijazah dll kepadanya.
- 2) Kapten akan menyerahkan “Cek Lis Familiarisasi” (S-1202-CF) kepada Awak kapal yang bergabung dan meminta untuk mengembalikannya lagi kepadanya setelah diisi secara lengkap.
- 3) Kapten akan memferifikasi dokumen mereka, apakah dokumen itu: Sah, asli, ditanda-tangani oleh Pejabat berwenang, benar, tidak kurang dll.

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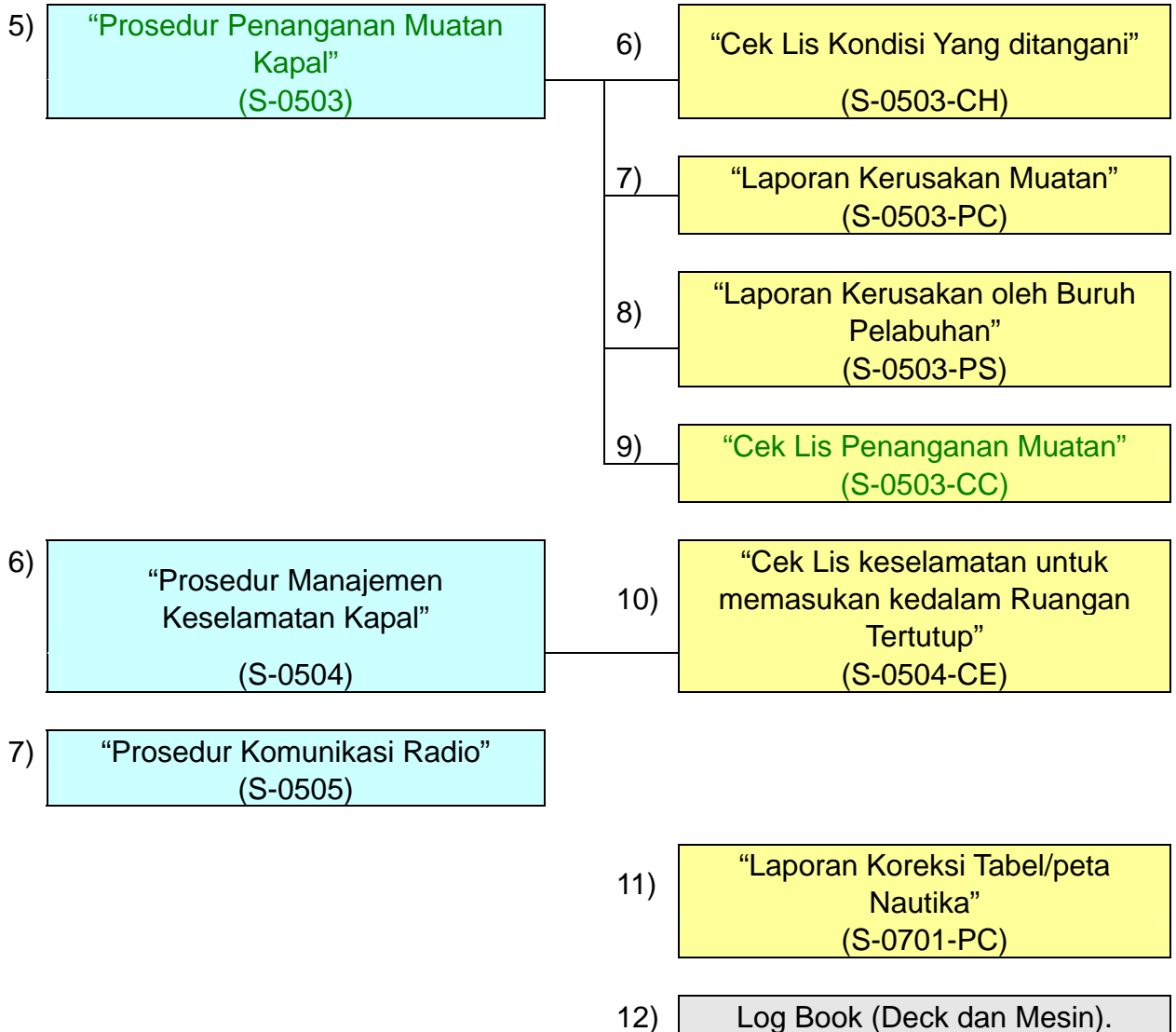
- 4) Awak kapal yang bergabung akan melakukan serah terima tugas dengan Awak kapal yang turun menyangkut tugas-tugas yang dibebankan.
- 5) Setelah melakukan serah terima, Awak kapal akan melaporkannya kepada Kapten, atau jika Kapten tidak ada kepada Officer yang bertugas.
- 6) Awak kapal yang turun akan melaporkan sign off ke Kapten, atau jika Kapten tidak ada kepada Officer yang bertugas, dan melakukan konfirmasi terhadap dokumen miliknya yang dikembalikan dari kapal, kemudian bersiap-siap dengan barang-barang milik pribadinya untuk pulang ke rumah.
- 7) Keadaan apa saja yang tidak memuaskan yang telah ditemukan sebaiknya dilaporkan oleh awak kapal pengganti kepada kapten atau jika Kapten tidak ada kepada Officer yang bertugas.
- 8) Dan bila ada, Kapten akan melaporkan kondisi apa saja yang tidak memuaskan itu yang telah ditemukan ke kantor,

5.11 Dokumen yang disesuaikan

Dokumen berikut ini akan digunakan untuk menyelesaikan aktivitas ini .



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6.1 Sasaran/Tujuan

Untuk menguraikan prosedur agar dapat diterapkan untuk memastikan bahwa tidak terjadi polusi lingkungan yang diakibatkan oleh pengoperasian kapal.

6.2 Ruang Lingkup Aplikasi

Isi dari Bab ini berlaku bagi semua kapal yang dioperasikan oleh perusahaan.

6.3 Perlindungan lingkungan

Semua prosedur operasi yang dilakukan diatas kapal yang dioperasikan oleh perusahaan adalah untuk mematuhi Konvensi Internasional untuk Pencegahan Polusi dari Kapal (MARPOL 73/78), yang mempunyai prioritas diatas prosedur seperti “Prosedur untuk Pencegahan Polusi di Laut” (S-0601).

6.3.1 Tanggung jawab Kapten

Kapten bertanggung jawab untuk mencegah polusi terhadap lingkungan apakah itu disebabkan oleh pembuangan minyak atau unsur berminyak (MARPOL 73/78 lampiran I), Limbah (MARPOL 73/78 lampiran IV), dan Sampah (MARPOL 73/78 lampiran V).

Prosedur ini diuraikan dalam “Prosedur untuk Pencegahan Polusi di Laut” (S-0601) dan Rencana Darurat Polusi Minyak di atas Kapal (SOPEP).

6.3.2 Tanggung jawab Chief Engineer’s

Chief Engineer bertanggung jawab untuk mencegah polusi yang disebabkan oleh pembuangan minyak bahan bakar atau minyak pelumas atau pembuangan sisa minyak dari ruang mesin.

Prosedur ini akan diuraikan dalam “Prosedur untuk pencegahan Polusi di Laut” (S-0601), “Prosedur untuk Mengisi/Memindahkan Minyak” (S-0603) dan Rencana Darurat Polusi Minyak di atas Kapal (SOPEP).

6.3.3 “Prosedur untuk Mencegah Polusi di Laut” (S-0601)

Pedoman ini ditujukan pada berbagai hal berikut ini :

- 1) Pencegahan tumpahan minyak dan air yang berminyak;
- 2) Pembuangan sisa minyak dari ruang mesin;
- 3) Pengolahan minyak atau air berminyak sebelum dibuang kelaut;
- 4) Perawatan atau pembuangan sampah beracun/Noxious;
- 5) Pembuangan Sampah;
- 6) Perawatan dan pembuangan Limbah.

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6.4 Kontrol Pembuangan Minyak

6.4.1 Langkah-langkah

- 1) Kapan saja jika suatu tumpahan minyak terjadi, maka tugas seseorang untuk menemukan tumpahan minyak itu dan dengan segera menginformasikan kepada Kapten atau Officer yang bertanggung jawab.
- 2) Kemudian Tim pencegahan Polusi Minyak dari Kapal akan memobilisasi.
- 3) Prioritas pertama yang harus dicegah adalah penyebaran polusi.
- 4) Dalam rangka mencegah pembuangan minyak kedalam air selama operasi rutin, personil kapal akan mengambil semua kemungkinan tindakan pencegahan yang konsisten dengan operasi manual kapal.
- 5) Pada saat peristiwa terjadi, Kapten akan mengambil semua tindakan yang memungkinkan dalam mencegah atau meminimalisasi pembuangan minyak lebih lanjut dan tindakan pertama adalah menyapu bersih, menyediakan personil dan menyelamatkan kapal tanpa kompromi.
- 6) Personil kapal akan berusaha keras untuk menjaga sumber pembuangan dan mencegah pembuangan minyak keluar kapal.

6.4.2 Oil Station / Sijil Pelatihan tumpahan Minyak

Dalam kejadian tumpahan minyak, personil kapal akan merespon seperti berikut ini :

Kapten mempunyai keseluruhan tugas terhadap semua operasi di atas kapal. Dia akan melaporkan peristiwa sebagaimana yang dibutuhkan.

3rd Officer dalam kelompok komando, untuk membantu kapten, dalam menjaga catatan-catatan dan berkomunikasi dengan transceiver.

2nd Officer dalam kelompok pemindahan minyak, memberi perintah kepada kelompok itu dan berkomunikasi dengan transceiver.

Chief Officer Dalam kelompok mengumpulkan pembuangan minyak, memberi perintah kepada kelompok itu dan berkomunikasi dengan transceiver.

Chief Engineer dalam kelompok mesin, memberi perintah kepada kelompok itu.

Radio Officer Dalam kelompok Komunikasi, untuk berkomunikasi dengan anjungan.

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6.5 Persyaratan Laporan

- 1) Ketika sebuah kapal terlibat dalam suatu peristiwa yang mengakibatkan pembuangan, atau kemungkinan membuang, suatu unsur yang berbahaya atau minyak ke laut, Kapten berkewajiban melaporkan rincian peristiwa, berdasarkan MARPOL 73/78 artikel 8 dan Protokol I, tanpa penundaan, kepada petugas pantai terdekat yang bisa dijangkau oleh saluran telekomunikasi yang tersedia di kapal dengan cara yang paling cepat.
- 2) Seperti berkomunikasi dengan suatu stasiun radio pantai, menerangkan pergerakan kapal ke stasiun penerima atau pusat Koordinasi Regu Penolong (RCC).
- 3) Persyaratan ini dimaksudkan untuk memastikan bahwa penjaga pantai itu diberitahu tanpa menunda informasi tentang segala peristiwa yang menimbulkan polusi atau ancaman polusi terhadap lingkungan laut, seperti halnya kebutuhan akan bantuan dan ukuran penyelamatan, sehingga tindakan yang tepat mungkin dapat diambil.
- 4) Prosedur pelaporan yang akan diikuti oleh Kapten atau orang yang bertanggung jawab terhadap kapal, setelah suatu peristiwa polusi minyak terjadi, didasarkan pada petunjuk yang dikembangkan oleh Organisasi Maritim Internasional (IMO).
- 5) Jika kapal terlibat dalam suatu peristiwa polusi, maka dua laporan harus dibuat yaitu ke penjaga pantai atau kontak pelabuhan yang tepat, dan ke perwakilan kontak yang berkepentingan dengan kapal.
- 6) Sebuah daftar kontak disiapkan dalam Rencana Darurat Polusi Minyak di atas Kapal (SOPEP), "Prosedur Tanggap Darurat Perusahaan" (O-0801) dan "Nomor Kontak Darurat" (OS-0801-LE).

6.6 Pemeliharaan Peralatan untuk Menangani Polusi

Peralatan yang disediakan diatas kapal untuk merespon suatu peristiwa polusi minyak akan digunakan hanya untuk tujuan itu.

Terhadap suatu inventaris peralatan yang ada, Anggota Awak Kapal didelegasikan untuk menjaga semua peralatan yang terdapat diatas kapal yang terinci dalam "Jadwal Perencanaan Pemeliharaan Kapal "(S-0702) dan dalam Rencana Darurat Polusi Minyak diatas Kapal (SOPEP).

6.7 Pelatihan

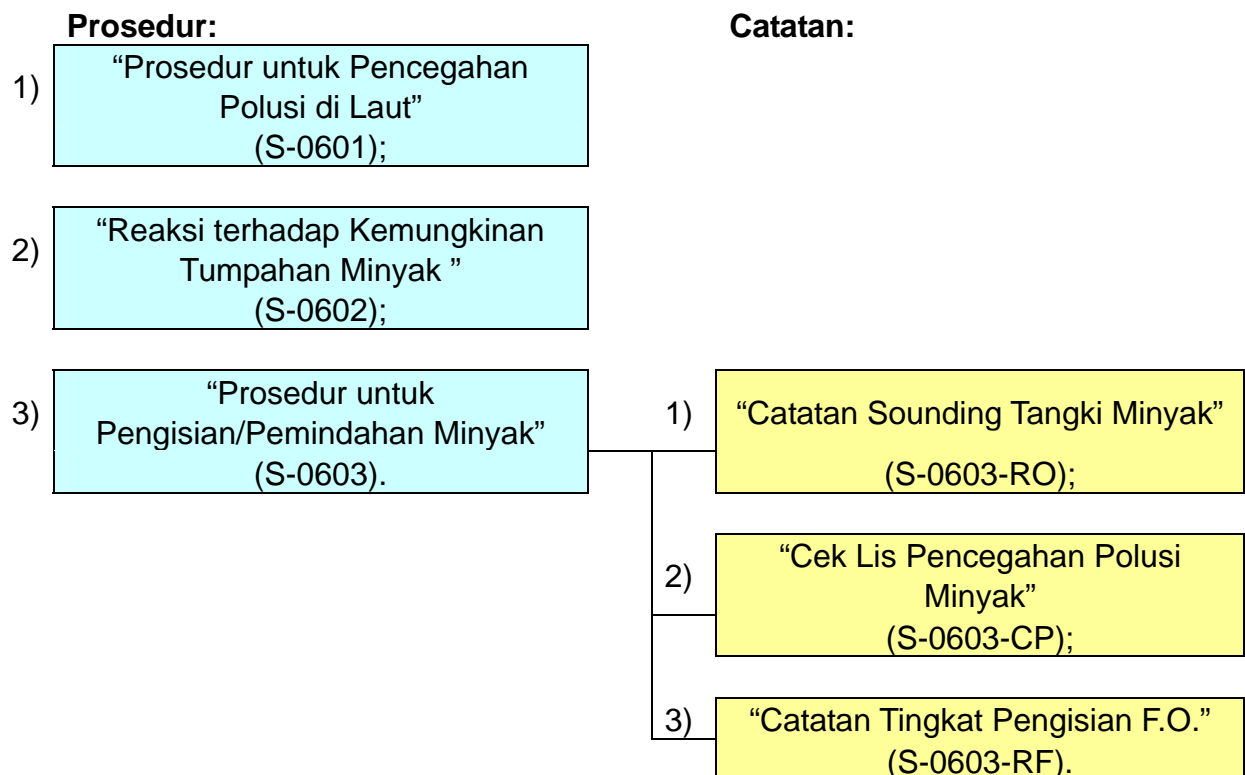
- 1) Dari waktu ke waktu latihan pelatihan diharapkan dapat diaktifkan.
- 2) Latihan secara teratur akan memastikan bahwa pengaturan yang memungkinkan dapat berfungsi dengan baik dan semua latihan itu disamakan seperti tampak dalam suatu kejadian tumpahan minyak, atau suatu ancaman tumpahan, sehingga akan menjadi terbiasa dengan tanggung jawab khusus mereka.

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- 3) Latihan juga akan dilaksanakan ketika personil berada didarat atau berlayar diatas kapal agar dapat menanggapi kejadian, baik dari kapal maupun dari kantor yang bersangkutan, agar dapat dimonitor dan dinilai.
- 4) Semua personil yang menangani tumpahan minyak harus dilatih dalam penggunaan peralatan yang tepat. Latihan harus diselenggarakan dengan cara simulasi nyata dari kondisi tumpahan minyak.
- 5) Kapten membentuk latihan diatas kapal untuk memastikan bahwa semua Awak Kapal yang berada diatas kapal memahami/menyadari prosedur itu dan menerapkannya pada saat tumpahan minyak terjadi.

6.8 Dokumen yang disesuaikan

Dokumen yang berikut akan dapat digunakan untuk menyelesaikan aktivitas ini.



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7.1 Sasaran/Tujuan

Untuk menguraikan secara garis besar bahwa semua bagian komponen kapal yang meliputi lambung kapal, permesinan dan peralatannya dipastikan telah dirawat dalam keadaan yang memuaskan agar sistim dan aturan serta peraturan yang ditetapkan dapat diterapkan, disamping itu pula agar kode, petunjuk dan standart yang direkomendasikan oleh Biro Klasifikasi dan Organisasi Industri Maritim dapat dijalankan.

7.2 Ruang Lingkup aplikasi

Prosedur ini berlaku untuk semua kapal yang dioperasikan oleh perusahaan.

7.3 Tanggung jawab untuk pemeliharaan Kapal

7.3.1 Pemeliharaan Peralatan

Manajer Teknis mempunyai tanggung jawab menyeluruh untuk memelihara semua kapal yang dioperasikan oleh perusahaan. Dia akan menyediakan pendukung teknis untuk Chief Engineer kapal.

Peralatan yang termasuk dalam ketentuan bab ini meliputi peralatan dibawah ini, tetapi tidak terbatas pada hal tersebut :

- 1) Peralatan Keselamatan/Life-saving ;
- 2) Peralatan kebakaran/Fire-fighting ;
- 3) Peralatan untuk mencegah polusi terhadap lingkungan seperti sistim pengawasan tumpahan minyak dan pengendaliannya, tempat pembakaran/incinerator, tangki limbah dll.
- 4) Peralatan Navigasi
Mencakup **kompas giroskop, radar, ARPA;**
- 5) Steering gear;
- 6) Peralatan Mooring ;
- 7) Mesin induk/Generators & peralatan manouvering;
- 8) Mesin Generator Diesel Auxiliary;
- 9) Main Switchboards dan perlengkapan elektrik;
- 10) Peralatan Cable handling ; dan
- 11) Peralatan Radio.

7.3.2 Pemeliharaan Rutin

- 1) **Manajer Teknis** bertanggung jawab untuk mengawasi pemeliharaan operasional kapal secara rutin dan akan memastikan bahwa keadaan lambung kapal, permesinan dan semuanya telah dirawat sesuai tepat pada waktunya.

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- 2) Kekurangan/ketidak-sesuaian terhadap mekanik harus dilaporkan kepada Manajer Teknis (melalui **Orang yang ditunjuk**) bersama dengan kemungkinan penyebabnya bila diketahui. Ia harus memastikan bahwa tindakan koreksi yang tepat dapat diambil.
- 3) Ia akan menilai semua laporan kondisi yang diterima dari kapal agar hal diatas dapat tetap konstan disadari.
- 4) Ia akan memastikan bahwa data yang diperoleh dari laporan itu dapat disusun dan disimpan sedemikian rupa sehingga kecenderungan perkembangannya dapat diamati.
- 5) **Manajer Teknis** secara pribadi akan menyelidiki beberapa peristiwa, yang mengakibatkan kerusakan pada kapal atau peralatannya atau beberapa kecelakaan yang disebabkan oleh struktur maupun kegagalan pada peralatan. Ia akan mencatat semua aktivitas ini dan melaporkan hasil penyelidikannya kepada **Manajer Umum Armada** dan kepada **Orang Yang ditunjuk** yang akan meneruskan laporan itu kepada **Pimpinan**.

7.3.3 Superintendent(s)

Manajer Teknis dalam tugasnya dibantu oleh **Superintenden**, Yang tepat.

7.3.4 Program pemeliharaan

Chief Engineers Kapal bertanggung jawab untuk menjalankan program pemeliharaan diatas kapal dengan bantuan dari Chief Officer sesuai ketetapan.

7.4 Pemeliharaan Peralatan

Prosedur pemeliharaan untuk kapal-kapal, dikembangkan agar dapat disesuaikan dengan perundang-undangan nasional dan Internasional yang ditetapkan, konvensi, aturan, petunjuk, standart industri dan kepentingan Biro Klasifikasi yang tersedia dalam "Instruksi Pemeliharaan Perusahaan" (O-0701) dan "Prosedur Perencanaan Pemeliharaan Kapal" (S-0701). Yang kesemuanya Ini akan diterapkan.

7.5 Dry Docking

- 1) Dry-docking rutin akan dilaksanakan pada jarak waktu sekitar tiga puluh bulan atau sesuai kebutuhan yang disarankan oleh Biro Klasifikasi.
- 2) Kapten bersama dengan Chief Engineer dan kepala departemen lain, akan menyiapkan suatu spesifikasi perbaikan dry-doking menurut "Prosedur Perencanaan Pemeliharaan Kapal"(S-0701) sekurang-kurangnya tiga (3) bulan sebelum tanggal Dry-doking dijadwalkan dan menyampaikannya kepada **Manajer Teknis**.
- 3) **Manajer Teknis** bertanggung jawab untuk memilih dok yang akan digunakan menurut prosedur yang terperinci dalam "Instruksi Pemeliharaan Perusahaan" (O-0701).

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- 4) Ia akan memberitahu Kapten kapal sekurang-kurangnya satu (1) bulan sebelum pelaksanaan.
- 5) **Manajer Teknis** akan mendiskusikan spesifikasi perbaikan dry-docking dengan Kapten sekitar (10) hari sebelum tanggal yang dijadwalkan.
- 6) Bila dry-docking telah ditetapkan maka **Manajer Teknis** akan memberitahu Kapten.

7.6 Pemeliharaan Terencana

Manajer Teknis bertanggung jawab pada Program manajemen Pemeliharaan kapal yang terencana sebagai berikut :

7.6.1 Lambung Kapal, Peralatan dan Permesinan

Pemeliharaan semua aspek menyangkut lambung kapal, peralatan dan permesinan akan dikerjakan menurut sistim Pemeliharaan yang direncanakan Perusahaan.

7.6.2 Permesinan Penting dan Peralatannya

Perusahaan telah menetapkan suatu prosedur pemeliharaan “Instruksi Pemeliharaan untuk Permesinan Penting dan Peralatannya” (S-0703) yang ditujukan bagi permesinan, peralatan dan sistim teknis yang dalam operasinya mendadak rusak/mengalami kegagalan yang mungkin mengakibatkan situasi berbahaya.

Perhatian khusus diberikan kepada hal pokok yang berhubungan dengan sistim pada peralatan kapal dan catatan hasil cek lis yang memadai :

- 1) Peralatan Kemudi Otomatis (Auto Pilot);
- 2) Mesin Induk/Generator Induk,
Termasuk sistim minyak pelumas;
- 3) Generator Diesel Auxiliary;
- 4) Steering gear/Azimuth Baling-baling.

Identifikasi diatas akan ditinjau ulang di kantor pada Tinjauan Ulang Manajemen sebelum mengeluarkan program pemeliharaan tahunan.

7.6.3 Pengaturan Kesiap-siagaan/Stand-by

Memastikan uji coba secara teratur pada Peralatan yang berhubungan dengan pengaturan stand-by atau sistim teknis yang diuraikan dalam 7.6.2 bahwa peralatan itu ditetapkan tidak digunakan secara terus menerus.

Masing-masing kondisi pengaturan akan dicatat ke dalam Cek Lis secara tepat berikut ini:

- 1) Steering Gear (S-0703-CP)
- 2) Unit Generator Drive (S-0703-CA)

Rincian sistim ini terdapat dalam “Instruksi Pemeliharaan untuk Permesinan Penting

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dan Peralatannya” (S-0703).

7.6.4 Laporan kepada Orang Yang ditunjuk

Manajer Teknis akan menyimpan Laporan Orang yang ditunjuk menyangkut segala pokok penyimpangan/kekurangan yang cukup berdampak terhadap manajemen keselamatan dan Pencegahan Polusi.

7.7 Pemeliharaan Kondisi setelah survey (Mengacu pada SOLAS Bab I Peraturan 11)

- 1) Kondisi kapal dan peralatannya akan dijaga agar dapat disesuaikan dengan ketentuan peraturan yang ada pada saat ini, agar dapat dipastikan bahwa semua hal yang menyangkut tentang kapal akan tetap berada dalam kondisi sehat/baik untuk melakukan proses pelayaran tanpa membahayakan terhadap kapal atau orang-orang diatas kapal.
- 2) Setelah beberapa survey yang dilakukan pada kapal menurut peraturan 7, 8, 9 atau 10, dipenuhi, tidak ada perubahan yang akan dibuat dalam pengaturan struktural, permesinan, peralatan dan hal pokok lainnya yang didapatkan dalam survey, tanpa sangsi administrasi.
- 3) Kapan saja sebuah peristiwa terjadi pada sebuah kapal atau suatu kerusakan telah ditemukan yang juga dapat mempengaruhi terhadap keselamatan kapal, efisiensi atau kelengkapan peralatan Life-saving atau peralatan lainnya, maka Kapten atau pemilik kapal akan melaporkan secepat mungkin kepada Pemerintah selaku administrasi, dan kepada Pensurvey yang dicalonkan atau organisasi yang dikenal yang bertanggung jawab untuk mengeluarkan sertifikat yang relevan, yang akan menyelidiki penyebabnya dan mulai menentukan apakah diperlukan sebuah survey, sesuai dengan ketentuan dalam peraturan 7, 8, 9 atau 10. Jika kapal berada di suatu pelabuhan Kontraktor Negara lain, maka Kapten atau Pemilik kapal juga akan melaporkan segera kepada Otoritas yang tepat dari Pelabuhan itu dan kepada Pensurvey yang dicalonkan atau organisasi yang dikenal yang akan memastikan bahwa laporan seperti itu telah dibuat.

7.8 Pemeliharaan dari Laporan dan Sertifikat

Kapten/Chief Engineer akan memastikan salinan laporan yang telah dihasilkan berada diatas kapal.

Dan **Manajer Teknis** akan memferifikasikan salinan laporan itu yang tersedia di atas kapal melalui pemeriksaan yang dilaksanakan oleh dia sendiri atau orang yang ditunjuknya.

7.8.1 Laporan & Catatan di atas Kapal

Laporan Asli yang akan dipegang di Perusahaan:

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1)	Cek Lis Sertifikat yang jatuh tempo	(S-0701-CC)
2)	Aplikasi untuk Survey	(S-0701-QA)
3)	Laporan Survey Chief Engineer	(S-0701-PE)
4)	Daftar Permintaan Spare Parts	(S-0701-QP)
5)	Daftar Permintaan Gudang	(S-0701-QS)
6)	Catatan Pemeliharaan untuk M/E, G/E	(S-0701-RO)
7)	Catatan Data Mesin	(S-0701-RM)
8)	Laporan Boiler	(S-0701-PB)
9)	Laporan Kerusakan	(S-0701-PI)
10)	Laporan Pemeliharaan Mesin	(S-0701-PM)
11)	Laporan Pemeliharaan Departemen Deck	(S-0701-PD)
12)	Daftar Permintaan Perbaikan	(S-0701-QR)
13)	Laporan Koreksi Tabel/Peta Nautika	(S-0701-PC)
14)	Inventaris Publikasi Nautika	(S-0701-LN)
15)	Laporan Pemakaian L.O.	(S-0701-PL)
16)	Cek lis Peralatan Keselamatan	(S-0701-CS)
17)	Catatan Penyediaan Peralatan	(S-0701-RE)
18)	Perencanaan Pemeliharaan Kapal	(S-0702-MP)
	Cek lis Operasi	
19)	-Steering Gear and Sistim Kemudi Otomatis	(S-0703-CP)
20)	-Mesin Induk	(S-0703-CM)
21)	-Unit Generator Drive	(S-0703-CA)

7.8.2 Sertifikat yang disimpan di atas kapal

Manajer Teknis akan memastikan bahwa salinan dokumen Sertifikat Pemenuhan dan Sertifikat SMS yang asli telah disediakan untuk Kapten, agar supaya Kapten memungkinkan untuk mendapat ferfikasi dari Pemerintah atau Organisasi yang berwenang untuk itu, jika diminta demikian.

Tanggung jawab untuk pemeliharaan dan pengesahan/pembaharuan sertifikat yang diterapkan berada pada Kapten.

Sertifikat yang dijaga adalah :

Sertifikat-sertifikat:

- 1) Ship's Registry Certificate
- 2) Certificate of Classification
- 3) Equipment Certificate of Classification
- 4) Certificate of Installation Registration
- 5) **Cargo Gear Booklets**
- 6) - Australian
- 7) - Indian
- 8) - Classification Society
- 9) - Pakistan
- 10) - Cakadian

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- 11) Exemption Certificate
- 12) Document of Compliance
- 13) Safety Management Certificate
- 14) Crew Accommodation Inspection Certificate
- 15) International Load Line Certificate
- 16) Cargo Ship Safety Equipment Certificate
- 17) Cargo Ship Safety Construction Certificate
- 18) Cargo Ship Safety Radiotelegraphy Certificate
- ~~19) Cargo Ship Safety Radiotelephony Certificate~~
- 20) International Oil Pollution Prevention Certificate
- ~~21) IMO Fitness Certificate~~
- 22) Ship Radio Station License
- 23) Dead-weight Tonnage Certificate
- 24) International Tonnage Certificate
- 25) Suez Canal Tonnage Certificate
- 26) Panama Canal Tonnage Certificate
- 27) Minimum Safe Manning Certificate
- 28) Certificate of Sanitary Inspection
- 29) Life Raft Certificate
- 30) Deratting Certificate
- 31) Equipment Inspection Certificate
- 32) Test Certificate of Anchors, Chains, and Shackles
- 33) SE-related Certificates
- 34) SR-related Certificates
- 35) Certificates for Loading Computer and others
- 36) Certificate of Financial Responsibility

Dokumen Yang disetujui:

- 1) SOPEP
- 2) Pedoman Pengamanan Muatan (Cargo Securing Manual)
- 3) Pedoman Pemuatan (Loading Manual)
- 4) Kalkulasi Stabilitas Kerusakan (Damage Stability Calculation)

Catatan:

- 1) Catatan Survey Klass (Class Survey Record)
- 2) Catatan Survey Menurut Undang-Undang (Statutory Survey Record)
- 3) Catatan GMDSS pada Peralatannya, Arsip Pemeliharaan, Perjanjian Pemeliharaan yang mendasar di Darat (GMDSS Record of Equipment, Maintenance Records, Shore-based Maintenance Agreement)
- 4) Buku Catatan Minyak (Oil Record Book)

7.9 Dokumen Referensi

Dokumen Yang Berikut ini digunakan untuk menyelesaikan aktifitas ini.

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Prosedur:

- 1) "Prosedur untuk mencegah Polusi di Laut" (S-0601);
- 2) Instruksi Perusahaan Tentang Pemeliharaan (O-0701);
- 3) Prosedur untuk Dry-docking (O-0701D);
- 4) Prosedur Perencanaan Pemeliharaan di atas Kapal (S-0701);
- 5) Jadwal Perencanaan Pemeliharaan diatas Kapal (S-0702);
- 6) Instruksi Pemeliharaan untuk Mesin-mesin Penting dan Peralatannya (S-0703).

Catatan:

- 1) Mengacu pada bagian 7.8.1 dalam manual ini
- 2) Mengacu pada bagian 7.8.2 Dalam manual ini

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8.1 Sasaran/Tujuan

Untuk menguraikan prosedur kemungkinan yang dibentuk untuk menjawab suatu kejadian utama yang terjadi di atas kapal, diluar kemampuan personil kapal atau peralatan kapal.

Rencana tanggapan darurat itu dimaksudkan untuk menyediakan prosedur terperinci yang dapat diterapkan di kantor untuk memastikan bahwa kapal menerima dukungan yang tepat untuk memperbaiki keadaan.

Rencana Darurat Kapal telah dibentuk dan terperinci dalam Manual-09.

8.2 Tim Tanggapan Darurat (Selanjutnya Disebut ERT)

- 1) Pada saat keadaan darurat terjadi disebuah kapal, ERT akan memobilisasinya menurut “Prosedur Tanggap Darurat Perusahaan” (O-0801) untuk menangani dan memenuhi kebutuhan yang penting pada situasi itu.
- 2) Dalam hubungannya dengan keadaan darurat, suatu ERT dilapangan (Lokasi kejadian ERT) akan melakukan mobilisasi dibawah tanggung jawab dari **Manajer Umum Armada** dan kapal akan dibawah kendali ERT
- 3) Permintaan biasanya dibuat dalam situasi berikut ini :
 - a) Situasi A:
Sebuah Kecelakaan di Laut (disebabkan karena Kerusakan lambung kapal & Kerusakan Mesin) seperti halnya kandas/stranding, Kebakaran atau Ledakan, Benturan/tabrakan, Kerusakan yang fatal pada mesin-mesin yang penting dan pada peralatannya, terdapat muatan berlebih;
 - b) Situasi B:
Kecelakaan atau kejadian yang menimpa awak kapal seperti seseorang jatuh kelaut, hilang, mengidap penyakit yang parah atau terjadi luka-luka, atau adanya kematian;
 - c) Situasi C:
Pencemaran air laut yang disebabkan oleh tumpahan minyak atau muatan berbahaya.

8.3 Instruksi Umum untuk ERT

Manajer Umum Armada akan bertanggung jawab sebagai Kepala ERT dan akan memberikan perintah untuk mengatasi situasi yang sedang ditangani.

8.4 Prosedur Tanggap Darurat Perusahaan

“Prosedur Tanggap Darurat Perusahaan “ (O-0801) dijalankan, dan berisi rincian sebagai berikut :

- 1) Anggota Tim dan Fungsi mereka;
- 2) Nomor Kontak dan rincian tanggung jawab, Organisasi pendukung eksternal, untuk semua kapal yang dioperasikan oleh perusahaan melalui “Latihan kesiap-siagaan keadaan darurat” (O-0801-RE);

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- 3) Daftar anggota Awak kapal dan alamat keluarga dekat yang bisa dihubungi;
- 4) Cek lis Keadaan;
- 5) Rincian sistim pendukung dengan bagian pendukungnya untuk mengatasi sebuah kejadian yang dapat meluas;
- 6) Perencanaan tanggap darurat Perusahaan;
- 7) Petunjuk untuk berhubungan dengan media.

8.5 Prioritas

Ketika melakukan mobilisasi, anggota ERT akan memberikan prioritas pertama kepada hal yang penting dalam peristiwa itu.

Mereka tidak akan terlibat secara serempak dalam pekerjaan lain, yang dapat merugikan terhadap tugas mereka dalam tim.

Manajer Umum Armada akan mengambil kendali ERT, dan melaporkan kemajuannya kepada **Pimpinan**.

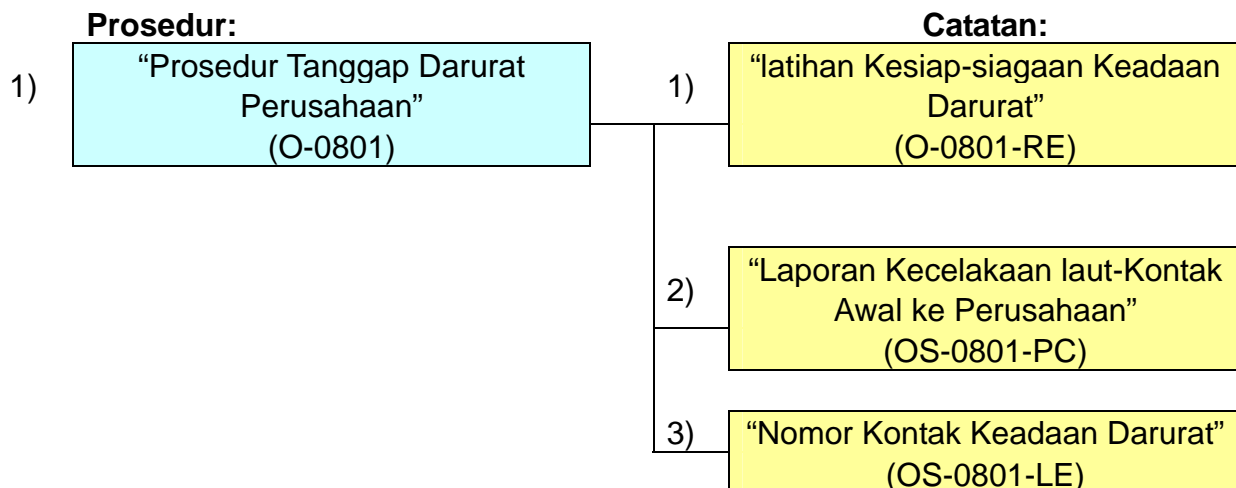
8.6 Latihan Kesiap-siagaan ERT

ERT akan menyelesaikan latihan dalam simulasi peristiwa yang berbeda-beda secara teratur sekurang-kurangnya sekali setahun untuk memastikan bahwa semua anggota dapat memberi reaksi secara cepat dan efisien ketika berhadapan dengan suatu kejadian nyata. ERT akan mencatat hasil yang dicapai dalam latihan yang dilaksanakan di dalam “Pelatihan Kesiap-siagaan Keadaan Darurat”9O-0801-RE).

Pimpinan akan meneliti hasil dari tiap latihan dan membuat peningkatan pada prosedur (jika diperlukan).

8.7 Dokumen Referensi

Dokumen yang berikut akan dapat digunakan untuk menyelesaikan aktifitas ini.



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9.1 Sasaran/Tujuan

Untuk menguraikan sistim mengenai prosedur kemungkinan yang dibentuk untuk menanggapi suatu peristiwa utama yang terjadi pada suatu kapal.

Rencana kemungkinan dasar didarat yang terperinci pada Manual-08.

Shipboard Oil Pollution Emergency Plan (SOPEP) menyediakan prosedur terperinci agar dapat dilaksanakan di atas kapal maupun di kantor untuk memastikan bahwa kapal menerima dukungan yang cukup untuk memperbaiki keadaan.

9.2 Tindakan cepat dalam suatu keadaan darurat

9.2.1 Tindakan yang diambil

Dalam suatu kecelakaan yang terjadi, prioritas Kapten adalah memastikan keselamatan bagi semua personil dan mengambil tindakan untuk mencegah meningkatnya suatu kejadian.

Dalam suatu kecelakaan yang terjadi yang telah mempengaruhi atau mungkin berakibat pada kegiatan manouver atau navigasi dari kapal seperti; kandas, kebakaran, benturan/tabrakan, kegagalan lambung kapal, keluar jalur pengendalian anjungan, dll, atau suatu tumpahan minyak yang membutuhkan pembersihan atau ancaman seperti sebuah tumpahan minyak, maka Kapten memerintahkan kegiatan menurut prosedur yang didokumentasikan di atas kapal dan dengan segera memberitahu seseorang yang memenuhi syarat dan Tim Tanggap Darurat Perusahaan melalui telepon atau dengan alternatif cara lain yang lebih cepat.

9.2.2 Situasi Keadaan Darurat

- 1) Rencana kemungkinan yang terjadi diatas kapal akan meliputi prosedur "Prosedur siap siaga keadaan darurat diatas Kapal" (S-0901-0914) dan "Prosedur Tanggap Darurat Perusahaan" (O-0801) yang diambil dari sebuah kejadian kecelakaan yang utama pada kapal.
- 2) Rencana akan disiapkan dan keseluruhan kapal milik perusahaan akan dilatih untuk menanggapi situasi yang mungkin terjadi seperti berikut :
 - a) **Situasi A:**
Sebuah Kecelakaan di Laut (disebabkan karena Kerusakan lambung kapal & Kerusakan pada Mesin) seperti halnya kandas/stranding, Kebakaran atau Ledakan, Benturan/tabrakan, Kerusakan yang fatal pada mesin-mesin yang penting dan pada peralatannya, terdapat muatan berlebih;
 - b) **Situasi B:**
Kecelakaan atau kejadian yang menimpa awak kapal seperti seseorang jatuh kelaut, hilang, mengidap penyakit yang parah atau terjadi luka-luka, atau adanya kematian;
 - c) **Situasi C:**
Pencemaran air laut yang disebabkan oleh tumpahan minyak atau muatan berbahaya.

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9.2.3 Situasi C

Ketika kapal sedang mengalami kebocoran minyak, sebagai akibat dari kejadian pada situasi C:

- 1) Sebuah operasional tumpahan minyak :
 - a) Kebocoran saluran pipa.
 - b) Tangki yang banjir.
 - c) Kebocoran lambung kapal.
- 2) Sebuah kecelakaan Tumpahan
 - a) Ketika kapal kandas atau terdampar;
 - b) Ketika kapal mengalami kebakaran atau ledakan;
 - c) Ketika kapal mengalami tabrakan/benturan;
 - d) Ketika kapal telah mengalami kerusakan lambung kapal;
 - e) Ketika kapal mempunyai suatu daftar muatan berlebih.

9.2.4 Rencana yang Disiapkan

Rencana yang disiapkan untuk masalah diatas adalah sebagai berikut :

- 1) Penilaian situasi;
- 2) Penilaian Kerusakan;
- 3) Tindakan Segera;
- 4) Memperbaiki kerusakan dan mempertimbangkan tekanan.

9.3 Prosedur Pelaporan

- 1) Prosedur Pelaporan terperinci dalam Shipboard Oil Pollution Emergency Plan (SOPEP) dan juga dalam "Instruksi Perlindungan terhadap Lingkungan" (Manual-06) pada Manual ini.
- 2) Kontak awal Kapten dengan Perusahaan akan dilayani Tim Tanggap Darurat Perusahaan untuk mengawali Tim prosedur tanggapan kecelakaan, dengan demikian dapat dipastikan bahwa semua pihak lain yang berkepentingan disiagakan dan tetap menjaga situasi yang berkembang.
- 3) Perusahaan akan menjawab telpon dari keluarga dan teman dekat dari awak kapal yang tidak bisa diabaikan ketika media menanggapi kejadian ini.
- 4) Setelah menerima berita penting dari Kapten sesuai dengan "Nomor kontak Keadaan Darurat" (OS-0801-LE0), penerima berita akan meminta [Pimpinan](#) untuk memobilisasi Tim Tanggap Darurat (Emergency Response Team-ERT).

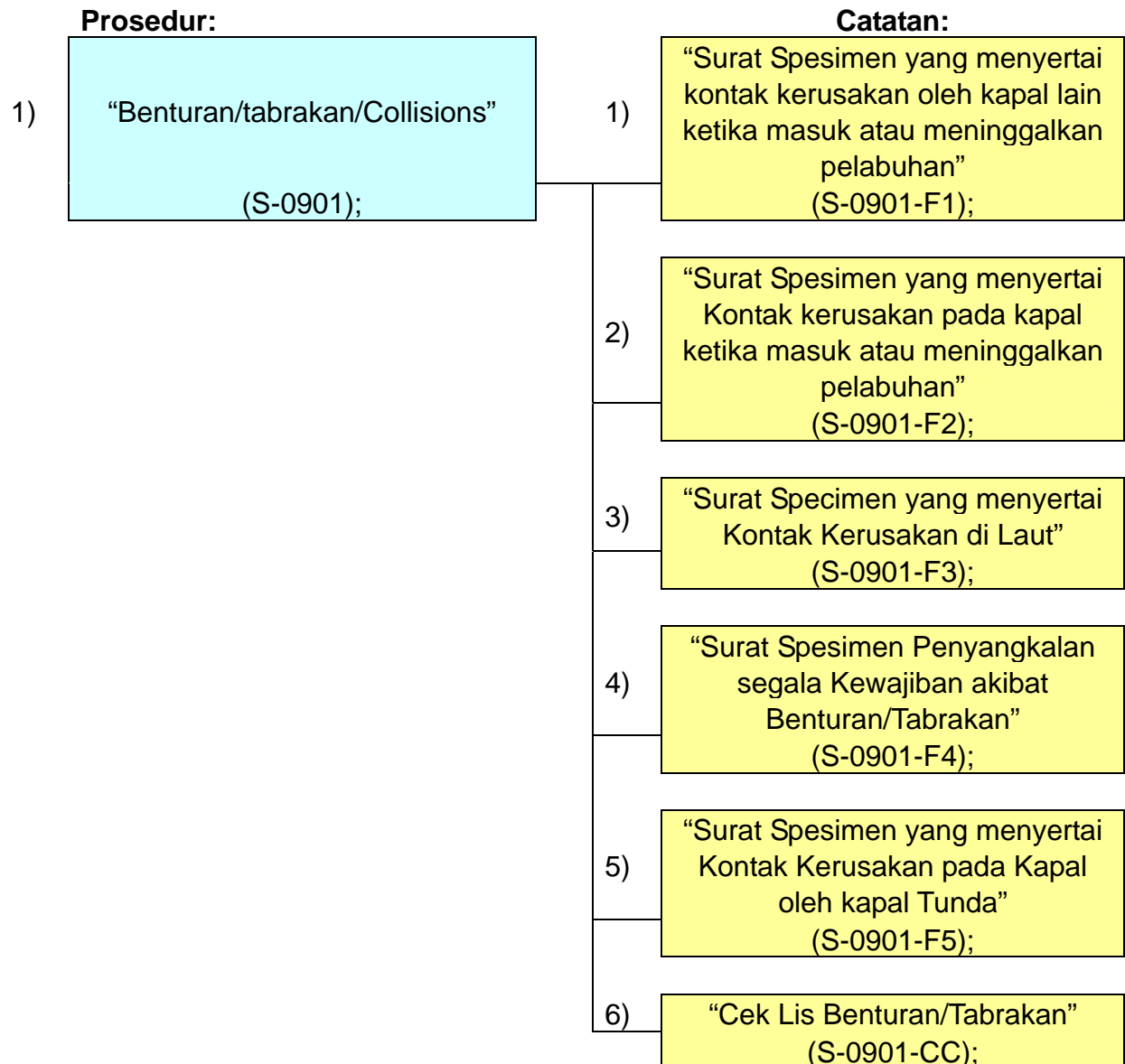
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9.4 Latihan dan Pelatihan Keadaan Darurat

- 1) Kapten akan memastikan bahwa latihan keadaan darurat di kapal diatur menurut “Penanggulangan Pelatihan” (S-0914-CD) agar semua Awak kapal menyadari tugas mereka pada saat Keadaan Darurat.
- 2) Kapten akan mengamati hasil latihan setelah beberapa latihan dilakukan dan membuat peningkatan terhadap penemuan penting untuk prosedur yang dihasilkan.
- 3) Hasilnya akan di catat dalam “Latihan dan Pelatihan” (S-0914-RD) dan kejadiannya akan dicatat dalam Log-Book Dek dan Engine.

9.5 Dokumen referensi

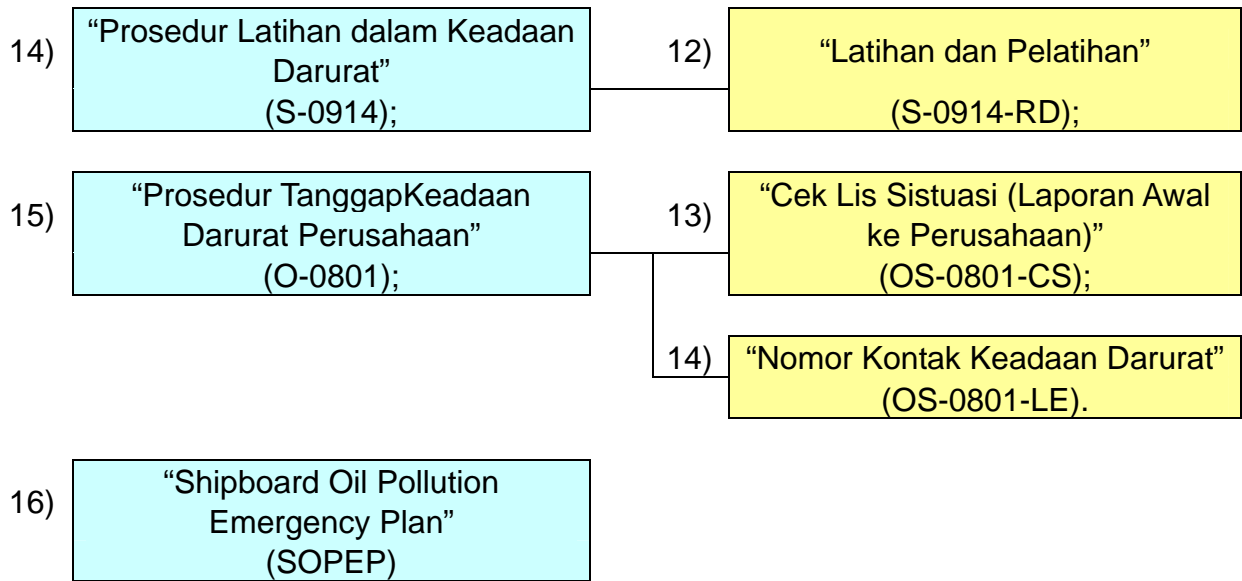
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2)	“Kandas/Terdampar” (S-0902);	7)	“Cek Lis Kandas/Terdampar” (S-0902-CU);
3)	“Kebakaran” (S-0903);	8)	“Cek Lis Kebakaran” (S-0903-CF);
4)	“Kerusakan pada Peralatan Penting” (S-0904);	9)	“Kerusakan Mesin Induk, Kegagalan Generator Diesel Aux. dan hilangnya tenaga” (S-0904-CM);
		10)	“Kerusakan Auxiliary Boiler” (S-0904-CB);
5)	“Kerusakan pada Steering Gear” (S-0905);	11)	“Kerusakan Steering Gear ” (S-0905-CR);
6)	“Black Out of Power” (S-0906);		
7)	“Seseorang jatuh keluar kapal” (S-0907);		
8)	“Seseorang Hilang di Laut” (S-0908);		
9)	“Luka-luka atau seseorang sakit” (S-0909);		
10)	“Kecelakaan Fatal” (S-0910);		
11)	“Kontrak penyelamatan/Salvage Contract” (S-0911);		
12)	“Meninggalkan kapal” (S-0912);		
13)	“Penyelamatan sebuah Kapal yang dalam kesulitan” (S-0913);		

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Bab 10	KETIDAK-SESUAIAN DAN TINDAKAN KOREKTIF	

10.1 Sasaran/Tujuan

Untuk menetapkan tanggung jawab personil dalam meminta Konsesi (OS-1001-QS) pada sistim, peralatan, pemakai dan personil, selama kegiatan normal kantor dan pengoperasian kapal.

10.2 Definisi

Definisi berikut ini akan berlaku bagi Sistim

Kekurangan/Deficiency:

Adalah Tidak terpenuhinya suatu maksud yang disyaratkan atau harapan yang layak termasuk sesuatu yang berhubungan dengan keselamatan.

Sebuah pengamatan situasi, suatu pernyataan dari fakta yang dibuat sepanjang pengoperasian Sistim yang normal dan yang diperkuat oleh bukti sasaran "Permintaan Konsesi" (OS-1991-QC), atau yang ditemukan dalam Internal & eksternal Audit oleh Auditor, seperti ;

- 1) Kegagalan Menerapkan Sistim dan operasinya,
- 2) Resiko kerugian,
- 3) Kegagalan Mekanis yang terjadi karena peralatan,
- 4) Permasalahan mengenai Pemakaian, spare gear dan Personil.

Bukti Sasaran/Tujuan:

Adalah Informasi Kwantitatif dan Kualitatif, catatan atau pernyataan Fakta yang menyangkut keselamatan atau keberadaan penerapan sebuah element sistim, yang didasarkan pada pengamatan, penilaian atau pengujian yang dapat dibuktikan.

Ketidaksesuaian

Adalah sebuah pengamatan terhadap situasi, kekurangan, dimana bukti sasaran/tujuan mengindikasikan tidak terpenuhinya sebuah persyaratan yang ditetapkan dalam sistim dan yang telah dijelaskan oleh **Orang yang ditunjuk**, atau Auditor ketika Internal & eksternal Audit dilaksanakan.

Sebagai contoh hal berikut ini dapat digolongkan sebagai suatu ketidak-sesuaian, tapi tidak terbatas pada hal tersebut yaitu :

- 1) Kejadian Kecelakaan;
- 2) Ketika sebuah laporan kekurangan dikeluarkan oleh Petugas Port State Control;
- 3) Situasi berbahaya termasuk near-miss;
- 4) Sertifikat Kapal,dll. Yang telah habis masa berlakunya;
- 5) Ijazah Kepelautan, Sertifikat, dll. Yang telah habis masa berlakunya atau hilang.

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10.3 Ruang Lingkup Aplikasi

Pedoman ini dapat diterapkan dalam kantor perusahaan dan di atas kapal.

10.4 Prosedur Pelaporan

10.4.1 Di atas Kapal

Siapa saja anggota Awak kapal yang mengidentifikasi adanya suatu penyimpangan, bertanggung jawab untuk melaporkan kepada kapten agar menjadi perhatiannya.

Kapten Kapal akan bertanggung jawab untuk mencatat semuanya dalam "Permintaan Konsesi" (OS-1001-QC) dan menyampaikannya kepada [Orang yang ditunjuk](#).

10.4.2 Kunjungan Staff Kantor

Para Manajer bertanggung jawab untuk melaporkan segala penyimpangan yang diidentifikasi selama kunjungan secara berkala ke atas kapal untuk melakukan pemeriksaan melalui "Permintaan Konsesi" (OS-1001-QS).

[Para Manajer](#) bertanggung jawab untuk mengawasi kemajuan terhadap segala tindakan korektif yang sedang dijalankan di kapal mereka, dalam menanggapi ketidak-sesuaian yang diidentifikasi dalam "Permintaan Konsesi" (OS-1001-QS)

10.4.3 Di Dalam Kantor

Siapa saja orang yang bekerja pada perusahaan yang mengidentifikasi adanya suatu kekurangan, bertanggung jawab untuk melengkapi sebuah "Permintaan Konsesi" (OS-1001-QS), dan menyampaikannya kepada [Orang yang ditunjuk](#).

10.5 Rincian dalam Laporan Ketidak-sesuaian

Seseorang yang mengidentifikasikan suatu kekurangan akan menyampaikan "Permintaan Konsesi" (OS-1001-QS) berisi informasi yang berikut ini, sejelas mungkin :

- 1) Uraian mengenai kekurangan itu;
- 2) Lokasi dan waktu deficiency itu terjadi atau pada saat telah ditemukan;
- 3) Penilaian perbaikan, jika telah diambil, dan hasil dari tindakan;
- 4) Kemungkinan penyebab dari kekurangan itu (jika mungkin);
- 5) Mengusulkan peningkatan atau amandemen terhadap sistim (jika mungkin).

Internal Auditor akan mengeluarkan sebuah "Permintaan Konsesi" (OS-1001-QS) untuk masing-masing ketidak-sesuaian yang diidentifikasi selama Audit Internal.

Formatnya akan disertai dengan suatu laporan naratif yang menjelaskan semua

Chapter 02	ISM Manual	
Bab 10	KETIDAK-SESUAIAN DAN TINDAKAN KOREKTIF	

rincian itu.

Auditor akan menggunakan format standart yang tepat untuk audit.

10.5.2 Orang yang ditunjuk/Designated Person

Designated Person bertanggung jawab untuk mengidentifikasi penyimpangan & ketidak-sesuaian dalam laporan “Permintaan Konsesi” (OS-1001-QC) dan bertanggung jawab untuk mengawasi semua laporan ketidak-sesuaian dan kemudian memulai tindakan perbaikan.

Ketika diidentifikasi adanya ketidak-sesuaian dalam “Permintaan Konsesi” (OS-1001-QC), Ia akan mengendalikannya dengan memberi tanda pada setiap penyimpangan NCR (Nonconformity Report) dan CAR (Corrective Action Request), dan memastikan bahwa perubahan yang penting perlu dibuat.

Terhadap tindakan korektif yang ditunda, **Orang yang ditunjuk** bertanggung jawab untuk memastikan bahwa tindakan sementara harus diambil oleh seseorang untuk memperkecil dampak yang terjadi pada masalah tersebut.

10.6 Pengendalian Ketidak-sesuaian

Prosedur Perusahaan “Tindakan Perbaikan” (OS-1001) mengontrol kegiatan ini dan harus diikuti oleh semua personil.

10.6.1 Tanggapan pada “Permintaan Konsesi” (OS-1001-QC)

- 1) Semua kejadian yang menyangkut segala ketidak-sesuaian yang terjadi pada officer dan segala ketidak-sesuaian pada kapal yang tidak dapat diperbaiki oleh personil kapal akan diselidiki dengan memperhatikan laporan yang dikeluarkan oleh orang yang tepat yang dicalonkan oleh **Orang yang ditunjuk**, yang akan dipenuhi dengan mengeluarkan “Permintaan Konsesi” (OS-1001-QS).
- 2) Kecelakaan yang berulang-ulang akan dibahas bersama dengan segala tindakan perbaikan yang dianggap perlu.
- 3) Kerusakan mekanik yang nyata akan diidentifikasi sebagai ketidak-sesuaian dan penilaian terhadap masalah itu dilakukan oleh staff kapal maupun para manager.
- 4) Ketika dibutuhkan, jasa dari personil lain didalam perusahaan dimanfaatkan untuk menyelidiki masalah dan menemukan solusinya.
- 5) Permasalahan yang diidentifikasi oleh personil yang bekerja dan personil yang berlatih akan dipecahkan oleh **Manajer Personalia** dan **Agen Pengawakan**.
- 6) Ketidak-sesuaian dalam perjanjian Carter diserahkan pada **Manajer Operasi** yang akan menyelidiki dan mengusulkan tindakan perbaikan.
- 7) **Semua ketidak-sesuaian yang mempengaruhi jasa ke pelanggan akan ditangani oleh Orang yang ditunjuk. Dalam menangani ketidak-sesuaian itu, Orang yang ditunjuk akan memastikan bahwa efektivitas dari sistim tidak melemah.**

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Bab 10	KETIDAK-SESUAIAN DAN TINDAKAN KOREKTIF	

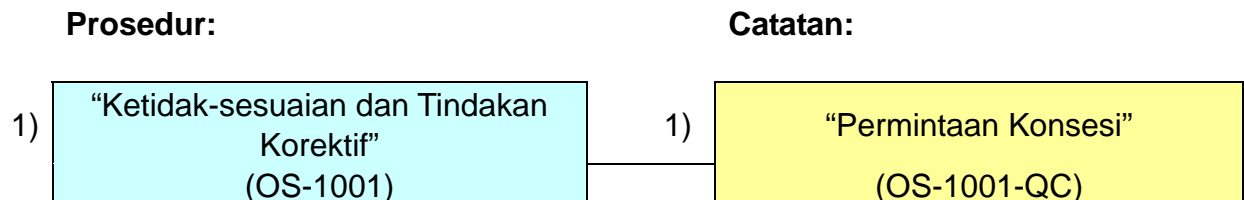
10.6.2 Orang yang ditunjuk /Designated Person

Designated Person /Orang yang ditunjuk akan :

- 1) Mengatur keberadaan ketidak-sesuaian bersama dengan “Permintaan Konsesi” (OS-1001-QC) untuk mempermudah referensi dalam memisahkan file-file dari “Permintaan Konsesi” (OS-1001-QS) yang timbul dari hal-hal berikut ini ,
 - a) Keluhan Pelanggan/Customer complaints,
 - b) Masing-masing kapal atau daerah operasional.
- 2) Menghasilkan ringkasan secara formal mengenai ketidak-sesuaian untuk “Tinjauan Ulang Manajemen”.
- 3) Menyelidiki semua bentuk ketidak-sesuaian lain yang tidak disebutkan di atas yang sama seperti dengan ketidak-sesuaian lain dan telah diatur secara tepat.
- 4) Menggunakan hasil dan efek balik bagi beberapa Kapten Kapal sebagai referensi mereka lebih lanjut dalam rangka mencegah permasalahan yang sama yang mungkin terjadi lagi pada armada, juga dalam rangka meningkatkan efektifitas dalam Operasi Sistim Perusahaan.

10.7 Dokumen referensi

Berikut ini dokumen yang dapat digunakan untuk menyelesaikan aktivitas ini.



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11.1 Sasaran/Tujuan

Untuk menetapkan suatu sistem Audit yang akan menentukan pada waktu tertentu apakah suatu struktur dan sistem manajemen yang efektif telah sesuai dan apakah semua itu telah diterapkan.

Kekurangan dan kegagalan dalam sistem kemudian dapat diidentifikasi dan tindakan perbaikan dapat dimulai.

11.2 Ruang Lingkup Aplikasi

Prosedur ini akan berlaku bagi semua aspek sistem baik di darat maupun di atas kapal yang dioperasikan oleh perusahaan.

Prosedur meliputi dibawah ini, tetapi tidak terbatas pada hal-hal tersebut.

- 1) Melakukan verifikasi sistem berdasarkan tinjauan ulang dalam semua aspek perundang-undangan nasional dan internasional, konvensi, peraturan atau petunjuk yang disyaratkan.
- 2) Menerapkan dan menjalankan prosedur operasi agar dapat diperiksa untuk mengkonfirmasi bahwa hal itu telah ditinjau ulang dan diamankan sebagaimana yang diperlukan dan didokumentasikan secara tepat.
- 3) Melakukan Konfirmasi mengenai instruksi yang didokumentasikan dan prosedur yang berhubungan dengan sistem itu telah dijalankan dengan benar.
- 4) Suatu pengecekan ketidak-sesuaian dalam sistem manajemen dan dalam instruksi serta prosedur yang berhubungan dengan sistem.
- 5) Memeriksa keadaan yang berkembang terhadap semua dokumentasi manajemen keselamatan meliputi Buku-buku Manajemen Keselamatan dan catatan Manajemen Keselamatan yang terperinci dalam "Dokumentasi Manajemen Keselamatan dan pengendalian perubahan" (Manual-03).

11.3 Audit dan Auditor

Orang yang ditunjuk akan:

- 1) Bertanggung jawab untuk mengaudit kedua sistem yang ada baik di laut maupun di darat;
- 2) Mengatur sebuah tim yang pada prinsipnya untuk memverifikasikan secara efektif penerapan prosedur yang dimiliki Perusahaan;
- 3) Anggota dari tim audit boleh terdiri dari tiap-tiap kepala departemen atau orang yang ditunjuknya.
- 4) Memastikan bahwa bagaimanapun juga tidak akan ada departemen apapun yang diaudit oleh personel departemennya sendiri.
- 5) Melaksanakan suatu persiapan tinjauan ulang hasil audit dalam menjalankan sistem.

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11.3.1 Tim Audit

- 1) Pemimpin Tim Audit yang dicalonkan oleh **Orang yang ditunjuk** akan memikirkan suatu rencana audit untuk memverifikasikan semua prosedur yang selaras dengan Pedoman sistim, dan pada waktu yang sama, menetapkan efektifitas dari sistim.
- 2) Kualifikasi/Kecakapan Auditor terperinci dalam prosedur "Prosedur Audit Internal" (O-1101).
- 3) Tim juga akan memastikan bahwa rencana kemungkinan yang dibuat untuk kejadian utama telah sesuai, memungkinkan dan dilaksanakan.
- 4) Tim mendiskusikan penemuan/penelitian dengan seseorang yang bertanggung jawab untuk masalah audit, dan mencatatnya dalam "Laporan Audit Internal Kantor" (O-1101-CA), "Laporan Audit Internal Kapal" (S-1101-CA) dan dalam "Permintaan Konsesi" (OS-1001-QC) agar dapat diperhatikan oleh **Orang yang ditunjuk**.
- 5) Departemen atau kapal yang sedang teraudit akan menyediakan fasilitas dan kebebasan dalam menjalankan audit kepada Auditor.
Kerjasama penuh diharapkan dapat diberikan lebih banyak kepada auditor.

11.4 Interval Audit

Auditing dari tiap departemen di kantor maupun di atas kapal yang dioperasikan oleh perusahaan diharapkan dapat dilakukan sedikitnya sekali setahun.

Secara normal audit akan dijadwalkan dan diberitahukan. Meskipun begitu, kapan saja, bila menurut pendapat **Orang yang ditunjuk**, terdapat pusat perhatian yang perlu untuk diaudit, maka audit tambahan mungkin akan dilakukan tanpa pemberitahuan terlebih dahulu.

11.5 Catatan Audit

"Laporan Audit" disusun oleh Pimpinan tim audit untuk disampaikan kepada **Orang yang ditunjuk**, setiap manajer departemen dan/atau Kapten memasukan sedikitnya rincian sebagai berikut ini:

- 1) Departemen atau kapal yang teraudit;
- 2) Tanggal Audit ;
- 3) Tandatanganan Pimpinan Tim Audit dan Auditor lainnya;
- 4) Tanda tangan Kepala Departemen atau Kapal yang teraudit;
- 5) Keseluruhan laporan umum pada penelitian/pengamatan audit;
- 6) Ketidak-sesuaian yang ditemukan.

11.6 Analisa

Orang yang ditunjuk akan bertanggung jawab untuk meneliti hasil laporan audit dan mengambil tindakan yang perlu, sebagai berikut.

Chapter 02	ISM Manual	
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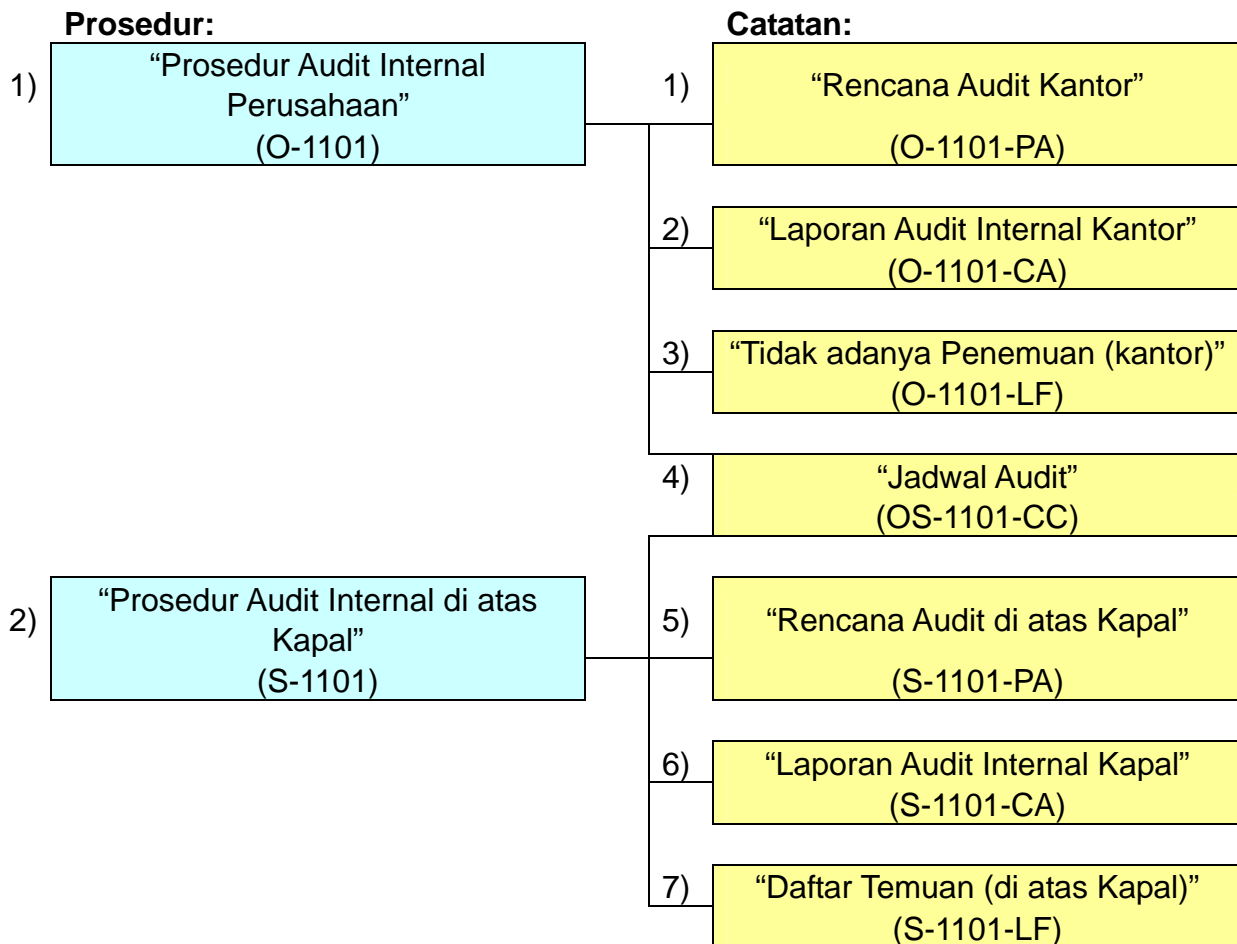
- 1) Mengeluarkan instruksi yang tegas untuk menilai perbaikan yang bertentangan dengan laporan NC;
- 2) Mengeluarkan instruksi yang tegas kepada yang mengoreksi atau yang menilai perbaikan yang bertentangan dengan penyimpangan yang dilaporkan;
- 3) Melaporkan hasil Audit Internal kepada pimpinan dan menganalisa secara umum perkembangannya.

11.7 Tindakan Perbaikan

- 1) Tanggung jawab untuk mengusulkan tindakan perbaikan berada pada para pimpinan departemen dari tempat yang diaudit.
- 2) Usulan tinjauan ulang dan persetujuannya diberikan oleh **Orang yang ditunjuk**.
- 3) Tindakan perbaikan yang tepat waktu diharapkan dapat diterapkan oleh para pimpinan departemen.
- 4) Kemudian, **Orang yang ditunjuk** /yang ditunjuknya, akan mengakhiri tindakan perbaikan setelah membuktikan bahwa hal itu telah efektif dijalankan.

11.8 Dokumen referensi

Prosedur berikut ini diharapkan dapat dimanfaatkan pada saat pengawasan intern/ internal audit:



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12.1 Sasaran/Tujuan

Untuk memastikan bahwa semua personil di Darat dan di atas kapal menerima pelatihan yang cukup dalam menerapkan dan menjalankan Sistim.

12.2 Ruang Lingkup Aplikasi

Prosedur ini akan berlaku untuk pendukung di darat dan personil yang berlayar pada semua kapal yang dioperasikan oleh perusahaan.

Hal ini akan berlaku bagi semua aspek sistim yang ada di darat maupun diatas kapal yang dioperasikan oleh perusahaan.

12.3 Rencana dan Pelatihan

Manajer Umum Armada akan bertanggung jawab terhadap kegiatan yang dilakukan oleh **Manajer Operasi** dan **Manajer Personalia** yang akan memastikan dalam merumuskan pelatihan perusahaan sebagai berikut :

- 1) “Penjadwalan Pelatihan” – Staff Darat (O-1201-CT) akan dirumuskan menurut prosedur yang didokumentasikan dalam “Rencana Pelatihan Staff Kantor Pusat” (O-1201).
- 2) Dan “Penjadwalan Pelatihan” – Staff di atas Kapal (S-1201-CT) akan dirumuskan menurut prosedur yang di dokumentasikan dalam “Rencana Pelatihan di Atas Kapal” (S-1201).
- 3) Masing-masing penanggalan akan dikeluarkan sekali setahun, dan semua penerapan rencana pelatihan meliputi ke empat materi dibawah ini.
- 4) Pelatihan ini akan memastikan bahwa semua pekerja mengikuti latihan yang ditetapkan untuk mendidik mereka agar mampu menerapkan sistim secara efektif dalam melaksanakan tugas-tugas mereka menurut “Rencana Pelatihan Staff Kantor Pusat” (O-1201) dan “Rencana Pelatihan Sebelum bergabung untuk Staff yang berlayar ” (OS-1202):
 - a) Familiarisasi kepada Anggota Awak Kapal baru sebelum berlayar;
 - b) Latihan di tempat kerja pada saat di laut dan di kantor;
 - c) Pelatihan semua karyawan, di darat dan di atas kapal dalam menjalankan sistim dan komponen yang terkait mencakup aturan yang diterapkan, peraturan, kode dan petunjuk;
 - d) Latihan dan prosedur pemahamannya bagi semua karyawan baru.

12.4 Catatan dan kursus pelatihan

Dalam memenuhi tujuan dari segala kursus yang ada, dibuat Catatan Pribadi dari personil

12.4.1 Instruksi Penting

Perusahaan akan memastikan bahwa Kapten akan memberi instruksi yang penting

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untuk dapat disediakan sebelum berlayar yang telah diidentifikasi, didokumentasikan dan ditetapkan dalam ketetapan “Instruksi Penting”(S-1203).

Instruksi yang penting itu seperti berikut ini, tetapi tidak terbatas pada hal tersebut : (Menurut Konvensi STCW)

- 1) Untuk menggambarkan Peran Personil Kapal dalam organisasi secara jelas;
- 2) Untuk memastikan bahwa semua itu dipersiapkan sebelum melaksanakan tugas-tugas mereka di atas kapal.

12.4.2 Familiarisasi

Personil baru diberi tugas yang berhubungan dengan keselamatan dan perlindungan terhadap lingkungan untuk melengkapi “Cek Lis Familiarisasi”(S-1201-CF) pada saat bergabung di atas kapal dan sebelum para Officer mengundurkan diri atau meletakkan jabatannya, dan selanjutnya menyerahkannya kepada kapten dalam penyelesaiannya.

Semua personil perusahaan menjalankan familiarisasi secara tepat dengan tugas-tugas mereka dan Catatan dibukukan dalam “Catatan Pelatihan Staff” (OS-1201-RT).

Familiarisasi bagi semua personil kapal dalam menjalankan sistim adalah tanggung jawab Kapten sesuai dengan “Prosedur Pelatihan di atas Kapal” (S-1201) dan mencatat hasil yang dicapai pada kursus pelatihan itu dalam “Catatan Pelatihan Staff” (OS-1201-RT).

12.4.3 Pelatihan di Kantor

- 1) **Manajer Operasi** akan mengatur untuk mendapatkan juru tulis Dokumen yang terlatih berdasarkan standart penting bagi dia dalam memastikan:
 - a) Peraturan nasional dan internasional yang berkembang, konvensi dan dokumen yang serupa dijaga tetap up to date.
 - b) Dokumen sistim sesuai dengan amandemen.

Hal ini akan dilakukan menurut “Dokumentasi Manajemen Keselamatan” (MANUAL-03).

- 2) **Manajer Operasi** akan mengatur semua anggota Awak kapal
 - a) Untuk mengikuti suatu latihan sebelum bergabung diatas kapal, sesuai dengan “Rencana Pelatihan sebelum bergabung untuk Staff yang berlayar” (OS-1202);
 - b) Dan mencatat hasil yang dicapai dari latihan itu dalam “Catatan Pelatihan sebelum bergabung” (OS-1202-RP).

Yang kemudian akan di jaga agar tetap up-to-date.

12.4.4 Catatan

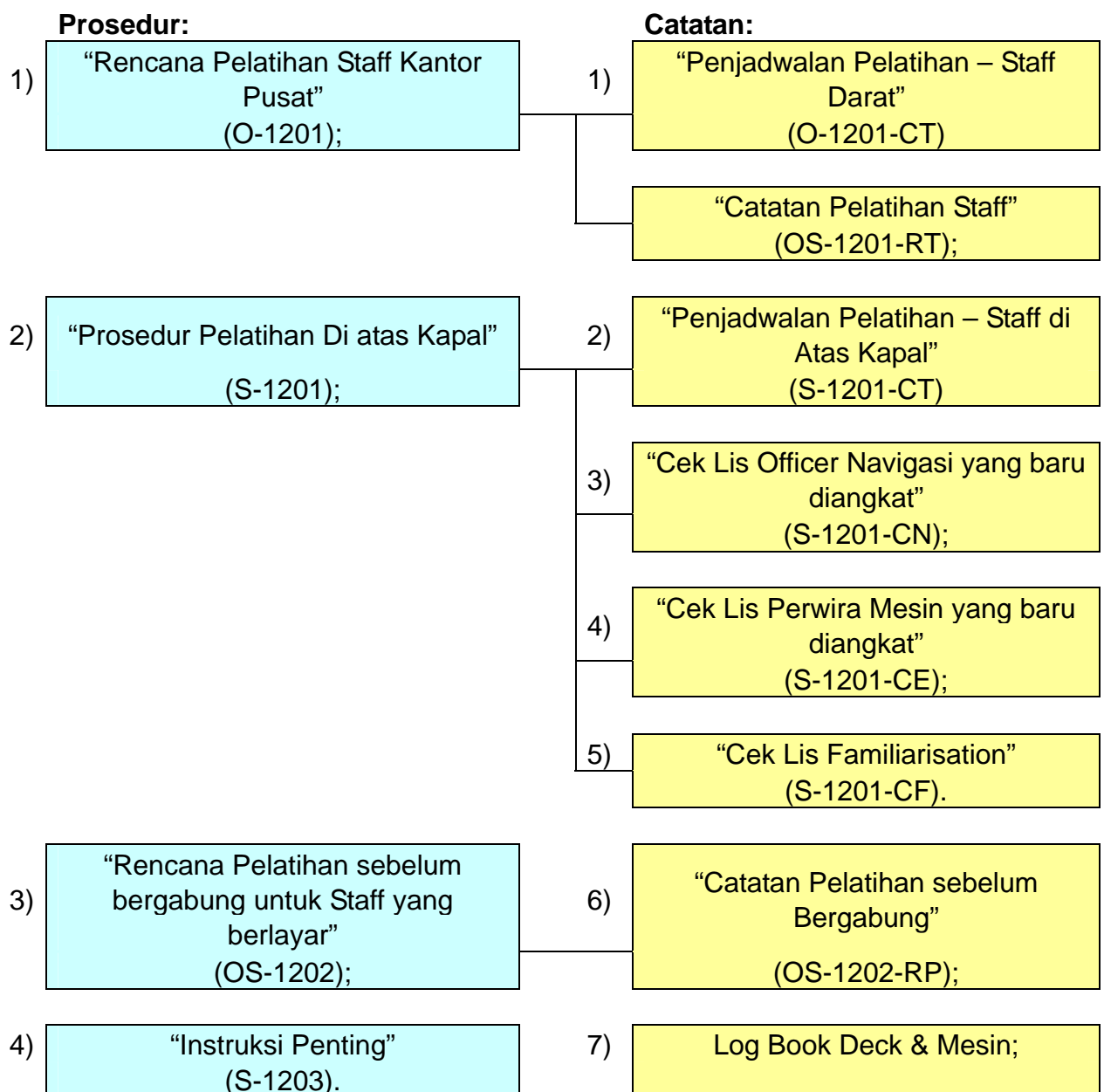
Semua catatan personil akan tetap dijaga agar tetap up-to-date.

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- 1) Kapten akan melaporkan hasil kursus pelatihan kepada **Manajer Umum Armada**, setelah membacanya dengan teliti kemudian memberikannya kepada **Manajer Operasi**.
- 2) **Manajer Operasi** akan memberitahu **Manajer Personalia** tentang keadaan anggota Awak kapal tersebut.

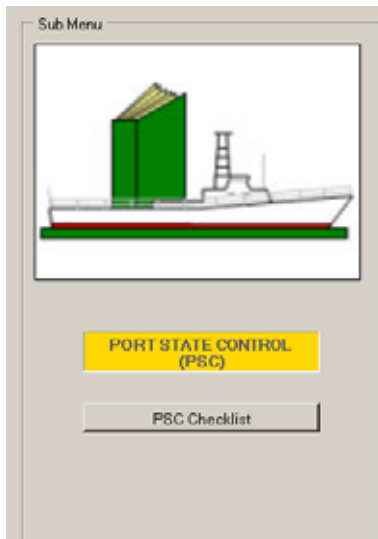
12.5 Dokumen referensi

Prosedur berikut diharapkan dapat dimanfaatkan untuk aktivitas ini:



- the end -

Chapter 03 Port State Control (PSC)



01 PSC Checklist (Good maintenance of ship for domestic vessels)

The checklist which classified the examples of restraint by PSC inspector and explained the demanding code of SOLAS with simple explanation and comic. This is useful not only for pre-check of arriving in port but also for education on new officers. With checking and reacting based on this list, the restraint in port can be avoided. This document is including following topics;

1. General
2. Nautical Publication
3. Log-Book
4. Safety
5. Test & Drill
6. Navigation Equipments
7. Life save
8. Fire fighting
9. Radio Installation
10. Load Line
11. Hull Construction
12. Machinery in Engine room
13. Electrical
14. Mooring Arrangement
15. Marine Pollution
16. Cargo Gear
17. Accommodation

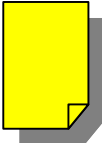



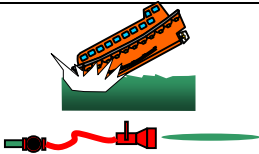

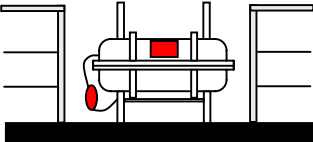
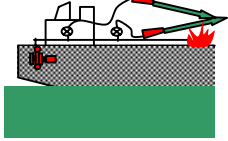
Example of the picture : 01 PSC Checklist

02 - PUBLIKASI NAUTIKA & KONVENSI INTERNASIONAL						
Untuk	Item Cek	Tgl. Pengeluaran	Poin Cek/Check	Disimpan di	Peraturan Ya Riterapkan	Ilustrasi
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	Tabel Pasang Surut	Tanggal: / / Remarks	<input type="checkbox"/> Tergantung edisi di Kapal? <input type="checkbox"/> Ya <input type="checkbox"/> tdk Tgl: / /			
	Kode Internasional untuk Sinyal/Syarat	Tanggal: / / Remarks	<input type="checkbox"/> Tergantung edisi di kapal? <input type="checkbox"/> Ya <input type="checkbox"/> tdk Tgl: / /			
SOLAS 74 Konvensi Internasional Untuk Keselamatan Jiwa di Laut			<input type="checkbox"/> Terdapat di kapal? <input type="checkbox"/> Ya <input type="checkbox"/> tdk Tgl: / /			

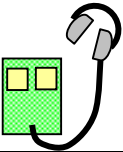
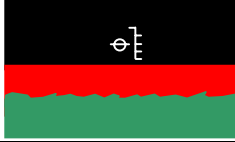
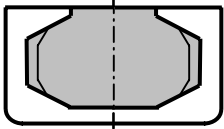
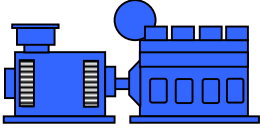
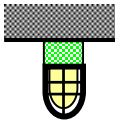
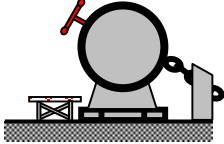
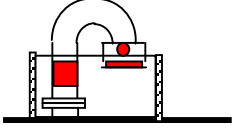
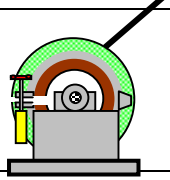
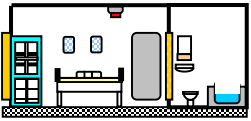

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PEMELIHARAAN KAPAL DENGAN BAIK DAN CEK LIST PSC


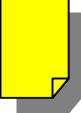



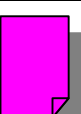
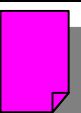
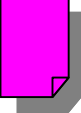
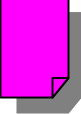
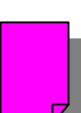
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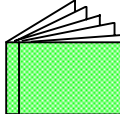
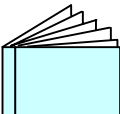



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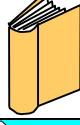





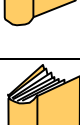

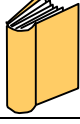

Chapter 03	PSC	
Bab 01	SERTIFIKAT & DOKUMEN	

Untuk	Item Cek	Tgl. Exp.	Endorsement Terakhir	Tanggal Pengeluaran	Disimpan	Item Cek / Cek	Ilustrasi
U M U M U M	Sertifikat Pendaftaran	/ /	/ /	/ / Remarks	Ruang Kapten	Terdapat di Kapal Ya tdk Tanggal: / /	
	Surat ijin stasiun Radio	/ /	/ /	/ / Remarks	Ruang Kapten	Terdapat di Kapal Ya tdk Tanggal: / /	
	Sertifikat Klass	/ /	/ / / /	/ / Remarks	Ruang Kapten	Terdapat di Kapal Ya tdk Tanggal: / /	
SERTIFIKAT MENURUT UNDANG-UNDANG	Sertifikat Lambung Timbul	/ /	/ /	/ / Remarks	Ruang Kapten	Terdapat di Kapal Ya tdk Tanggal: / /	
	Sertifikat Keselamatan Konstruksi (Safcon)	/ /	/ / / /	/ / Remarks	Ruang Kapten	Terdapat di Kapal Ya tdk Tanggal: / /	
	Sertifikat Keselamatan Peralatan	/ /	/ / / /	/ / Remarks	Ruang Kapten	Terdapat di Kapal Ya tdk Tanggal: / /	
	Sertifikat Keselamatan Radio	/ /	/ /	/ / Remarks	Ruang Kapten	Terdapat di Kapal Ya tdk Tanggal: / /	
	Sertifikat Intern. Pencegahan Pencemaran Minyak (IOPPC)	/ /	/ / / /	/ / Remarks	Ruang Kapten	Terdapat di Kapal Ya tdk Tanggal: / /	
	Sertifikat Manajemen Keselamatan (SMC)	/ /	Audit Lanjutan / /	/ / Remarks	Kantor Kapal	Terdapat di Kapal Ya tdk Tanggal: / /	
	Salinan Dokumen Compliance (Copy of Document of Compliance (DOC))	/ /	/ /	/ / Remarks	Kantor Kapal	Terdapat di Kapal Ya tdk Tanggal: / /	

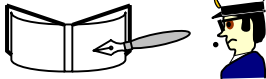
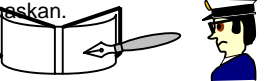
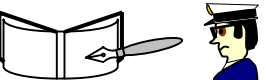

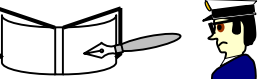
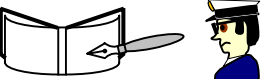
Chapter 03	PSC	
Bab 01	SERTIFIKAT & DOKUMEN	

Untuk	Item Cek	Tgl. Exp.	Endorsement Terakhir	Tanggal Pengeluaran	Disimpan	Item Cek / Cek	Ilustrasi
DOKUMEN DAN MANUAL	Buklet Informasi Stabilitas	Klass()	Terdapat di Kapal? Dimengerti oleh Perwira?		Ya tdk Tgl: / / Ya tdk Tgl: / / Remarks	Kantor Kapal	
	Pola penanggulangan Keadaan Darurat Pencemaran Minyak di Kapal (SOPEP)	Klass()	Terdapat di Kapal? Dimengerti oleh semua Awak Kapal?		Ya tdk Tgl: / / Ya tdk Tgl: / / Remarks	Ruang Kapten	
	Buku Catatan Minyak	Pejabat DiCap Oleh: () Bukan Pejabat	Terdapat di Kapal? Dimengerti oleh semua Awak mesin? Didata dengan baik?		Ya tdk Tgl: / / Ya tdk Tgl: / / Ya tdk Tgl: / / Remarks	ECR	
DOKUMEN DAN MANUAL	Buklet Cargo Gear	Dikeluarkan Oleh Klass()	Terdapat di Kapal?		N/A Ya tdk Tgl: / /	Ruang Kapten	
			Survey Tahunan Inspeksi visual Pengesahan terakhir? Apakah cargo gear ditemukan dalam keadaan baik oleh inspeksi visual?		Tgl: / / Ya tdk Tgl: / / Remarks		
			Survey tiap empat tahun Overhaul dan tes beban Pengesahan terakhir? Apakah telah dilaksanakan overhaul dan tes beban pada Cargo Gear dan ditemukan dalam keadaan baik?		Tgl: / / Ya tdk Tgl: / / Remarks		
	Buklet Cargo Gear Untuk: Canada India Pakistan Australia	Dikeluarkan Oleh Galangan Kapal	Apakah Catatan Overhaul telah dilaksanakan di kapal? Apakah Catatan Overhaul di Cap oleh Galangan?		N/A Ya tdk Tgl: / / Ya tdk Tgl: / / Remarks	Ruang Kapten	
DOKUMEN DAN MANUAL	Oil /Chemical tankers	Klass()	Terdapat di Kapal? Dimengerti oleh semua Perwira?		Tgl: / / Ya tdk Tgl: / / Ya tdk Remarks	Kantor Kapal	
			Terdapat di Kapal? Dimengerti oleh semua Awak Kapal?		Tgl: / / Ya tdk Tgl: / / Ya tdk Remarks	Ruangan Kontrol Muatan	
			Terdapat di Kapal? Dimengerti oleh semua Awak Kapal?		Tgl: / / Ya tdk Tgl: / / Ya tdk Remarks		

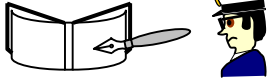
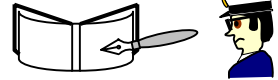

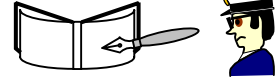
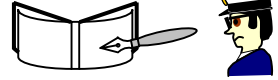
Chapter 03	PSC	
Bab 02	PUBLIKASI NAUTIKA & KONVENSI INTERNASIONAL	

Untuk	Item Cek	Disetujui Oleh	Poin Cek	Cek	Disimpan di	Ilustrasi
PUBLIKASI NAUTIKA DAN KONVENSI INTERNASIONAL	Publikasi Nautika		Tanggal: / / Dikoreksi baik dengan Notice dari pelaut? Ya tdk Tgl: / /	Ruang Tabel/peta	SOLAS Bab. V R. 20, 21	
			Tanggal: / / Tergantung edisi di kapal? Ya tdk Tgl: / /			
			Tanggal: / / Tergantung edisi di kapal? Y N Date: / /			
			Tanggal: / / Digunakan Tabel dan daftar Mercu suar? Ya tdk Tgl: / /			
			Tanggal: / / Tergantung edisi di Kapal? Ya tdk Tgl: / /			
			Tanggal: / / Tergantung edisi di kapal? Ya tdk Tgl: / /			
PUBLIKASI NAUTIKA DAN KONVENSI INTERNASIONAL	Konvensi Internasional		Terdapat di kapal? Ya tdk Tgl: / /	Anjungan	SOLAS Bab.V R.20, 21	
			Terdapat di Kapal? Ya tdk Tgl: / /			
			Terdapat di kapal? Ya tdk Tgl: / /			
			Terdapat di Kapal? Ya tdk Tgl: / /			
			Terdapat di kapal? Ya tdk Tgl: / /			
			Terdapat di Kapal? Ya tdk Tgl: / /			

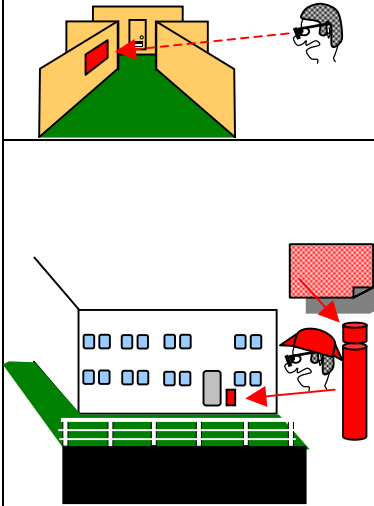
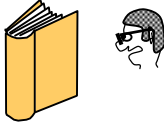
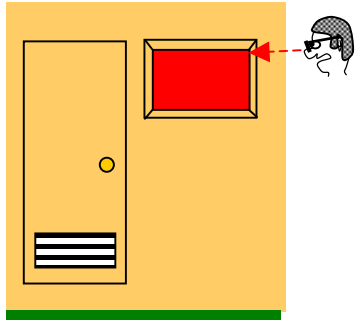
Chapter 03	PSC	
Bab 03	BUKU CATATAN MASUKAN KEJADIAN (LOGBOOK ENTRIES)	

Untuk	Item Cek	Point Cek	Cek	Peraturan yang diterapkan	Ilustrasi	
BUKU CATATAN MASUKAN KEJADIAN	Tes	Tes Operasi Sistim Steering Gear	Steering gear diuji 12 Jam sebelum keberangkatan dari pelabuhan.	Ya tdk Tgl pengujian terakhir: / / Remarks	SOLAS Bab. V R.19.2	Sistim kemudi telah diuji dan ditemukan dlm kondisi yg memuaskan di pelabuhanxxxxx pada dd/mm/yy. 
	Pengujian	Tes operasi darurat Steering Gear	Sistim steering darurat diharapkan diuji setiap 3 bulan	Ya tdk Tgl pengujian terakhir: / / Remarks	SOLAS Bab. R.19.3	Sistim steering darurat telah diuji dan ditemukan dalam kondisi yg memuaskan. 
		Pengujian Abandon ship	Suatu pengujian Abandon Ship utk semua awak kapal dapat dilaksanakan dalam 24 Jam dari keberangkatan jika lebih dari 25% dari semua Awak kapal diganti.	Ya tdk Tgl pengujian terakhir: / / Remarks		Pengujian Lifeboat dilaksanakan setelah meninggalkan pelabuhan xxxxx. 
		Pengujian Rescue	Suatu pengujian rescue boat diharapkan dapat dilaksanakan tiap bulan. Sebuah tes operasional dari rescue boat diharapkan dapat dikerjakan bulanan jika memungkinkan, tapi berselang seling tidak lebih dari 3 bulan.	Ya tdk Tgl pengujian terakhir: / / Remarks		Menjalankan dan meluncurkan Rescue boat ldi pelabuhan xxxxx. 
		Pengujian Pemadam Kebakaran	Sebuah latihan pemadam kebakaran yg menyertakan semua Awak kapal dilaksanakan dalam 24 jam dari keberangkatan jika lebih dari 25% dari semua Awak kapal diganti. Suatu latihan pemadam kebakaran menyertakan semua awak kapal dilaksanakan tiap bulan. Pompa pemadam kebakaran diharapkan dapat beroperasi dan memeriksa tekanan air.	Ya tdk Tgl pengujian terakhir: / / Ya tdk Tgl pengujian terakhir: / / Ya tdk Tgl: / / Remarks		Pelaksanaan pengujian pemadam kebakaran dan menyalakan pompa pemadam kebakaran. Semua ditemukan dalam kondisi baik dan siap utk dipakai. 
		Official Log-book	Catatan latihan di data dalam Official Log-book	Ya tdk Tgl: / / Remarks		
	Pelatihan/Instruksi	Peralatan Life-Saving	Semua anggota awak kapal baru menerima instruksi operasi LSA dan pelatihan dalam seminggu berturut-turut pada saat bergabung.	Ya tdk Tgl pengujian terakhir:l: / / Remarks	SOLAS Bab. R.19.4	Anggota awak kapal baru diinstruksikan dalam penggunaan peralatan life saving dan tingkat kepuasan dari pengetahuan yang telah dicapai. 



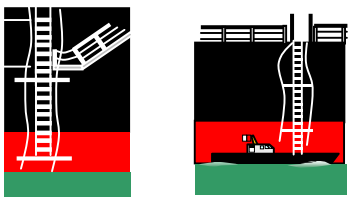
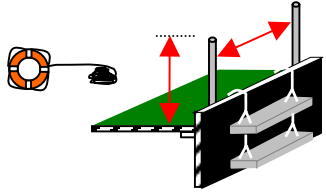
Chapter 03	PSC	
Bab 03	BUKU CATATAN MASUKAN KEJADIAN (LOGBOOK ENTRIES)	

Untuk	Item Cek	Point Cek	Cek	Peraturan yang diterapkan	Ilustrasi		
BUKU CATATAN MASUKAN KEJADIAN	Inspeksi	Mingguan	Suatu pemeriksaan peluncuran alat dari life boat, life raft dan rescue boat untuk dapat dilaksanakan.	Ya tdk Tgl pengujian terakhir: / / Remarks	SOLAS Bab III R.20.6	Peluncuran gear dari semua life-boats, life-rafts and rescue-boat diperiksa dan ditemukan dalam kondisi baik dan siap untuk dipakai. 	
			Semua mesin life-boats and rescue boat dapat dijalankan di depan dan diburitan kapal dalam 3 menit.	Ya tdk Tgl pengujian terakhir: / / Remarks		Mesin dari lifeboats and rescue-boat dihidupkan dan dijalankan sedikitnya untuk 3 menit, kemudian menemukan keadaannya dalam kondisi baik. 	
			Alarm Darurat Umum agar dapat diuji.	Ya tdk Tgl pengujian terakhir: / / Remarks		Menguji alarm umum dan mendapatkannya dalam keadaan siap dipakai. 	
	Catatan	Catatan Inspeksi	Bulanan	Semua peralatan lifeboat dan life-saving dapat dibuktikan dan untuk memferifikasikan keadaan yang berlawanan dengan ceklist yang ada.	Ya tdk Tgl pengujian terakhir: / / Remarks	SOLAS Bab. III R.20.7	Ferivikasi semua peralatan lifeboat dan life-saving yang bertentangan dengan ceklis dan mendapatkan hasilnya dalam keadaan baik. 
			Semua catatan pemeriksaan didata dalam log-book.	Ya tdk Tgl pengujian terakhir: / / Remarks	SOLAS Bab. III R.19		

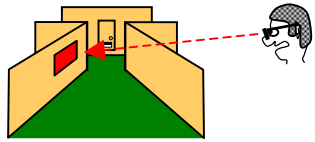
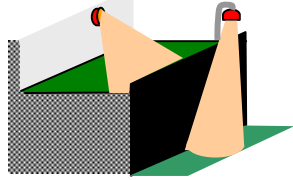

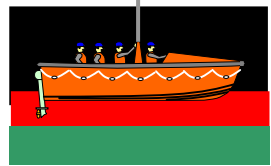
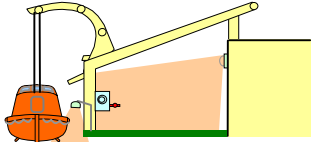
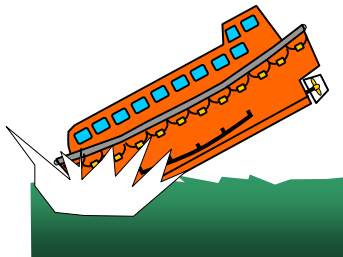
Chapter 03	PSC	
Bab 04	KESELAMATAN SECARA UMUM	

Untuk	Item Cek	Point Cek	Cek	Peraturan yang diterapkan	Ilustrasi
KESELAMATAN SECARA UMUM	Rencana pengawasan Pemadam Kebakaran	Apakah FCP's telah ditempatkan pada setiap akomodasi gang kapal?	Ya tdk Tgl: / /	SOLAS Bab. II-2 R.20	
		Apakah FCP's telah disiapkan pada peti kedap air(kontainer watertight) di luar dan dipintu masuk akomodasi utama?	Ya tdk Tgl: / /		
		Apakah semua itu dalam bahasa yang dimengerti oleh semua Anggota awak kapal? English Indonesian Japanese Spanish	Ya tdk Tgl: / /		
		Apakah perencanaan diperbaharui sesuai keperluan?	Ya tdk Tgl: / / Remarks		
	Buku petunjuk untuk pemeliharaan dan operasi sistim pemadam kebakaran	Apakah manual itu dapat dengan mudah dimengerti dan diakses oleh semua anggota awak kapal?	Ya tdk Tgl: / /	Remarks	
		Apakah bahasanya dapat dimengerti oleh semua anggota awak kapal? English Indonesian Japanese Spanish	Ya tdk Tgl: / /		
	Daftar Inspeksi	Apakah daftar inspeksi ditempatkan dalam anjungan navigasi, ruangan, mesin dan disetiap gang kapal akomodasi di dek?	Ya tdk Tgl: / /	Remarks	
		Apakah semua itu menunjukkan tugas-tugas dari tiap orang?	Ya tdk Tgl: / /		
		Apakah semua itu ditulis dalam bahasa yang dimengerti oleh semua anggota awak kapal? English Indonesian Japanese Spanish	Ya tdk Tgl: / /		
	KESELAMATAN SECARA UMUM	Manual Pelatihan	Apakah manualnya disediakan di ruang makan awak kapal/officer dan ruang rekreasi atau di kamar masing-masing awak kapal?	Ya tdk Tgl: / /	SOLAS Bab. III R.35
Ruang makan Officer Ruang makan anak buah kapal Ruang Rekreasi Di setiap kamar			Ya tdk Tgl: / / Ya tdk Tgl: / / Ya tdk Tgl: / / Ya tdk Tgl: / /		
		Apakah semua ditulis dalam bahasa yang dimengerti oleh semua anggota awak kapal? English Indonesian Japanese Spanish	Ya tdk Tgl: / / Remarks		


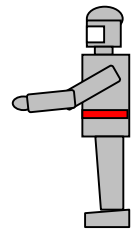
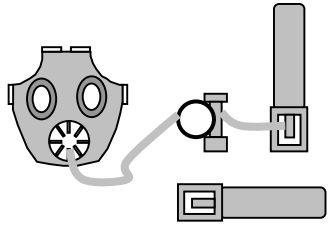
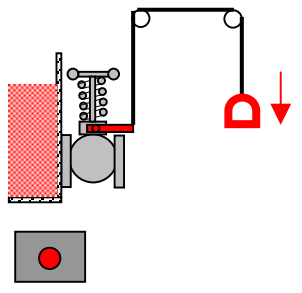

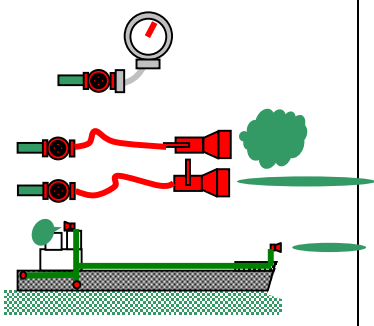
Chapter 03	PSC	
Bab 04	KESELAMATAN SECARA UMUM	

Untuk	Item Cek	Point Cek	Cek	Peraturan yang diterapkan	Ilustrasi
	Instruksi untuk pemeliharaan di atas kapal	Tersedia di kapal sesuai SOLAS Peraturan 36	Ya tdk Tgl: / /	SOLAS Bab. III R.36	
		Menggunakan bahasa yang dimengerti oleh semua awak kapal. English Indonesian Japanese Spanish	Ya tdk Tgl: / / Remarks		
	Penempatan atau penandaan	Penyediaan dalam lifeboats, Rescue-boat dan life-rafts juga mencakup pengendalian peluncurannya.	Ya tdk Tanggal: / /	SOLAS Bab. III R.9	
		Menggunakan symbol mark IMO.	Ya tdk Tgl: / / Remarks		
	Tangga pandu	Apakah item berikut dalam kondisi baik:		SOLAS Bab. V R.17	<p>Pada atau diatas 9m dibawah 9m</p> 
		Tali temali sisi?	Ya tdk Tgl: / /		
		Tangga karet?	Ya tdk Tgl: / /		
		Tangga kayu?	Ya tdk Tgl: / /		
		Apakah tiang penyangga sudah sesuai tersedia?	Ya tdk Tgl: / /		
		Apakah pelampung penolong dengan talinya telah siap dipakai?	Ya tdk Tgl: / / Remarks		

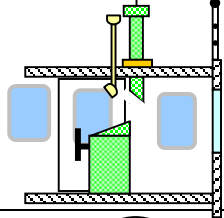
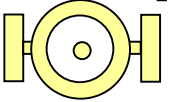


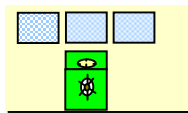
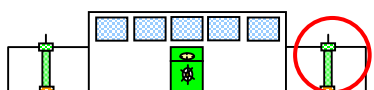
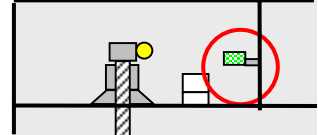
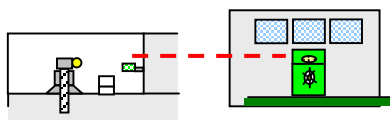

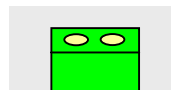
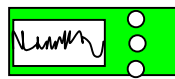
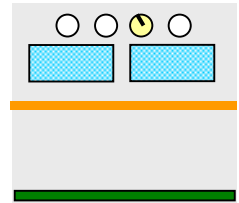
Chapter 03	PSC	
Bab 05	TES DAN PENGUJIAN	

Untuk	Item Cek	Point Cek	Cek	Peraturan yang diterapkan	Ilustrasi
TES OPERASI DAN PENGUJIAN	Pengujian Abandon Ship Setiap bulan Dalam 24 jam dari keberangkatan, jika awak kapal dirubah lebih dari 25%.	Apakah semua anggota awak kapal memahami alarm abandon /tugas-tugasnya dll. Yang telah ditetapkan dalam daftar yang dikumpulkan?	Ya tdk Tgl: / /	SOLAS Bab. V R. 18, 19	
		Sudahkah lampu darurat diuji?	Ya tdk Tgl: / /		
		Apakah semua lifejackets anggota awak kapal dalam keadaan baik dan lengkap dengan : Lampu? Pluit?	Ya tdk Tgl: / / Ya tdk Tgl: / /		
		Dimana mesin lifeboat dan rescue boat: Dinyalakan? Dioperasikan lebih dari 3 menit? Di depan ? Buritan Kapal?	Ya tdk Tgl: / / Ya tdk Tgl: / / Ya tdk Tgl: / / Ya tdk Tgl: / /		
		Sudahkah sekoci penolong/ lifeboats dilemparkan keluar dan diturunkan?	Ya tdk Tgl: / /		
		Sudahkah sekoci penolong/ lifeboats diluncurkan untuk manouvering? (Sedikitnya sekali tiap 3 bulan) Perahu penolong/Rescue boat? Sekoci penolong/Lifeboat?	Ya tdk Tgl: / / Ya tdk Tgl: / /		
			Remarks		

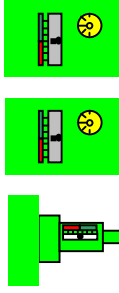
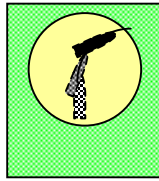
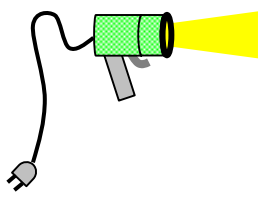
Chapter 03	PSC	
Bab 05	TES DAN PENGUJIAN	

Untuk	Item Cek	Poin Cek	Cek	Peraturan yang diterapkan	Ilustrasi
TES OPERASI DAN PENGUJIAN	Pengujian pemadam kebakaran Setiap Bulan Dalam 24 jam setelah keberangkatan, jika awak kapal dirubah lebih dari 25% dari semua awak kapal.	Apakah semua anggota awak kapal memahami alarm kebakaran/tugas-tugasnya dll. Seperti ditetapkan dalam daftar yang dikumpulkan?	Ya tdk Tgl: / /	SOLAS Bab. III R. 18, 19	
		Sudahkah perlengkapan dari anggota pemadam kebakaran dicek dan ditemukan dalam keadaan memuaskan: Baju pelindung kebakaran () set? Sepatu Boot & Sarung tangan? Suatu Helm kebakaran? Sebuah lampu keamanan elektrik? Sebuah axe?	Ya tdk Tgl: / / Ya tdk Tgl: / / Ya tdk Tgl: / / Ya tdk Tgl: / / Ya tdk Tgl: / /		
		Apakah semua piranti pernapasan yang disatukan telah dicek dan ditemukan dalam keadaan memuaskan: Piranti pernapasan () set lifeline terpasang dengan kencang pada harness Botol cadangan () botol	Ya tdk Tgl: / / Ya tdk Tgl: / / Ya tdk Tgl: / /		
		Apakah semua alat penyedot tangki FO telah diuji dan ditemukan dalam keadaan memuaskan: Oleh udara? Oleh Hyd.? Oleh Kawat/ wire?	Ya tdk Tgl: / / Ya tdk Tgl: / / Ya tdk Tgl: / /		
		Sudahkah sistim pemberhentian darurat fans di uji dan ditemukan dalam keadaan memuaskan?	Ya tdk Tgl: / /		
		Apakah memungkinkan untuk star pompa kebakaran utama dalam E/R dan pompa kebakaran darurat dalam pusat kebakaran untuk menyediakan besarnya tekanan dan panjangnya pancaran air dari alat masing-masing nozzle? Kebakaran utama dan pompa GS. Pompa kebakaran darurat Menghubungkan untuk: Tinggi (anjungan)()kg/cm ² Forecastle ()kg/cm ²	Ya tdk Tgl: / / Ya tdk Tgl: / / Ya tdk Tgl: / / Ya tdk Tgl: / / Ya tdk Tgl: / /		
			Remarks		

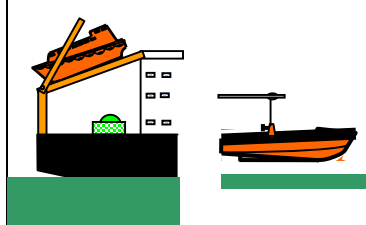
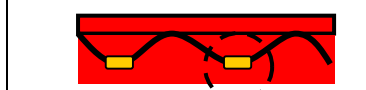
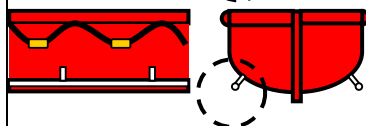
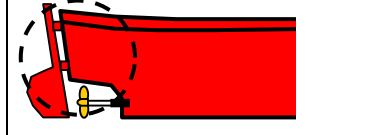
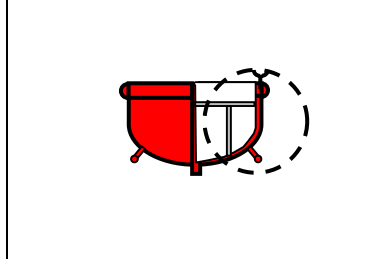
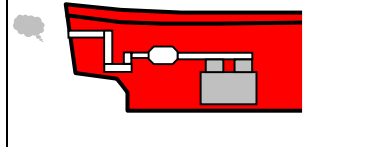
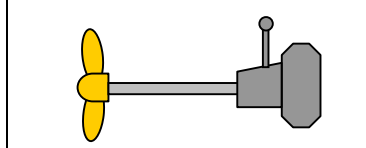
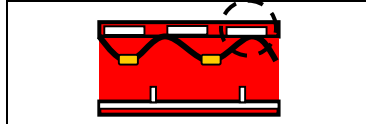
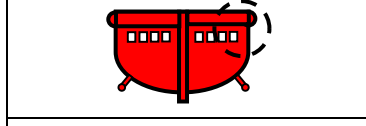
Chapter 03	PSC	
Bab 06	PERALATAN NAVIGASI	

Untuk	Item Cek	Point Cek	Cek	Peraturan yang diterapkan	Ilustrasi
PERALATAN NAVIGASI	Kompas Magnetik	Apakah alat itu dengan jelas dibaca oleh juru mudi pada posisi kemudi utama?	Ya tdk Tgl: / /	SOLAS 88 Bab.V R.12(b)	
		Adakah disana komunikasi yang efektif antara posisi kompas standart dan posisi kemudi utama?	Ya tdk Tgl: / /		
		Tidak adakah bubble sized lebih panjang sari 10 mm dalam diameter di dalam kompas?	Ya tdk Tgl: / /		
		Adakah suatu table/kurva penyimpangan residu (tahunan) tersedia?	Ya tdk Tgl: / / Remarks		
	Kompas Gyro	Apakah dengan jelas dibaca oleh juru mudi di kemudi yang utama?	Ya tdk Tgl: / /	SOLAS Bab.V R.12(d)	
		Adakah Gyro utama dan Gyro pengulang dalam kondisi yang baik?	Ya tdk Tgl: / / Remarks		
	Informasi utama untuk posisi kemudi Darurat	Adakah disana sebuah kompas yang menyediakan posisi kemudi darurat dalam tempat steering gear ?	Ya tdk Tgl: / /	SOLAS Bab.V R.12(f)	
		Adakah disana suatu makna komunikasi yang efektif antara anjungan dan posisi kemudi darurat?	Ya tdk Tgl: / / Remarks		
	Radar	Apakah semua radar bekerja dengan memuaskan? Apakah fasilitas yang direncanakan tersedia?	Ya tdk Tgl: / / Ya tdk Tgl: / / Remarks	SOLAS Bab.V R.12(g),(i)	
	ARPA (Kapal pada dan diatas 10,000 Gloss Tons)	Apakah ARPA bekerja dengan memuaskan?	Ya tdk Tgl: / / Remarks	SOLAS Bab.V R.12(j)	
Echo Sounder	Apakah echo sounder bekerja dengan memuaskan?	Ya tdk Tgl: / / Remarks	SOLAS Bab.V R.12(k)		
Buku catatan kecepatan dan jarak (Kapal yang dibuat pada dan setelah 01 September telah dicoba menggunakan ARPA)	Apakah Buku catatan bekerja memuaskan?	N/A Ya tdk Tgl: / / Remarks	SOLAS Bab.V R.12(l)		


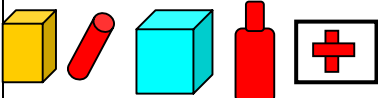

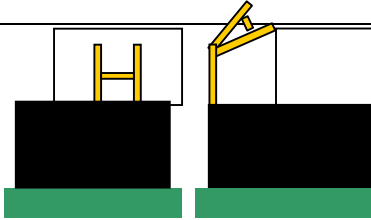
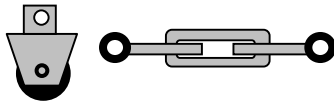
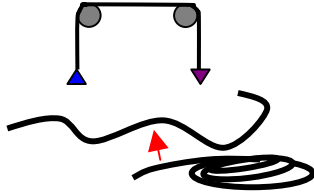
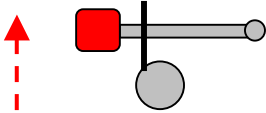
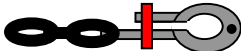
Chapter 03	PSC	
Bab 06	PERALATAN NAVIGASI	

Untuk	Item Cek	Poin Cek	Cek	Peraturan yang diterapkan	Ilustrasi
	Indikator untuk sudut kemudi/Rudder Angle, RPM Baling-baling /Propeller RPM (Pitch dan Operational Mode untuk CPP dan Side Thrusters)	Apakah unit ini bekerja dengan memuaskan: Anjungan? Sayap anjungan/Wing bridge? ECR? Sisi unit CPP Hyd. ?	Ya Tdk Tgl: / / Ya tdk Tgl: / / Ya tdk Tgl: / / N/A Ya tdk Tgl: / / Remarks	SOLAS Bab.V R.12(m)	
	Indikator belok Rate-of (Kapal pada dan diatas 100,000 gross tonnage dibuat pada dan setelah 01 september 1984)	Apakah RTI bekerja dengan memuaskan?	Ya tdk Tgl: / / Remarks	SOLAS Bab.V R.12(n)	
	Lampu signal Daylight	Apakah SL bekerja dengan memuaskan? Apakah sebuah power supply darurat 24V tersedia?	Ya tdk Tgl: / / Ya tdk Tgl: / / Remarks	SOLAS Bab.V R.11	

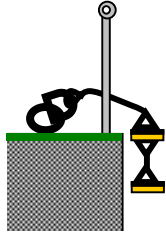
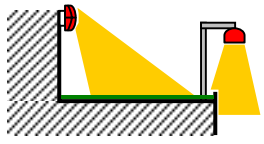
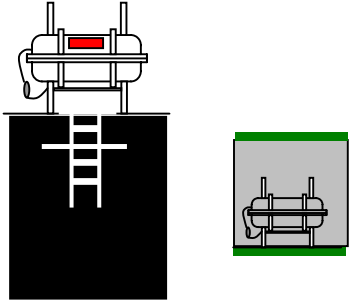
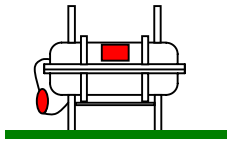
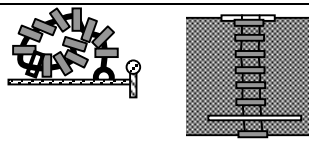
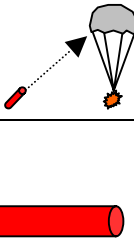
Chapter 03	PSC	
Bab 07	PERLENGKAPAN ALAT PENYELAMAT	

Untuk	Item Cek	Point Cek	Cek	Peraturan yang diterapkan	Ilustrasi
PERLENGKAPAN ALAT PENYELAMAT	Sekoci Penolong dan Perahu penolong	Apakah lambung kapal (didalam/diluar) dalam kondisi yang baik tanpa karat dan tanpa perbaikan pada dasarnya?	Ya tdk Tgl: / /	SOLAS Bab. III R.20, 34, 35, 36	
		Apakah tali pegangan tersedia pada kedua sisi?	Ya tdk Tgl: / /		
		Apakah ikat tiang puncak terdapat pada kedua sisi dari bawah?	Ya tdk Tgl: / /		
		Apakah rudderstock, Kemudi & tangkai kemudi dan penghalang buritan dijaga dengan baik?	Ya tdk Tgl: / /		
		Apakah Item berikut dalam keadaan baik:			
		Bangku melintang sekoci?	Ya tdk Tgl: / /		
		Bangku samping?	Ya tdk Tgl: / /		
		Lubang keliti/Clutch holes?	Ya tdk Tgl: / /		
		Bordu/tutup tajuk/Gunwales?	Ya tdk Tgl: / /		
		Mesin/Engine?	Ya tdk Tgl: / /		
		Dudukan mesin/Engine seating?	Ya tdk Tgl: / /		
		Pipa exhaust/Exhaust pipes?	Ya tdk Tgl: / /		
		Propeller?	Ya tdk Tgl: / /		
Shafting?	Ya tdk Tgl: / /				
Clutch?	Ya tdk Tgl: / /				
Adakah tape yang memantulkan cahaya terpasang pada lambung?	Ya tdk Tgl: / /				
Adakah nama kapal, jumlah orang, dimensi, pendaftaran pelabuhan dll tertanda/terdapat pada lambung?	Ya tdk Tgl: / /				
Adakah sebuah drain plug tersedia, dijamin aman oleh suatu rantai dan posisinya memadai?	Ya tdk Tgl: / /				
Adakah pompa bilge dan pipa karet dalam keadaan yang baik dan di tes secara berkala?	Ya tdk Tgl: / /				
	Remarks				

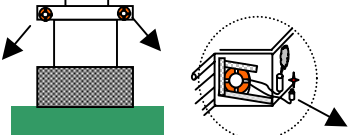


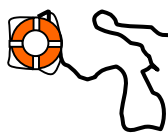


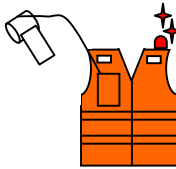
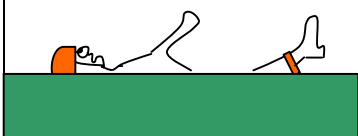

Chapter 03	PSC	
Bab 07	PERLENGKAPAN ALAT PENYELAMAT	

Untuk	Item Cek	Poin Cek	Cek	Peraturan yang diterapkan	Ilustrasi	
PERLENGKAPAN ALAT PENYELAMAT	Inventaris Lifeboat	Apakah masing-masing item dan kuantitasnya telah dibuktikan menurut dengan Cek lis inventaris?	Ya tdk Tgl: / /	SOLAS Bab. III R.20		
		Apakah tanggal dari provisions pyrotechnics, dan pemadam api portable dalam keadaan masih berlaku?	Ya tdk Tgl: / /			
		Apakah peti kedap air/Kontainer watertight Dalam keadaan baik?	Ya tdk Tgl: / / Remarks			
	Penyimpanan Lifeboat dan /atau Rescue Boat	Apakah perahu dapat dimuat dengan aman?	Ya tdk Tgl: / /			
		Apakah piranti pengangkatan dalam keadaan baik?	Ya tdk Tgl: / / keterangan			
	Pengaturan peluncuran sekoci penolong dan /atau perahu penolong (Rescue Boat)	Apakah Item berikut dalam keadaan baik:				
		Dewi sekoci/Davits?	Ya tdk Tgl: / /			
		Blocks?	Ya tdk Tgl: / /			
		Falls?	Ya tdk Tgl: / /			
		Mata bantalan/Pad eyes?	Ya tdk Tgl: / /			
Links?	Ya tdk Tgl: / /					
Fastenings?	Ya tdk Tgl: / /					
Semua pelengkap lain?	Ya tdk Tgl: / /					
Tali lopor sekoci/Falls	Sudahkah tali lopor diputar sampai habis pada ujungnya sedikitnya setiap 30 bulan?	Ya tdk Tgl: / /				
	Sudahkah tali lopor diperbaharui sedikitnya tiap 5 tahun.	Ya tdk Tgl: / /				
Mesin Derek/Winch	Apakah rem pada mesin Derek bekerja dengan baik?	Ya tdk Tgl: / /				
	Apakah rem mesin Derek diuji secara menyeluruh sedikitnya setiap 5 tahun?	Ya tdk Tgl: / /				
Alat pelepas sekoci/Release gear	Apakah alat pelepas sekoci dalam keadaan baik?	Ya tdk Tgl: / /				
	Apakah alat pelepas sekoci diperiksa secara seksama dan diuji sedikitnya tiap 5 tahun?	Ya tdk Tgl: / /				


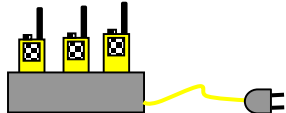
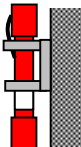
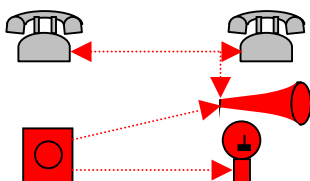
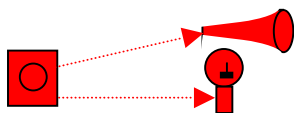
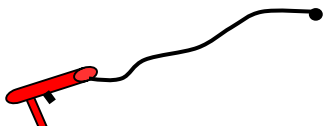
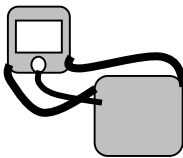
Chapter 03	PSC	
Bab 07	PERLENGKAPAN ALAT PENYELAMAT	

Untuk	Item Cek	Point Cek	Cek	Peraturan yang diterapkan	Ilustrasi
LIFESAVING APPLIANCES	Pengaturan peluncuran pada sekoci penolong dan/atau perahu penolong	Apakah item berikut ada dalam keadaan baik:	Ya tdk Tgl: / /	SOLAS Bab. III R.20	
		Pelincir sekoci/Skates?	Ya tdk Tgl: / /		
		Bantalan/Fenders?	Ya tdk Tgl: / /		
		Tangga embarkasi/Embarkation ladders?	Ya tdk Tgl: / /		
		Pegangan tangan/Handholds?	Ya tdk Tgl: / /		
	Tali temali samping/Side ropes?	Ya tdk Tgl: / /			
	tangga/Steps?	Ya tdk Tgl: / /			
	Fitting shackles?	Ya tdk Tgl: / /			
	mata bantalan/Pad eyes?	Ya tdk Tgl: / /			
	Lampu embarkasi Boat dan power daruratnya?	Ya tdk Tgl: / / Remarks			
Rakit Penolong kembang (Inflatable Liferrafts)	Apakah rakit penolong dapat digelembungkan dengan roda pelepasnya dari pembuatnya sedikitnya setiap 12 bulan kecuali ketika ada otorisasi penambahan waktu oleh bendera Negara kapal?	Ya tdk Tgl: / /	SOLAS Bab. III R.31		
	Apakah nama pembuatnya, no. seri, tanggal service terakhir, jumlah orang, dll. Tervera dengan jelas pada peti rakit penolong?	Ya tdk Tgl: / /			
	Apakah rakit penolong dapat digelembungkan dengan alat retro-reflective tapes?	Ya tdk Tgl: / / Remarks			
Tempat penyimpanan rakit penolong/ Liferrafts	Apakah rakit penolong disimpan dalam keadaan baik?	Ya tdk Tgl: / /	SOLAS Bab. III R.31		
	Apakah pelepasan dengan hidrostatik dijamin dengan aman?	Ya tdk Tgl: / /			
	Adakah instruksi pelepasan pada tempatnya?	Ya tdk Tgl: / /			
	Apakah tangga embarkasi dalam keadaan baik?	Ya tdk Tgl: / / Remarks			
Tanda Isyarat (Distress Flares)	Apakah terdapat 12 parasut isyarat roket diatas kapal?	Ya tdk Tgl: / /	SOLAS Bab. III R. 6.3		
	Apakah tanggalnya masih berlaku?	Ya tdk Masa berlaku: / / Tgl: / / Remarks			

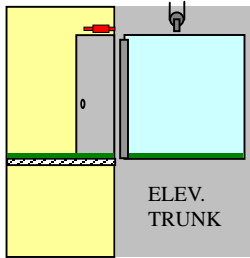
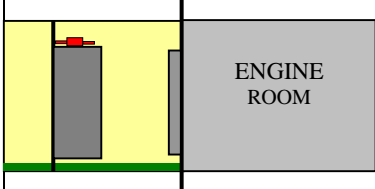
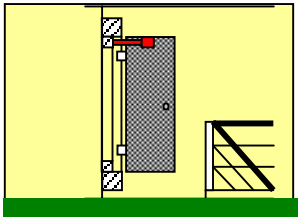
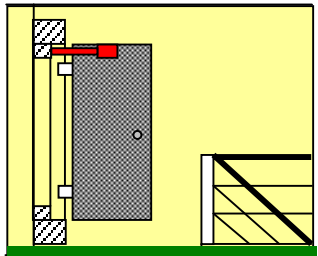
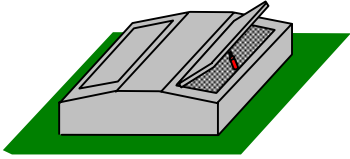
Chapter 03	PSC	
Bab 07	PERLENGKAPAN ALAT PENYELAMAT	

Untuk	Item Cek	Poin Cek	Cek	Peraturan yang diterapkan	Ilustrasi
PERLENGKAPAN ALAT PENYELAMAT	Pelampung penolong untuk kapal 83 ES	Apakah jumlah yang sesuai dari pelampung dengan tandanya dan tape retro-reflective tersedia?	Ya tdk Tgl: / /	SOLAS Bab. III R.7.1, 32	
		Apakah 2 set dari pelepas pelampung seperti lampu isyarat (SIL) dan isyarat asap terdapat pada sayap nya?	Ya tdk Tgl: / /		
		Apakah lampu pada SILs bekerja dengan tepat?	Ya tdk Tgl: / /		
		Apakah tanggal dari signal asap masih berlaku?	Ya tdk Tgl: / /		
		Apakah operasi pelepasan dengan cepat memuaskannya?	Ya tdk Tgl: / /		
		Sudahkah sedikitnya satu-setengah dari jumlah total pada pelampung diatas kapal dilengkapi dengan SILs?	Ya tdk Tgl: / /		
	Minimum L(m) No. dari pelampung	<100 8	Apakah SILs beroperasi dengan memuaskannya?	Ya tdk Tgl: / /	
		100 <150 10	Sudahkah sedikitnya satu pelampung pada masing-masing sampingnya dilengkapi dengan tali penolong ? (panjang tali penolong mencapai 30 meter atau dua kali tingginya pada penyimpanan diatas garis air dalam kondisi pelayaran paling ringan yang mana mengikuti pula pada pelayaran besar).	Ya tdk Tgl: / /	
	150 <200 12	Apakah jumlahnya sama pelampung yang dimuat tanpa penyimpanan yang terikat pada masing-masing samping kapal?	Ya tdk Tgl: / /		
	200 14		Ya tdk Tgl: / /		
	Baju apung (Lifejackets)	Sudahkah baju apung/ lifejacket yang terdapat tape retro-protective tersedia untuk masing-masing orang diatas kapal? -Untuk kapal 83 NS- Penambahan baju apung/lifejackets untuk orang-orang dan untuk digunakan pada saat penyelamatan. Anjungan ()pcs Tempat kelasi/Forecastle ()pcs ECR ()pcs apakah beberapa baju apaung/ lifejacket dilengkapi dengan pluit dan lampu?	Ya tdk Tgl: / / Remarks	SOLAS Bab. III R. 7.2, 32	
	Immersion Suits	Sudahkah sedikitnya pakaian selam tersedia pada masing-masing sekoci? Apakah semuanya siap untuk digunakan dengan segera. (untuk perahu penolong jenis yang terbuka saja).	Ya tdk Tgl: / / Remarks	SOLAS Bab. III R.7.3, 32	
	Pelindung tahan panas (Thermal Protective Aids)	Setelah pengadaan sejumlah baju selam terdapat pada perahu penolong, apakah disana ada juga sejumlah pelindung tahan panas yang sesuai dengan kapasitas dari perahu?	Ya tdk Tgl: / / Remarks	SOLAS Bab. III R.32, 34	

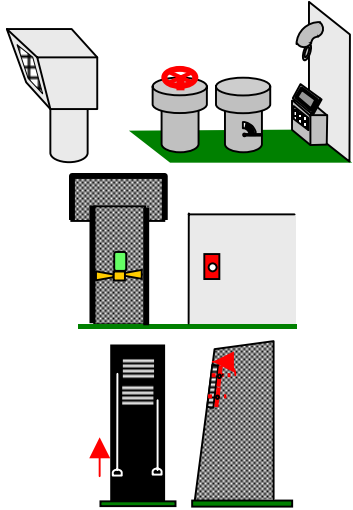

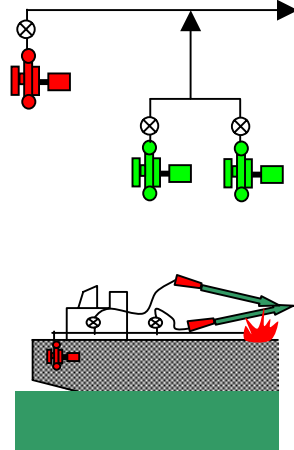
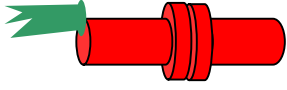

Chapter 03	PSC	
Bab 07	PERLENGKAPAN ALAT PENYELAMAT	

Untuk	Item Cek	Point Cek	Cek	Peraturan yang diterapkan	Ilustrasi
PERLENGKAPAN ALAT PENYELAMAT	Two-Way VHF Radio-Telephone Apparatus	-Untuk kapal 88 NS- Sudahkah tiga set radiotelephones tersedia yang sesuai dengan standart yang harus dipatuhi diatas kapal?	N/A Ya tdk Tgl: / /	SOLAS Bab. III R.6.2.1	
		Apakah baterai secara penuh telah di Chas?	Ya tdk Tgl: / / Remarks		
	Radar Transponders	Sudahkah sedikitnya satu radar transponder tersedia pada masing-masing samping kapal?	Ya tdk Tgl: / / Remarks	SOLAS Bab. III R.6.2.2	
	Komunikasi diatas kapal(Onboard Communications)	Sudahkah makna dari komunikasi dua arah antara stasiun control darurat, muster dan stasiun keberangkatan dan posisi strategis telah tersedia?	Ya tdk Tgl: / / Remarks	SOLAS Bab. III R.6.2.4	
	Alarm Umum keadaan darurat (General Emergency Alarm)	Sudahkah suatu sistim alarm umum untuk memanggil awak kapal untuk pengumpulan stasiun telah tersedia?	Ya tdk Tgl: / / Remarks		
	Alat pelempar tali (Line-Throwing Appliances)	Adakah satu alat pelempar tali yang dapat/mampu diproyeksikan tidak kurang dari 230 m telah tersedia paling sedikitnya 4 tali?	Ya tdk Masa berlaku: Tgl: / / Remarks	SOLAS Bab. III R.18	
	Alat pernapasan untuk menghindar dalam keadaan darurat (Emergency Escape Breathing Devices)				


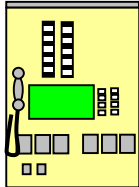
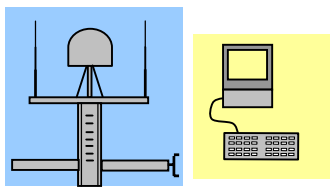
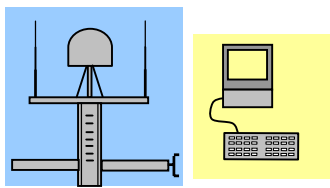
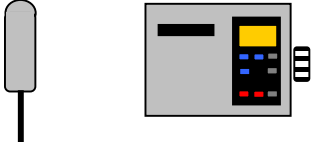
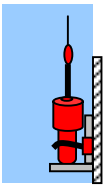


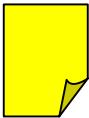
Chapter 03	PSC	
Bab 08	PERLENGKAPAN PEMADAM KEBAKARAN	

Untuk	Item Cek	Poin Cek	Cek	Peraturan Yang Diterapkan	Ilustrasi
PETRELENGKAPAN PEMADAM KEBAKARAN	Pintu Kebakaran	Apakah pintu beroperasi dengan memuaskan pada:			
		Setiap elevator pintu masuk?	N/A Ya tdk Tgl: / /		
		Pintu masuk E/R?	Ya tdk Tgl: / /	SOLAS Bab. II-2 R.47	
		Setiap pintu masuk pada jalan gang tangga?	Ya tdk Tgl: / / Remarks		
	- Untuk kapal 81 NS - Apakah pintu tertutup sendiri , bebas dari penahan yang tersangkut	N/A Ya tdk Tgl: / / Remarks			
	Kaca (Skylights) Atap	Apakah pengaturan tutup pintu terpasang dalam keadaan baik:			
Type operasi Udara?		N/A Ya tdk Tgl: / /	SOLAS Bab. II-2 R.11.2.2		
Type operasi Manual?		N/A Ya tdk Tgl: / /			
- Untuk kapal 81 NS - Apakah kaca atap dibuat dari baja tanpa panel kaca?	N/A Ya tdk Tgl: / / Remarks				

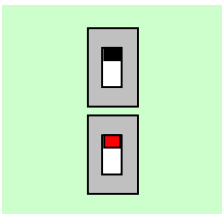

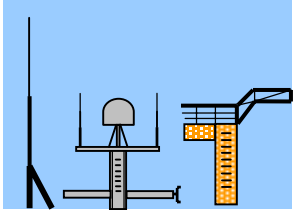

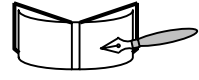

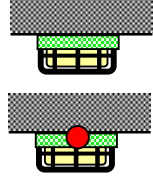
Chapter 03	PSC	
Bab 09	INSTALASI RADIO	

Untuk	Item Cek	Point Cek	Cek	Peraturan yang diterapkan	Ilustrasi
PERLENGKAPAN PEMADAM KEBAKARAN	Plat logam tahan api (Fire Dampers)	Apakah plat logam beroperasi dengan memuaskan, terpasang pada:	Ya tdk Tgl: / /	SOLAS Bab. II-2 R.5.1.4	
		Ruang muatan kapal/Cargo holds?	Ya tdk Tgl: / /		
		Kamar mesin/Engine room?	Ya tdk Tgl: / /		
		Ruang akomodasi /Accommodation spaces?	Ya tdk Tgl: / /		
		Stasiun pengendali/Control stations?	Ya tdk Tgl: / /		
	Ruang lain/Other spaces?	Ya tdk Tgl: / /			
		Apakah "Tutup-buka" beroperasi dengan memuaskan?	Ya tdk Tgl: / / Remarks		
	Pompa Induk kebakaran	Beroperasi memuaskan?	Ya tdk Tgl: / /		
		Mampukan mengatur tekanan yang sesuai?	Ya tdk Tgl: / /		
		Apakah alat pengukur tekanan dalam keadaan baik?	Ya tdk Tgl: / / Remarks		
Pompa Kebakaran Darurat (Emergency Fire Pump)	Beroperasi memuaskan?	Ya tdk Tgl: / / Remarks	SOLAS Bab. II-2 R.4		
	Mampukah mengatur tekanan yang sesuai?	Ya tdk Tgl: / / Remarks			
	Apakah alat pengukur tekanan dalam keadaan baik?	Ya tdk Tgl: / / Remarks			
	Apakah prime mover dalam keadaan baik?	Ya tdk Tgl: / / Remarks			
	Apakah pipa exhaust dalam keadaan baik?	N/A Ya tdk Tgl: / / Remarks			
Pemasangan pipa induk kebakaran (Fire Main Piping)	Apakah pemasangan pipa dalam keadaan baik dan bebas dari kebocoran?	Ya tdk Tgl: / /			
	apakah pemasangan pipa bebas dari doubler, pengapit dan cacat yang jelas?	Ya tdk Tgl: / / Remarks			
Klep Isolasi (Isolation Valves)	Apakah semua klep beroperasi dengan memuaskan?	Ya tdk Tgl: / / Remarks			


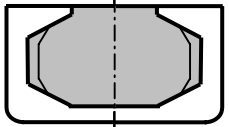
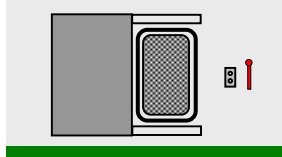
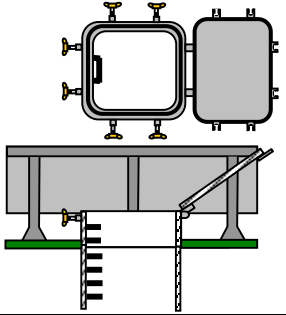
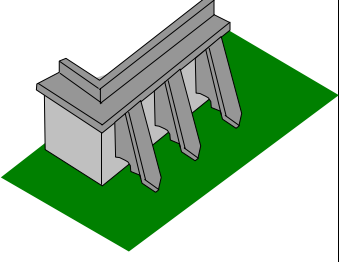
Chapter 03	PSC	
Bab 09	INSTALASI RADIO	

Untuk	Item Cek	Poin Cek	Cek	Peraturan yang diterapkan	Ilustrasi	
INSTALASI RADIO	Untuk kapal yang menerapkan GMDSS	Instalasi VHF	Apakah sistim berfungsi dengan memuaskan?	Ya tdk Tgl: / / Remarks	SOLAS 88 Bab. IV R.7	
		Instalasi MF	Apakah sistim berfungsi dengan memuaskan?	Ya tdk Tgl: / / Remarks		
		Instalasi MF/HF	Apakah sistim berfungsi dengan memuaskan? Apakah NBDP berfungsi dengan memuaskan?	Ya tdk Tgl: / / Remarks	SOLAS 88 Bab. IV R.8, 9, 10, 11	
		INMARSAT	Apakah sistim berfungsi dengan memuaskan? Apakah penerimaan EGC berfungsi dengan memuaskan?	Ya tdk Tgl: / / Remarks		
		NAVTEX Receiver	Apakah sistim berfungsi dengan memuaskan?	Ya tdk Tgl: / / Remarks	SOLAS 88 Bab. IV R.7.1.4	
		Satelit EPIRB	Apakah sistim berfungsi dengan memuaskan?	Ya tdk Tgl: / /	SOLAS 88 Bab. IV R.7.1.6	
			Baterai Apakah masa pakai dari baterai masih berlaku?	Ya tdk Tgl: / /		
			Free float sensor Apakah tanggal terakhir service dari free float sensor tertera dalam serifikat yang berlaku?	Ya tdk Tgl: / /		
		Rader Transponder	Apakah sistim berfungsi dengan memuaskan?	Ya tdk Tgl: / /		
Buku Aturan Radio (Radio rule books)	Apakah semua aturan radio dibukukan di atas kapal?	Ya tdk Tgl: / /				
Pemeliharaan di darat	Adakah PERJANJIAN PEMELIHARAAN DI DARAT terdapat di atas kapal?	Ya tdk Tgl: / / Remarks				

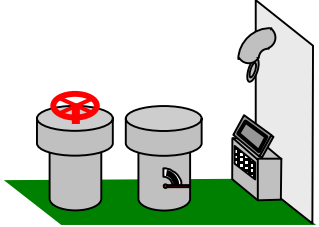
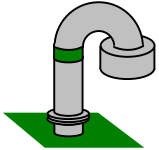
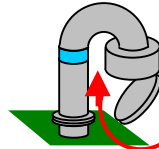
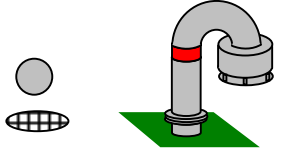
Chapter 03	PSC	
Bab 09	INSTALASI RADIO	

Untuk	Item Cek	Point Cek	Cek	Peraturan yang diterapkan	Ilustrasi
RADIO INSTALLATION	Sumber Energi (Source of Energy)	Apakah item berikut ini memuaskan: Sumber Utama/Main source?	Ya tdk Tgl: / /	SOLAS 88 Bab. IV R.13	
		Sumber Darurat/Emergency source?	Ya tdk Tgl: / /		
		Sumber cadangan/Reserve source?	Ya tdk Tgl: / /		
		Baterai?	Ya tdk Tgl: / /		
		Apakah bobot khusus dari acid, ukuran cairan dan tegangan pusat memuaskan?	Ya tdk Tgl: / / Remarks		
	Antenna	Apakah semua unit dalam keadaan baik tanpa beberapa kerusakan dan/atau ada komponen yang hilang?	Ya tdk Tgl: / /	SOLAS 74 Bab. IV R.10, 16	
Apakah tiang antenna dengan pelindungan ya dalam keadaan baik tanpa karatan berat dan lebar?		Ya tdk Tgl: / / Remarks			
Peralatan dan cadangannya (Tools and Spares)	Apakah persediaan yang cukup terdapat diatas kapal?	Ya tdk Tgl: / / Remarks	SOLAS 74 Bab. IV R.19		
Buku Catatan Radio (Radio Log Book)	Adakah semua catatan yang teratur dibuat dalam buku catatan kejadian/ logbook?	Ya tdk Tgl: / / Remarks			
Jam (Clock)	Apakah Jam akurat?	Ya tdk Tgl: / / Remarks	--		
Pencahayaan di ruang Radio (Lighting in Radio Room)	Apakah lampu berikut ini dalam keadaan baik: Lampu Normal/Normal lights? Lampu Darurat/Emergency lights?	Ya tdk Tgl: / / Ya tdk Tgl: / / Remarks	--		


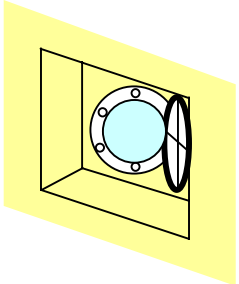
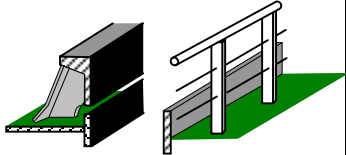
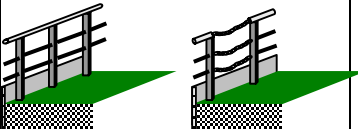
Chapter 03	PSC	
Bab 10	GARIS BEBAN (LOAD LINE)	

Untuk	Item Cek	Poin Cek	Cek	Peraturan yang Diterapkan	Ilustrasi	
GARIS BEBAN	Tanda pada dinding kapal yang tidak tenggelam (Freeboard Marks)	Apakah tanda , jelas /terlihat pada setiap sisi dari lambung kapal?	Ya tdk Tgl: / / Remarks	ILL AX I R. 5 , 6		
	Struktur Bagian Atas penyekat (Superstructure End Bulkhead)	Apakah ada bagian terbuang dalam batas toleransi tanpa penuh karat ?	Ya tdk Tgl: / / Remarks	ILL AX I R. 11		
	Pintu dari semua akses pembuka pada ujung Bulkhead dari struktur atas yang ada. (Doors of all Access Openings in Bulkhead at Ends of Enclosed Superstructures)	Dapatkan keberadaan watertight dirawat?	Ya tdk Tgl: / /	Ya tdk Tgl: / / Remarks	ILL AX I R. 12	
		Apakah disana ada tanda penuh karat dan /atau bagian terbuang?	Ya tdk Tgl: / /			
		Apakah semua gasket dan alat clamping dapat bekerja dengan baik?	Ya tdk Tgl: / / Remarks			
	Mengakses lubang Palka (Access Hatches)	Dapatkan keberadaan watertight terawat?	Ya tdk Tgl: / /	Ya tdk Tgl: / / Remarks	ILL AX I R. 13, 14	
Apakah ambang palka dalam keadaan baik tanpa penuh karat dan /atau bagian terbuang?		Ya tdk Tgl: / /				
Apakah semua gaskets dan alat clamping dapat bekerja dengan baik?		Ya tdk Tgl: / / Remarks				
LOAD LINE	Palka Muatan (Cargo Hatches)	Dapatkan keberadaan watertight terawat?	Ya tdk Tgl: / / Remarks	ILL AX I R. 13, 14, 15, 16		
		Apakah item berikut ini dalam keadaan baik tanpa penuh karat dan atau bagian terbuang? Ambang lubang palka/Hatch coamings	N/A Ya tdk Tgl: / /			
		Tumpuan/Stays	Ya tdk Tgl: / / Remarks			
		Apakah item berikut ini dapat bekerja dengan baik : Palang penekan/Compression bar Packing Alat Clamping /Clamping devices	N/A Ya tdk Tgl: / / Ya tdk Tgl: / / Ya tdk Tgl: / / Remarks			
		Tutup Palka/Hatch covers Apakah tutup palka dalam keadaan baik tanpa penuh karat dan bagian terbuang?	N/A Ya tdk Tgl: / / Remarks			ILL AX I R. 13, 14, 15, 16

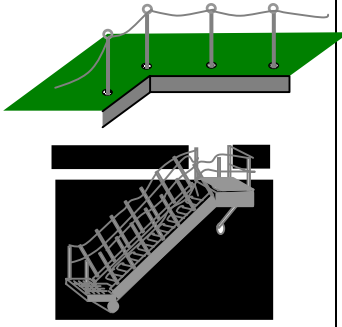
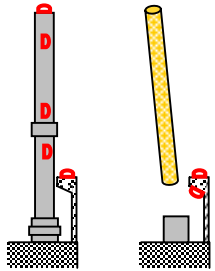



Chapter 03	PSC	
Bab 10	GARIS BEBAN (LOAD LINE)	

Untuk	Item Cek	Point Cek	Cek	Peraturan yang diterapkan	Ilustrasi	
LOAD LINE	Ventilators	Apakah pelindungnya dalam keadaan baik tanpa penuh karat dan ada bagian terbang?	Ya tdk Tgl: / / Remarks	ILL AX I R. 19		
		Apakah alat penutup dalam keadaan baik dan mampu menjaga keberadaan watertight?	Ya tdk Tgl: / / Remarks			
		Apakah packing dan alat penutup dapat bekerja dengan baik?	Ya tdk Tgl: / / Remarks			
	Pipa Udara (Air Pipes)	Apakah semua pipa dalam keadaan baik tanpa penuh karat dan/atau ada bagian terbang?	Ya tdk Tgl: / /	ILL AX I R. 20		
		Apakah pipa udara diatas dalam keadaan baik tanpa penuh karat dan /atau ada bagian terbang?	Ya tdk Tgl: / /			
		Apakah nameplates tertera dan dapat dibaca?	Ya tdk Tgl: / /			
		Tangki F.W. Apakah alas penutup dalam keadaan baik?	Ya tdk Tgl: / /			
		Tangki F.O. Apakah float bolls dibagian atas untuk tangki FO dapat bekerja dengan baik?	Ya tdk Tgl: / / Remarks			
						 

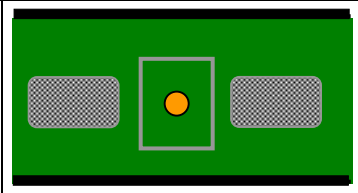
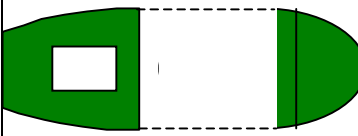
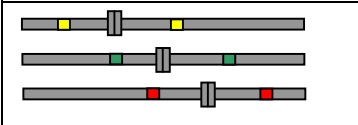
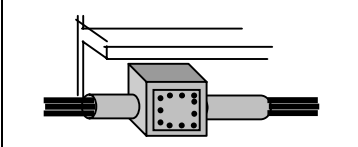
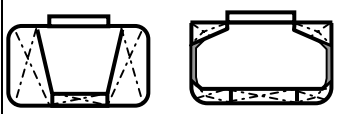
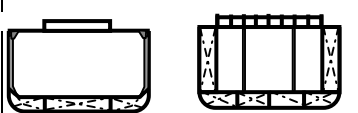
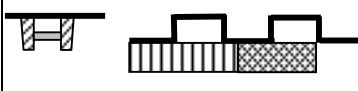
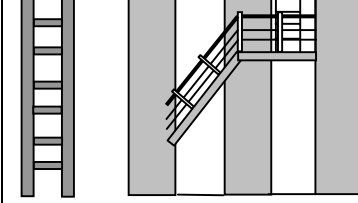
Chapter 03	PSC	
Bab 10	GARIS BEBAN (LOAD LINE)	

Untuk	Item Cek	Poin Cek	Cek	Peraturan yang Diterapkan	Ilustrasi
LOAD LINE	Cargo ports, Lamp way dan pembuka yang serupa	Dapatkan yang berikut ini merawat watertight secara efektif :	N/A	ILL AX I R. 21	
		Pintu muatan/Cargo port?	Ya tdk Tgl: / /		
		Lamp way?	Ya tdk Tgl: / /		
		Apakah semua plat baja dan pemasangannya dalam keadaan baik tanpa penuh karat?	Ya tdk Tgl: / / Remarks		
	Lubang pembuang, lubang masuk, pembuangan (Scuppers, Inlets, Discharges)	Apakah item berikut ini dalam keadaan baik tanpa penuh karat dan/atau bagian terbuang::			
Jendela Samping (Side Scuttles)		Dapatkan keberadaan kedap udara terjaga?	N/A	ILL AX I R. 23	
		Apakah penutup plat baja/deadlights dapat bekerja dengan baik?	Ya tdk Tgl: / / Remarks		
Lubang jalan Air (Freeing Ports)		Apakah pengaturan aliran dapat bekerja dengan baik?	Ya tdk Tgl: / / Remarks	ILL AX I R. 24	
Pagar kapal dan tumpuan, terali pengaman (Bulwarks and Stays, Guard Rails)		Apakah item berikut ini dalam keadaan baik tanpa penuh karat, berlubang dan/atau patah:		ILL AX I R. 25	 
	Pagar kapal/Bulwarks?	Ya tdk Tgl: / / Remarks			
	Tumpuannya/Stays?	Ya tdk Tgl: / / Remarks			
		Terali pengaman/Guard rails?	Ya tdk Tgl: / / Remarks		

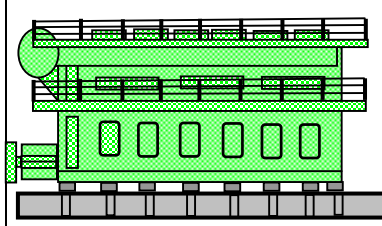
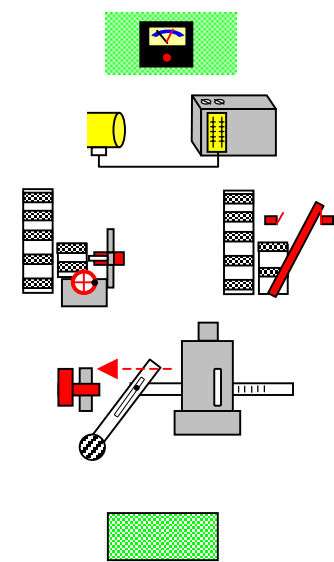
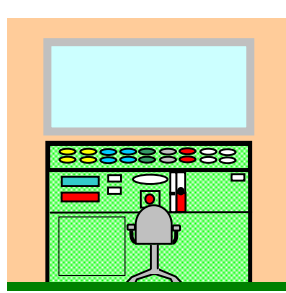
Chapter 03	PSC	
Bab 10	GARIS BEBAN (LOAD LINE)	

Untuk	Item Cek	Point Cek	Cek	Peraturan yang diterapkan	Ilustrasi	
GARIS BEBAN	Tali penolong, Tangga Kapal, jalanan (Life Lines, Gangways, Passages)	Apakah item berikut ini dalam keadaan baik tanpa penuh karat, komponen yang hilang dan/atau terbuang:	Ya tdk Tgl: / / Remarks	ILL AX I R. 25		
		Tali penolong/Life lines?	Ya tdk Tgl: / / Remarks			
		Tangga Kapal/Gangways?	Ya tdk Tgl: / / Remarks			
		Jalanan/Passage?	Ya tdk Tgl: / / Remarks			
	Tegak Lurus, mengikat (Uprights, Lashings)	- Hanya untuk kapal pengangkut papan -		N/A	ILL AX I R. 44	
		Apakah item berikut ini dalam keadaan baik tanpa penuh karat, berlubang dan/atau patah:		Ya tdk Tgl: / / Remarks		
	Soket/Sockets?		Ya tdk Tgl: / / Remarks			
	Eye plates?		Ya tdk Tgl: / / Remarks			
	Tiang penyokong/Stanchions?		Ya tdk Tgl: / / Remarks			
	Apakah persediaan yang cukup berikut ini terdapat diatas kapal:		N/A			
	Rantai ikatan/Lashing chains?		Ya tdk Tgl: / / Remarks			
	Sekrup jarum/Turnbuckles?		Ya tdk Tgl: / / Remarks			
	Kawat/Wire?		Ya tdk Tgl: / / Remarks			
	Segel/Shackles?		Ya tdk Tgl: / / Remarks			

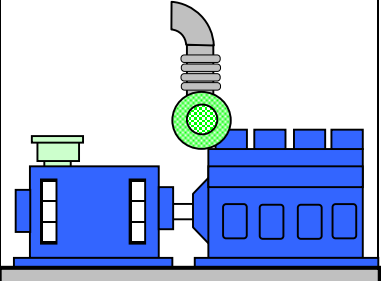
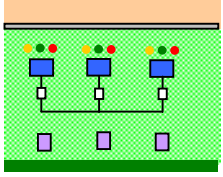
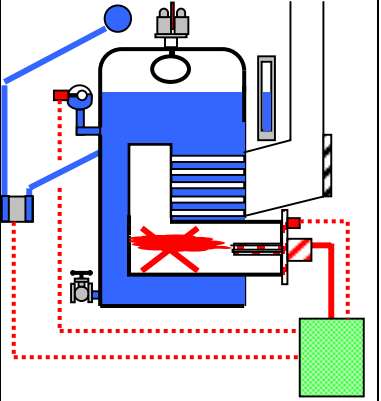
Chapter 03	PSC	
Bab 11	KONSTRUKSI LAMBUNG KAPAL	

Untuk	Cek Item	Cek Poin	Cek	Peraturan yang Diterapkan	Ilustrasi	
KONSTRUKSI LAMBUNG KAPAL DAN SALURAN PIPA DI DEK	Main Deck Plating, Cross Deck Plating	Apakah semua plating dalam keadaan baik tanpa penuh karat, terbuang dan/atau patah?	Ya tdk Tgl: / / Remarks	SOLAS Bab. -1 Part B		
	F'cle Deck Plating, Poop Deck Plating	Apakah semua plating dalam keadaan baik tanpa penuh karat, dan bagian terbuang dan/atau patah?	Ya tdk Tgl: / / Remarks			
	Semua saluran pipa di Dek dengan klep	Apakah semua saluran pipa dalam keadaan baik tnpa penuh karat, ada bagian terbuang dan/atau patah?	Ya tdk Tgl: / / Remarks			
	Bok kabel elektrik dan pipa (Electric Cable Box & Pipe)	Apakah semua sistim dalam keadaan baik dan dapat bekerja dengan baik tanpa penuh karat, ada bagian terbuang dan/atau patah?	Ya tdk Tgl: / / Remarks			
	Palka (Cargo Holds)	Hanya Kapal Barang			N/A	
		Apakah item yang berikut ini dalam keadaan baik tanpa penuh karat, ada bagian terbuang dan/atau patah:				
Sekat pemisah/Bulkheads?		Ya tdk Tgl: / /				
Frames?	Ya tdk Tgl: / /					
Tank top plating?	Ya tdk Tgl: / / Remarks					
Apakah item berikut ini dalam keadaan baik tanpa penuh karat, ada bagian terbuang dan/atau patah.						
Tangga akses / Access ladders?	Ya tdk Tgl: / /					
Pipa Sounding/Sounding pipes?	Ya tdk Tgl: / /					
Pipa Udara/Air pipes?	Ya tdk Tgl: / / Remarks					

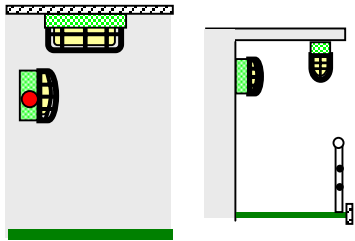
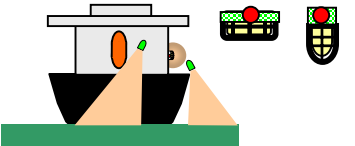
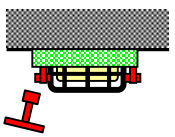
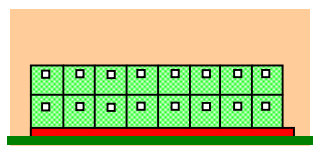
Chapter 03	PSC	
Bab 12	PERMESINAN DI DALAM RUANG MESIN	

Untuk	Item Cek	Point Cek	Cek	Peraturan yang diterapkan	Ilustrasi
PERMESINAN DI DALAM RUANG MESIN	Mesin Induk (Main Engines)	Apakah mesin beroperasi dengan memuaskan? Tekanan mak. /Max. pressure ()kg/cm ² Tekanan Comp. / Comp. pressure ()kg/cm ² Exh. Gas temp. () T/C rev. ()rpm Scav. Air press. ()kg/cm ² Kondisi Star / Starting condition:	Ya tdk Tgl: / / Ya tdk Tgl: / / Ya tdk Tgl: / / Ya tdk Tgl: / / Ya tdk Tgl: / / (baik) (lemah) Tgl: / / Remarks	SOLAS Bab. -1 Part C	
		Jaga alat keselamatan berfungsi dengan baik: Over speed trip? LO low pressure trip? Turning gear Interlock system? Over load interlock? Auto load reducing system?	Ya tdk Tgl: / / Ya tdk Tgl: / / Ya tdk Tgl: / / N/A Ya tdk Tgl: / / N/A Ya tdk Tgl: / / Remarks		
		Lakukan fungsi remote controls dengan baik dalam : kontrol anjungan/Bridge control? Wing consol control? Engine local control stand side? ECR control?	Ya tdk Tgl: / / N/A Ya tdk Tgl: / / Ya tdk Tgl: / / Ya tdk Tgl: / / Remarks		

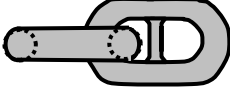
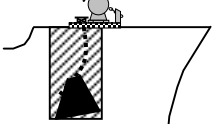
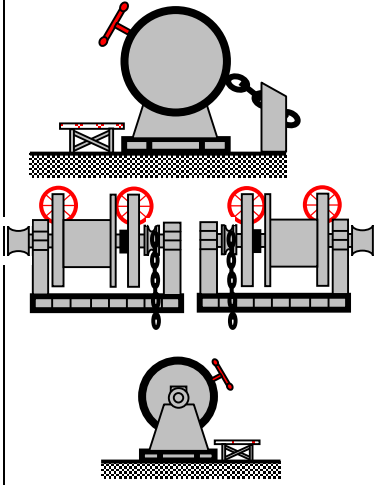
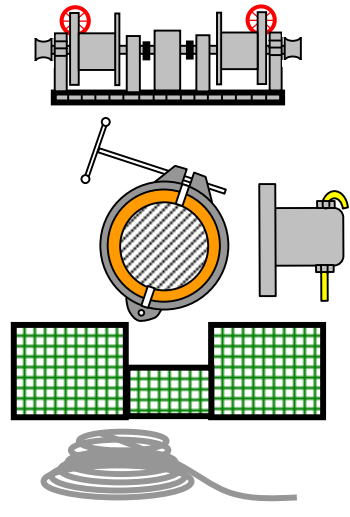
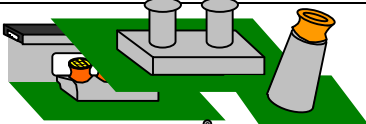
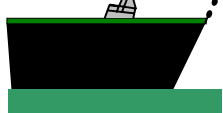
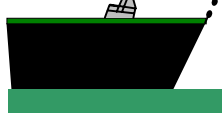
Chapter 03	PSC	
Bab 12	PERMESINAN DI DALAM RUANG MESIN	

Untuk	Item Cek	Poin Cek	Cek	Peraturan Yang Diterapkan	Ilustrasi
PERMESINAN DI DALAM RUANG MESIN	Mesin Generator (Generator Engines)	Lakukan unit-unit ini beroperasi memuaskan?	Ya tdk Tgl: / / Remarks	SOLAS Bab. -1 Part C	
		Lakukan alat keselamatan berikut ini berfungsi dengan memuaskan? Over speed trip?	Ya tdk Tgl: / /		
		LO low pressure trip? Interlock system?	Ya tdk Tgl: / / N/A Ya tdk Tgl: / /		
		Sistim star otomatik/Auto start system?	N/A Ya tdk Tgl: / / Remarks		
		Lakukan remote control berikut ini dan control otomatik berfungsi dengan baik:: Sistim Star Otomatik/Auto start system?	Ya tdk Tgl: / / N/A Ya tdk Tgl: / /		
		Auto load shearing system?	Ya tdk Tgl: / / Remarks		
	Lakukan kontrol boiler dan kondisi burning beroperasi dengan memuaskan?	Ya tdk Tgl: / / Remarks			
Boilers		Lakukan alat keselamatan berikut ini berfungsi dengan baik: Burner cut dengan level controller?	Ya tdk Tgl: / /	SOLAS Bab. -1 Part C	
		Burner cut dengan independent trip system?	Ya tdk Tgl: / /		
		Burner cut dengan flame eye?	Ya tdk Tgl: / / Remarks		
	Lakukan remote control dan control otomatik berikut ini berfungsi dengan baik: Klep pembuka keselamatan boiler/Boiler safety valves open?	Ya tdk			
	Klep pembuka reg./Reg. Valves open?	Ya tdk			
	Burner set fire?	Ya tdk			
	Burner stop?	Ya tdk			
	Alarm level tinggi/High level alarm?	Ya tdk			
	Penghentian pompa FW/FW pump stop?	Ya tdk			
	Star pompa FW/FW pump start?	Ya tdk			
	Aalarm level rendah/Low level alarm?	Ya tdk			
	Burner cut?	Ya tdk Tgl: / / Remarks			

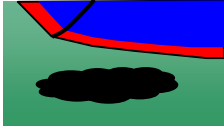
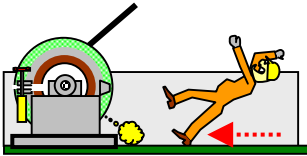

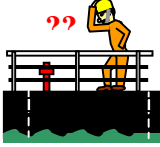
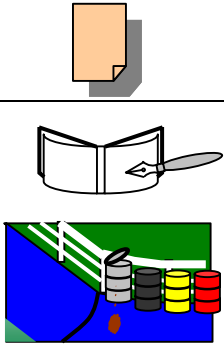
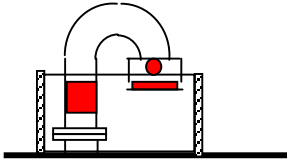
Chapter 03	PSC	
Bab 13	ELEKTRIK DI DALAM RUANG MESIN	

Untuk	Item Cek	Point Cek	Cek	Peraturan yang diterapkan	Ilustrasi	
ELEKTRIK DI DALAM KAMAR MESIN	Penerangan di Ruang mesin (Lighting in E/R)	Apakah item berikut ini dapat bekerja dengan baik: Semua Lampu/All lights? Tutup pelindungnya ?	Ya tdk Tgl: / / Remarks	SOLAS Bab. -1 Part D		
	Penerangan di tempat Acc. (Lighting in Acc. Spaces)	Apakah item berikut ini dapat bekerja dengan baik: Semua lampu/All lights? Tutup pelindungnya?	Ya tdk Tgl: / / Remarks			
	Penerangan di Stasiun kontrol, ruang kerja, ruang kemudi dan ditempat lain (Lighting in Control Station, Working Room, Steering Room and Other Spaces)	Apakah item berikut ini dapat bekerja dengan baik: Semua lampu/All lights? Tutup Pelindungnya/Protection covers or guards	Ya tdk Tgl: / / Remarks	SOLAS Bab. -1 Part D		
	Emergency Cables	Apakah semua cables dan trunking dapat bekerja dengan baik dengan tidak ada kawat yang melintang atau tanda penuh karat, khususnya pada saat cuaca didek?	Ya tdk Tgl: / / Remarks			
	Lampu Darurat (Emergency Lights)	Apakah semua lampu dapat bekerja dengan baik dengan: Isyarat lampu Darurat/Emergency light marked? Tidak ada komponen yang rusak?	Ya tdk Tgl: / / Remarks			
	Lampu tahan ledak dalam tempat berbahaya, ruang pompa, ruang baterai, tempat penyimpanan cat, dll.	Apakah semua lampu dapat bekerja dengan baik dengan : isyarat lampu darurat/Emergency light marked? Tidak ada komponen yang rusak? Suatu persediaan yang cukup dari alat pengaman?	Ya tdk Tgl: / / Remarks			
	Insulating Mats around MSB	Apakah isolasi temporer terdapat diatas kapal atau apakah material isolasi permanent terpasang pada plating dek?	Ya tdk Tgl: / / Remarks			

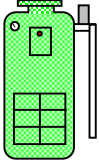
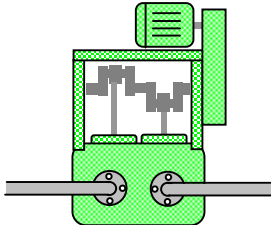
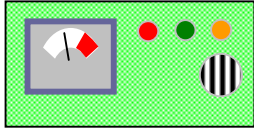
Chapter 03	PSC	
Bab 14	PENGATURAN TEMPAT TAMBAT	

Untuk	Item Cek	Poin Cek	Cek	Peraturan Yang Diterapkan	Ilustrasi
PENGATURAN TEMPAT TAMBAT	Jangkar & kabel rantai (Anchor & Chain Cables)	Apakah semua jangkar dan rantai dalam kondisi dan dapat bekerja dengan baik tanpa ada bagian yang terbuang, hilang atau rusak?	Ya tdk Tgl: / /		
		Apakah tempat penyimpanan rantai dalam keadaan baik dan dapat bekerja dengan baik?	Ya tdk Tgl: / / Remarks		
	Mesin jangkar (Windlass)	Mesin Derek/Winch Apakah kabel gypsies dan barrel ends dalam keadaan baik?	Ya tdk Tgl: / / Remarks		
		Rem tangan (Brake hands) Apakah rem tangan dalam keadaan baik dengan tidak ada pemakaian /pengausan yang berlebihan ?	Ya tdk Tgl: / / Remarks		
		Plat jeruji/Grating plates Apakah grating plates dalam keadaan baik, tanpa ada bagian hilang, terbuang atau bagian yang rusak?	Ya tdk Tgl: / / Remarks		
		Pelindung dan/atau penutup Gear Apakah pelindung dan/atau penutup gear dalam keadaan baik tanpa penuh karat atau kerusakan?	Ya tdk Tgl: / / Remarks		
		Sistim Minyak Hidrolik (Hydraulic oil system) Adakah hydraulic oil system (jika diterapkan) bebas dari kebocoran?	Ya tdk Tgl: / / Remarks		
	Sistim Tambat (Mooring System)	Derek tempat menambat (Mooring winches) Apakah mooring winches dalam keadaan baik?	Ya tdk Tgl: / / Remarks		
		Rem Tangan (Brake hands) Apakah rem tangan dalam keadaan baik dengan tidak ada pemakaian yang berlebihan atau keausan?	Ya tdk Tgl: / / Remarks		
		Plat Jeruji (Grating plates) Apakah Plat jeruji dalam keadaan baik dengan tidak ada bagian terbuang, hilang atau bagian yang rusak?	Ya tdk Tgl: / / Remarks		
		Tali Temali (Ropes) Adakah tali temali yang cukup dalam keadaan baik terseia diatas kapal?	Ya tdk Tgl: / / Remarks		
		Sistim minyakHydraulik Apakah sistim ini (jika diterapkan) bebas dari kebocoran?	Ya tdk Tgl: / / Remarks		
	Tiang Tambatan (Bollards)	Adakah semua bollards dalam keadaan baik?	Ya tdk Tgl: / / Remarks		
	Alat Pengantar untuk tali (Fairleader)	Apakah fairleader dalam keadaan baik?	Ya tdk Tgl: / / Remarks		
Sistim penggandeng darurat (Emergency Towing System)	Hanya untuk kapal tanker apakah sistim penggandeng darurat dalam keadaan baik?	Ya tdk Tgl: / / Remarks			

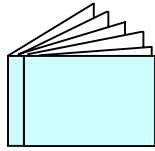
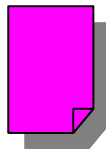
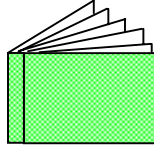
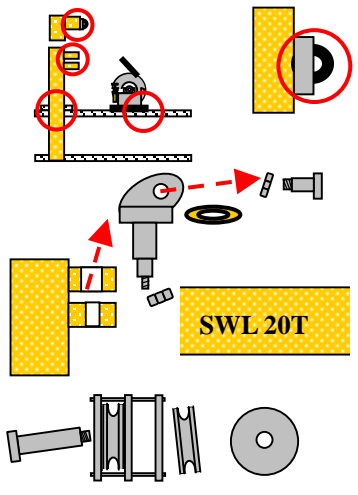
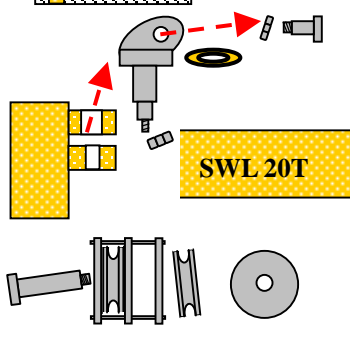
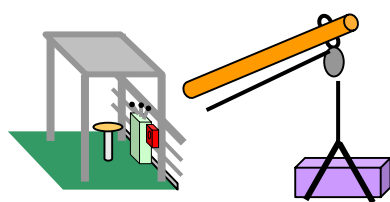
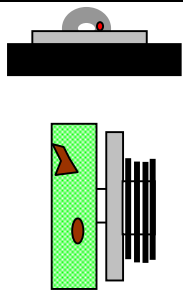
Chapter 03	PSC	
Bab 15	PENCEMARAN LAUT	

Untuk	Item Cek	Point Cek	Cek	Peraturan yang diterapkan	Ilustrasi
PENCEMARAN LAUT	Air Ballas (Ballast Water)	Adakah prosedur ballas di atas kapal?	Ya tdk Tgl: / /		
		Apakah permukaan laut airnya berminyak?	Ya tdk Tgl: / / Remarks		
	Deck	Mesin Hidrolik dan sistim Saluran pipa (Hyd. machinery and piping system) Apakah pipa dan permesinan terbebas dari kebocoran?	Ya tdk Tgl: / / Remarks		
	Gambar/poster (Drawings / Posters)	- Tanda peringatan pencemaran (Pollution awareness sign) - Daftar pengumpulan (Muster list) - Perencanaan control kebakaran (Fire control plan) - Semua tanda keselamatan (All safety sign)	Ya tdk Tgl: / / Remarks		
	Harus Diketahui (Must know)	Pengaturan Tangki (Tanks arrangement) Semua awak kapal (all crew) Tanda-tanda (Marking) Adakah suatu tanda dan diberi cat?	Ya tdk Tgl: / / Ya tdk Tgl: / / Remarks		
	Manajemen Sampah (Garbage Management)	Sistim manajemen Sampah (Garbage Management System) Apakah sistim manajemen sampah diterapkan di atas kapal? Log Sampah (Garbage log) Apakah log sampah dirawat ? Drum Sampah (Garbage Drums) Apakah drum sampah terjaga dengan tutupnya? Apakah drum sampah ditandai dan diberi warna menurut ketentuan MARPOL?	Ya tdk Tgl: / / Ya tdk Tgl: / / Remarks Ya tdk Tgl: / / Remarks	MARPOL AX V	
Tangki penuang minyak (Oil Spill Tank)	Apakah struktur tangki bebas dari karat dan tidak ada bagian yang terbuang?	Ya tdk Tgl: / / Remarks	USCG		

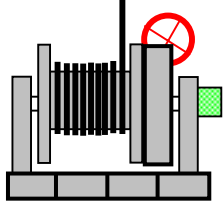
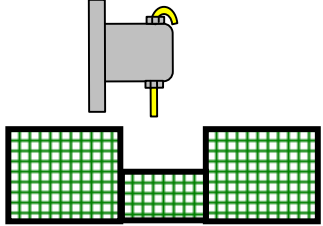
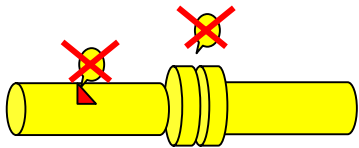
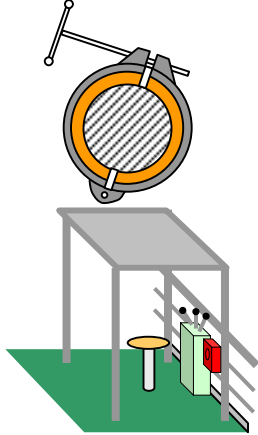
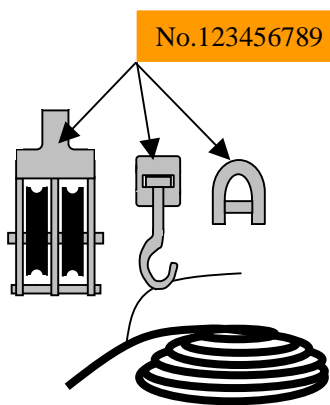
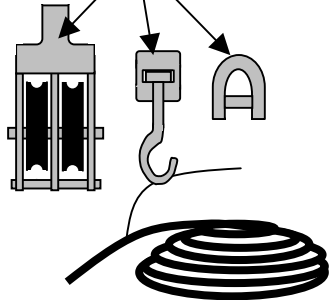
Chapter 03	PSC
Bab 15	PENCEMARAN LAUT

Untuk	Item Cek	Poin Cek	Cek	Peraturan Yng Diterapkan	Ilustrasi
PENCEMARAN LAUTA	Mesin pemisah air berminyak dengan Pompa (Oily Water Separator with Pump)	Apakah sistim beroperasi dengan memuaskan?	Ya tdk	MARPOL AX I R. 16, 17, 19	
		Selubung bagian luar (Outer casing) Apakah semua item bebas dari penuh karat dan bagian terbuang pada selubung bagian luarnya?	Ya tdk		
		Klep (Valves) Apakah operasi dari semua klep memuaskan?	Ya tdk		
		Alat pengukur tekanan (Pressure gauges) Apakah semua alat pengukur tekanan dapat bekerja dengan baik?	Ya tdk Tgl: / / Remarks		
	Saluran Pipa Pembuangan (Discharge Piping)	Sistim Saluran pipa (Piping system) Apakah sistim saluran pipa terbebas dari karat dan ada bagian yang terbuang?	Ya tdk Tgl: / /		
		Klep (Valves) Apakah operasi dari semua klep memuaskan?	Ya tdk Tgl: / / Remarks		
	Pompa kotoran (Sludge Pump)	Apakah sistim beroperasi dengan memuaskan?	Ya tdk Tgl: / / Remarks		
	Alarm (15 ppm Alarm)	Apakah sistim beroperasi memuaskan?	Ya tdk Tgl: / /		
		Alarm Apakah alarm berfungsi dengan sesuai?	Ya tdk Tgl: / /		
		Auto stop Apakah auto stop berfungsi dengan sesuai?	Ya tdk Tgl: / / Remarks		

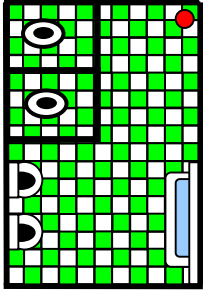
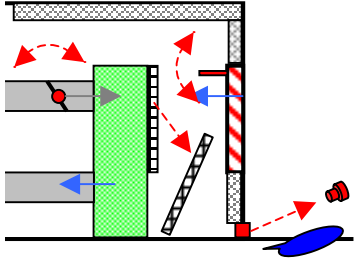
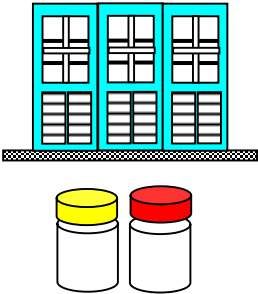
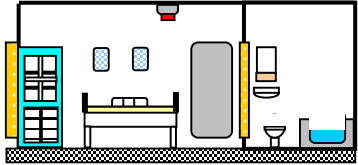
Chapter 03	PSC	
Bab 16	ALAT-ALAT BONGKAR MUAT (CARGO HANDLING GEAR)	

Untuk	Item Cek	Point Cek	Cek	Peraturan yang diterapkan	Ilustrasi		
ALAT-ALAT BONGKAR MUAT	Pemeriksaan secara berkala oleh orang yang berkompeteren (Surveyor Kelas) (Periodical Inspection by a Competent Person (Class Surveyors))	Loose gear Adakah jumlah yang membedakan tertera pada loose gear? Adakah sertifikat yang telah dikeluarkan untuk saat ini?	Ya tdk Tgl: / / Ya tdk Tgl: / /	ILO			
		Adakah sertifikat diuji keabsahaannya?	Ya tdk Tgl: / /				
		Apakah survey tahunan (setiap tahun) telah dilaksanakan pada waktu yang benar?	Ya tdk Tgl: / /				
		Sudahkah survey setiap 4 tahun dilaksanakan dan pelaksanaannya sesuai waktu yang benar?	Ya tdk Tgl: / /				
		Cargo gear booklet Sudahkah cargo gear booklet di endors dengan tepat?	Ya tdk Tgl: / / Remarks				
	Tiang kapal, Tiang, Palang, Tiang Topang yang dipasang (Eye plate, Heel Pieces, Gooseneck) (Masts, Posts, Booms, Jib Including Attachments (Eye Plates, Heel Pieces, Gooseneck))				N/A		
		Apakah item berikut ini dapat bekerja dengan baik dan dalam kondisi yang baik, dengan tidak ada pemakaian yang berlebihan, penuh dengan karat atau kerusakan: Tiang kapal/Mast? Palang/Booms? Tiang Topang/Jib? Gooseneck? Topping brackets? Guy posts?	Ya tdk Tgl: / / Ya tdk Tgl: / / Ya tdk Tgl: / / Ya tdk Tgl: / / Ya tdk Tgl: / / Ya tdk Tgl: / /		Remarks		
		Sudahkah alat keselamatan berikut ini dilakukan tes: Penghentian darurat/Emergency stop? Penghentian kelebihan muatan/Over load stop? Penghentian sudut batas/Limit angle stop? penghentian rem dengan tanpa voltase?	Ya tdk Tgl: / / Ya tdk Tgl: / / Ya tdk Tgl: / / Ya tdk Tgl: / /		Remarks		
		Apakah item berikut ini dapat bekerja dan dalam keadaan baik dengan tidak ada pemakaian berlebihan, penuh dengan karat atau rusak: Eye plates Penutup Gear/Gear covers Rel tangan/Hand rail Plat Lantai/Floor plate	Ya tdk Tgl: / / Ya tdk Tgl: / / Ya tdk Tgl: / / Ya tdk Tgl: / /		Remarks		

Chapter 03	PSC	
Bab 16	ALAT-ALAT BONGKAR MUAT (CARGO HANDLING GEAR)	

Untuk	Item Cek	Poin Cek	Cek	Peraturan Yang Diterapkan	Ilustrasi
ALAT-ALAT BONGKAR MUAT	Sistim gear Derek (Winch Gear System)	Melakukan sebuah inspeksi pada sistim minyak hidrolik yang menunjukkan : Tidak ada suara berisik/gaduh? Tidak ada minyak yang bocor?	Ya tdk Tgl: / / Ya tdk Tgl: / / Remarks		
		Melakukan sebuah inspeksi pada motor minyak hidrolik yang menunjukkan: Dapat bekerja dengan baik dan kondisi baik tanpa karat berlebihan atau kerusakan? Tidak ada suara berisik/gaduh? Tidak ada minyak yang bocor?	Ya tdk Tgl: / / Ya tdk Tgl: / / Ya tdk Tgl: / / Remarks		
		Melakukan Inspeksi pada sistim control yang menunjukkan : Dapat bekerja dengan baik dan kondisi baik tanpa karat yang berlebihan atau kerusakan?	Ya tdk Tgl: / / Remarks		
		Melakukan sebuah inspeksi pada sistim control yang menunjukkan : Brake linkage dan lining apakah dalam keadaan baik? Pengontrol dalam kondisi dan keadaan baik?	Ya tdk Tgl: / / Ya tdk Tgl: / / Remarks		
	Loose Gear (kerek, Mata kerek, Gantungan, segel, tali kawat dll) Loose Gear (Blocks, Sheaves, Hooks, Shackles, Wire Ropes, Etc.)	Loose Gear Apakah loose gear dalam keadaan dapat bekerja dengan baik, dengan tidak ada pemakaian yang berlebihan, penuh dengan karat atau kerusakan?	Ya tdk Tgl: / / Remarks	ILO ILO	
		Cargo gear booklet Adakah cargo gear booklet diendors dengan tepat?	Ya tdk Tgl: / / Remarks		

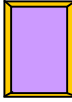
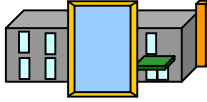
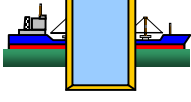
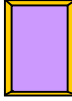

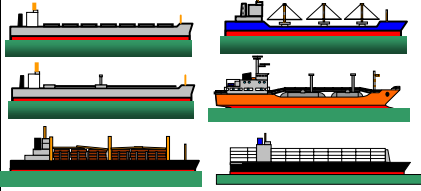


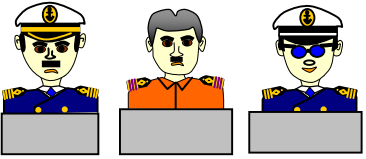
Chapter 03	PSC	
Bab 17	AKOMODASI	

Untuk	Item Cek	Point Cek	Cek	Peraturan yang diterapkan	Ilustrasi
AKOMODASI	Toilets	Apakah toilets dalam keadaan baik? Apakah toilet bilas dalam keadaan baik dengan operasi yang memuaskan? Apakah pekerjaan ubin dalam kondisi yang baik dengan tidak ada kerusakan pada ubin? Apakah semua lantai dalam keadaan bersih? Apakah semua pengeringan di lantai dalam keadaan baik?	Ya tdk Tgl: / / Ya tdk Tgl: / / Ya tdk Tgl: / / Ya tdk Tgl: / / Remarks		
	Kamar mandi, Tempat cuci piring, ruang mencuci (Shower Rooms, Washbasins, Laundry Room)	Tempat sanitari (Sanitary Spaces) Apakah semua tempat sanitari dalam keadaan baik? Apakah semua itu dialiri air dan bersih? Apakah air panas yang banyak tersedia?	Ya tdk Tgl: / / Ya tdk Tgl: / / Ya tdk Tgl: / / Remarks		
	Ventilasi Udara di ruang akomodasi (Air Ventilating in Accommodation Spaces)	Ventilasi/Ventilation Apakah ventilasi dan pemanas atau sistim penyejukan/cooling sistim pada ruang akomodasi mencukupi dan dalam keadaan baik.	Ya tdk Tgl: / / Remarks	ILO STCW ILO STCW	
	Instrumen Medis (Medical Instrument)	Perawatan Medik/Medical care Apakah suatu persediaan obat dan peralatan medial/surgical yang memadai terdapat diatas kapal? Apakah semua obat dalam tanggal kadaluarsa yang benar/sah? Apakah semua peralatan kedokteran dibersihkan dan siap untuk digunakan dalam keadaan darurat?	Ya tdk Tgl: / / Ya tdk Tgl: / / Ya tdk Tgl: / / Remarks		
	Kamar/ruang rumah sakit di kapal (Sick Bay)	Struktur & kebersihannya Dapatkah pintu dikunci dari luar untuk keperluan isolasi? Dapatkah pintu masuk eksternal dan pintu luar dikunci dari luar? Apakah areal itu bersih dari sampah dan hal lain yang tidak perlu?	Ya tdk Tgl: / / Ya tdk Tgl: / / Ya tdk Tgl: / / Remarks		

Chapter 03	PSC	
Bab 17	AKOMODASI	

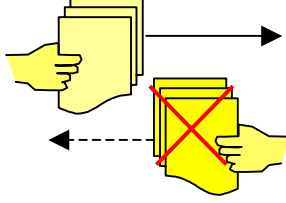

Untuk	Item Cek	Poin Cek	Cek	Peraturan Yang Diterapkan	Ilustrasi
AKOMODASI	Dapur (Galley)	<p>Apakah dapur dalam keadaan baik? Apakah ubinnya bersih dan tidak rusak?</p> <p>Apakah ventilator hoods terpasang dengan kawat penghubung, yang dapat dipindahkan untuk pembersihan secara berkala? Apakah penyaring saluran pipa dapat dipindahkan untuk pembersihan?</p>	<p>Ya tdk Tgl: / /</p> <p>Ya tdk Tgl: / /</p> <p>Ya tdk Tgl: / /</p> <p>Remarks</p>		<p>The illustration shows three parts: 1. A top-down view of a blue and white checkered tile with a red dashed circle around one corner. 2. A cross-section of a tile being lifted by a metal tool. 3. A side view of a kitchen hood with a red arrow pointing to a removable filter.</p>
	Ruang makan dan Kamar awak kapal (Mess Rooms and Crew Cabins)	<p>Apakah ruang makan dan kamar awak kapal dalam keadaan baik? Apakah tempat yang umum bersih dan bebas dari sampah dan hal lain yang tidak perlu? Apakah hordeng penutup cahaya telah terpasang pada jendela?</p>	<p>Ya tdk Tgl: / /</p> <p>Ya tdk Tgl: / /</p> <p>Remarks</p>		<p>The illustration shows a window with a blue frame and a yellow light blind partially covering it.</p>

Chapter 03	PSC	
Bab 18	ISM code	

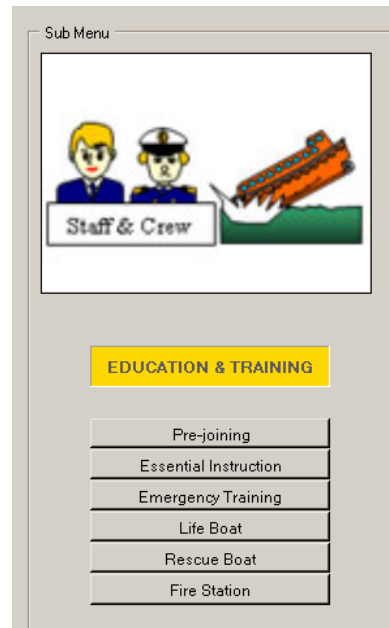
Untuk	Item Cek	Point Cek	Cek	Peraturan yang diterapkan	Ilustrasi
ISM code	Kebijakan Keselamatan dan Perlindungan Lingkungan (Safety and Environmental Protection Policy)		Ya tdk Tgl: / / Remarks		 POLICY
			Ya tdk Tgl: / / Remarks		
			Ya tdk Tgl: / / Remarks		
			Ya tdk Tgl: / / Remarks		
			Ya tdk Tgl: / / Remarks		
			Ya tdk Tgl: / / Remarks		
			Ya tdk Tgl: / / Remarks		
	Manajemen Tinjauan Ulang (The Management Reviews)	Sudahkah kamu melaporkan kepada Orang yang ditunjuk untuk tinjauan ulang Kapten?	Ya tdk Tgl: / / Remarks		
			Ya tdk Tgl: / / Remarks		
	Struktur Organisasi Manajemen di Darat dan diatas Kapal (Management Organisation Structure Ashore and on the Ship)	Siapa orang yang ditunjuk? (Nama dan posisinya)	Ya tdk Tgl: / / Remarks		
		Ya tdk Tgl: / / Remarks			

Chapter 03	PSC	
Bab 18	ISM code	

Untuk	Item Cek	Poin Cek	Cek	Peraturan Yang diterapkan	Ilustrasi
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ISM code	Dokumentasi Manajemen Keselamatan dan Perubahan Kontrol (Safety Management Documentation and Change Control)		Ya tdk Tgl: / / Remarks		
			Ya tdk Tgl: / / Remarks		
			Ya tdk Tgl: / / Remarks		
			Ya tdk Tgl: / / Remarks		
	Personil di atas Kapal (Shipboard Personnel)		Ya tdk Tgl: / / Remarks		
			Ya tdk Tgl: / / Remarks		
			Ya tdk Tgl: / / Remarks		
			Ya tdk Tgl: / / Remarks		
	Operasi Keselamatan di Atas Kapal (Safe Operation of Ship)		Ya tdk Tgl: / / Remarks		
			Ya tdk Tgl: / / Remarks		
			Ya tdk Tgl: / / Remarks		
			Ya tdk Tgl: / / Remarks		
			Ya tdk Tgl: / / Remarks		
			Ya tdk Tgl: / / Remarks		

Chapter 04 Education & Training



01 Pre-joining

This text explains instructions before on-boarding with pictures and flow-charts.

02 Essential Instruction

This text explains instructions relating to the safety which should be checked right after boarding on the vessel with pictures and flow-charts.

03 Emergency Training

This text explains the emergency training which should be implemented in the vessel with pictures and flow-charts.

04 Life Boat

This text explains instructions of life boat utilizations with pictures and flow-charts.

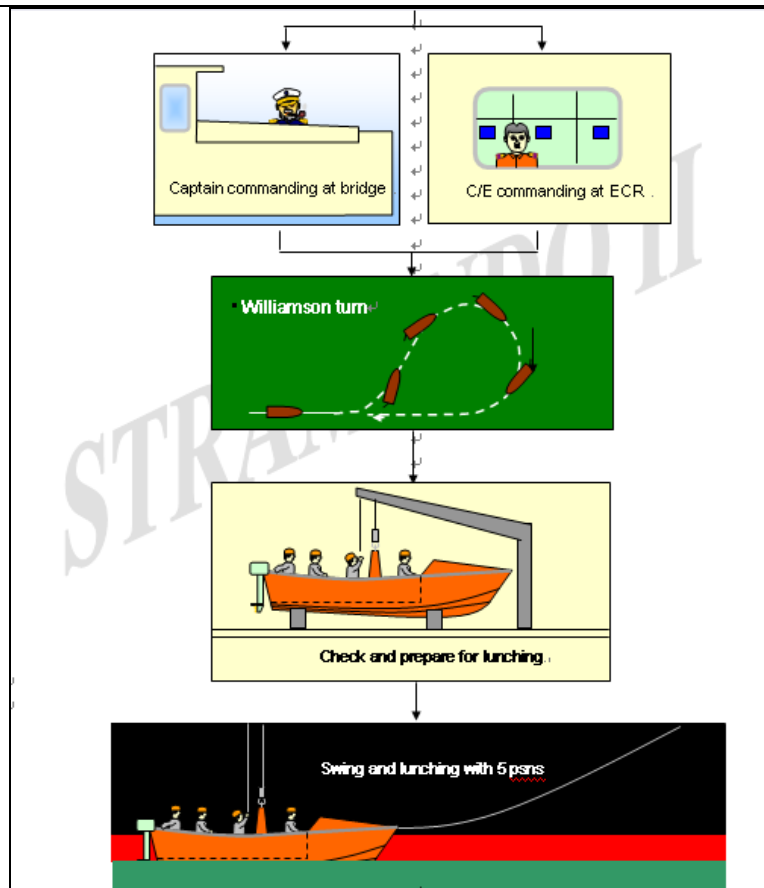
05 Rescue Boat

This text explains the procedure and method of rescues of fallen person with pictures and flow-charts.

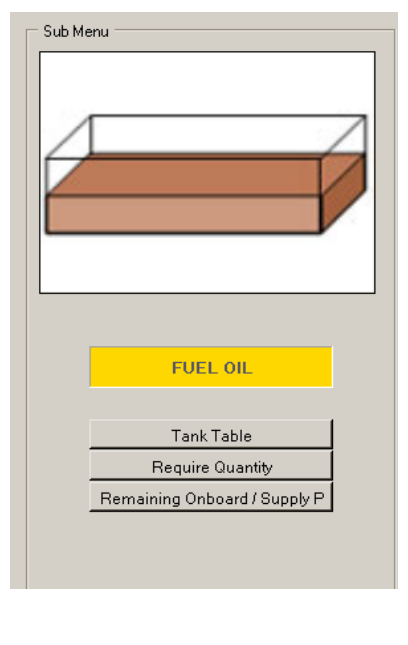
06 Fire Station

This text explains the fire drill with pictures and flow-charts.

Example of the picture : 05 Rescue Boat



Chapter 05 Fuel Oil



01 Tank Table

The tank table made in Chapter 1 will be shown. Once entering the record of depth in tank, it will automatically calculate the speed of fuel consumption. The accidents of fuel oil outflow can be avoided.

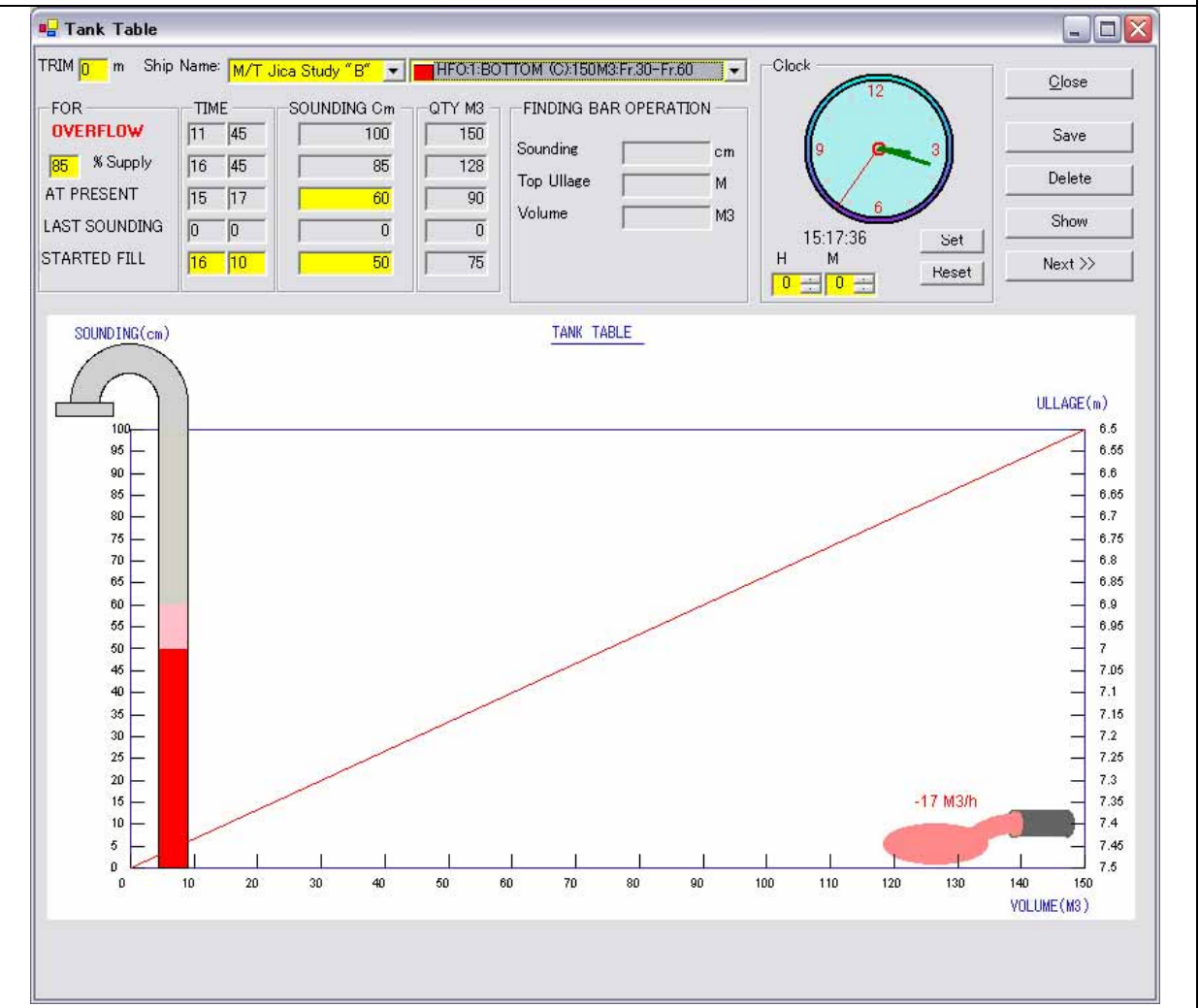
02 Require Quantity

The table can calculate the volume of remaining fuel oil and which needed to be supplied.

03 Remaining Onboard / Supply Plan

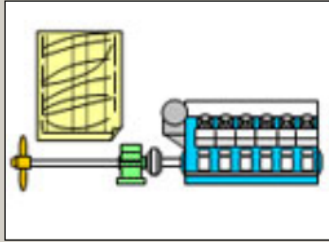
By the tank table which made in Chapter 1, the volume of fuel oil will be automatically calculated with measured depth the relative density of mixed oils. It will help to avoid accidents.

Example of the picture : 01 Tank Tables



Chapter 06 Engine Condition

Sub Menu



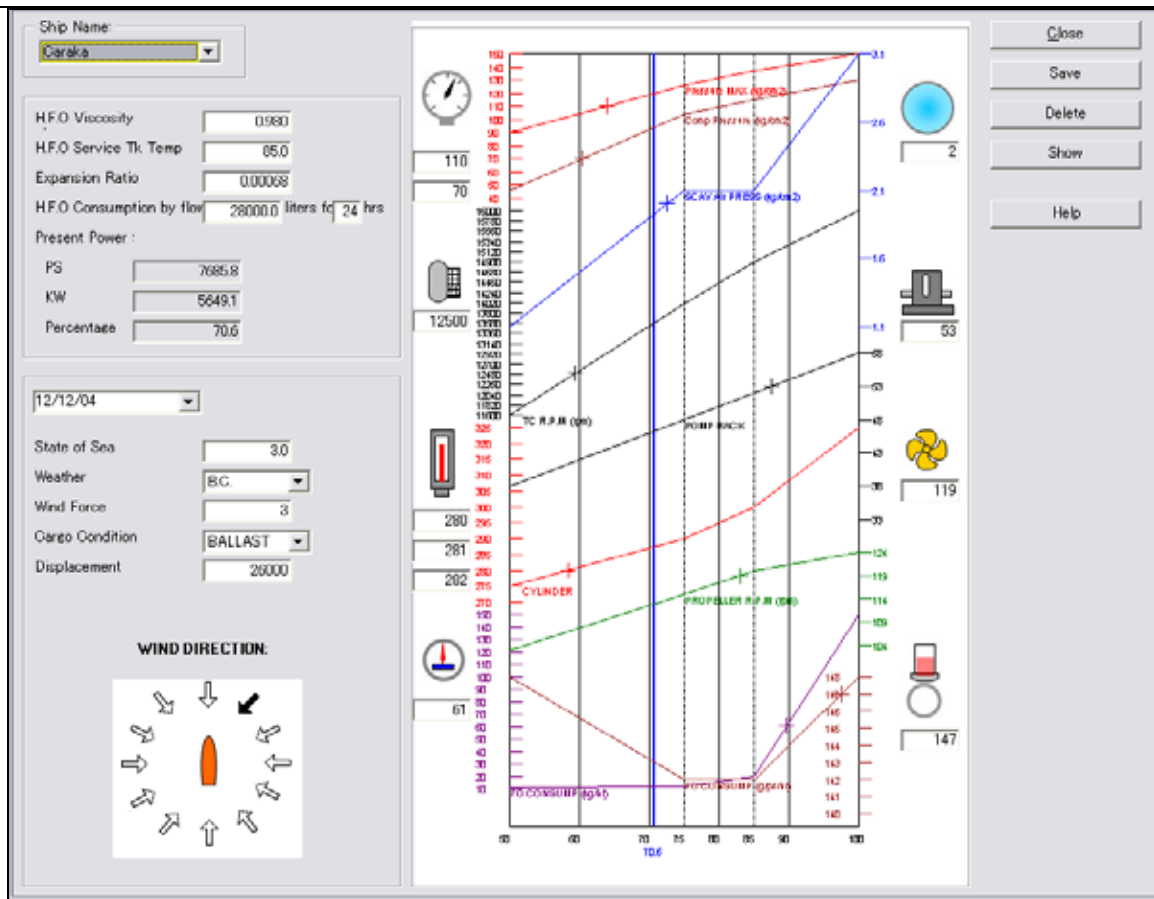
ENGINE CONDITION

Running Data Analysis

01 Running Data Analysis


The performance curve which the data has input in Chapter 1 will be shown. The output of fuel consumption will also be automatically illustrated on the performance curve. If measured data is input in this table, current condition will be plotted on each line and it will be enable to analyze operating condition.

Example of the picture : 01 Running Data Analysis



Chapter 07 Certificates Control

Sub Menu



CERTIFICATES CONTROL

Due Date Control

01 Due Data Control

The database input in Chapter 1 is linking to various inspection documents. This table will alarm the expiry period according to input date and period.

Example of the picture : 01 Due Data Control

Ship Name: Caraka

Today : **2004/12/04**

Close

Name of Certificates	Certificate No	Issued	Val. yrs	Exp. Date	Remarks
Safety Equipment(SE)	1212	2003/11/30	1	2004/11/30	RECOM
Safety Radio(SR)	2212313	2004/12/10	2.5	2007/06/10	NIL
Safety Construction(SC)	123213	2003/05/12	1.5	2004/11/12	NIL
Load Line(ILL)	452423	2004/09/09	2.5	2007/03/09	NIL
Oil Pollution Por.(IOPP)	2312312545	2004/09/16	2	2006/09/16	NIL
Doking Survey	645745634	2004/09/10	2.5	2007/03/10	RECOM
Propeller Survey	234234525	2004/08/14	5	2009/08/14	EXTENSION
Boiler Survey	5645747456	2004/05/18	1	2005/05/18	NIL
Cont. Machinery (CSM)	7746464	2004/08/12	2.5	2007/02/12	NIL
		2004/12/12			

Class Recommendation :

Master's Comments :

Office Comments :

Save

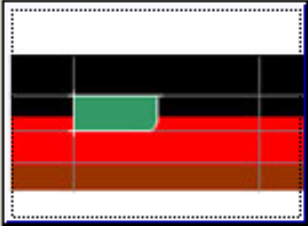
Delete

Refresh

Help

Chapter 08 Class Survey Guidance (Hull)

Sub Menu



STATUTORY SURVEY

- IOPP
- International Load Line
- Safety Equipment
- Safety Construction
- Safety Radio

CLASS SURVEY

- Annual Survey
- Intermediate Survey
- Special Survey
- x

This chapter is including conventional documents and class survey items to check inspection items of superintendents.



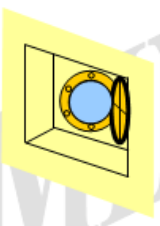

[Statutory Survey]

- 01 IOPP**
- 02 International Load Line**
- 03 Safety Equipment**
- 04 Safety Construction**
- 05 Safety Radio**

[Class Survey]

- 06 Annual Survey**
- 07 Intermediate Survey**
- 08 Special Survey**

Example of the picture : 06 Annual Survey


No.	AREA	SURVEY CHECK ITEMS	HOW TO CHECK
03	Closing construction & appliance	<ul style="list-style-type: none"> □ F.W. Tank 	<ul style="list-style-type: none"> □ to check no damage or heavy corrosion at pipe head piece and pipe. □ to check possible to close the cover.
04	Closing construction & appliance	<ul style="list-style-type: none"> □8. Bridge plating 	<ul style="list-style-type: none"> □ to check no heavy corrosion, hole, crack.
		<ul style="list-style-type: none"> □9. Side Scuttles 	<ul style="list-style-type: none"> □ to check no damage at glass and packing. □ to check emergency blind cover of side scuttles on the main deck being in good condition. □ to check hinge and nut being in good condition. □ to check curtain hanging over portholes at forepeak area.
		<ul style="list-style-type: none"> □10. Scuppers 	<ul style="list-style-type: none"> □ to check no corrosion, hole of the pipe. □ to check drainage well without any stop.

Chapter 09 Class Survey Guidance (Machinery)

This chapter should be developed in proper timing.

Chapter 10 Marine Formula

Sub Menu



MARINE FORMULAR

Deck

Engine

This is programmed to calculate necessary data using maritime formula which can be used practically on deck and in engine.

01 Deck

02 Engine

Example of the picture : 02 Engine

FORMULA

$$KW = \frac{K/L \text{ per hr} \times 10^3 \times \{SG - 0.0007(STT - DBTT)\}}{FOCR \text{ (g/kw/hr)} \times M \text{ Hrs}}$$

DBTT.....Temperature of HFO in the Double bottom Tank

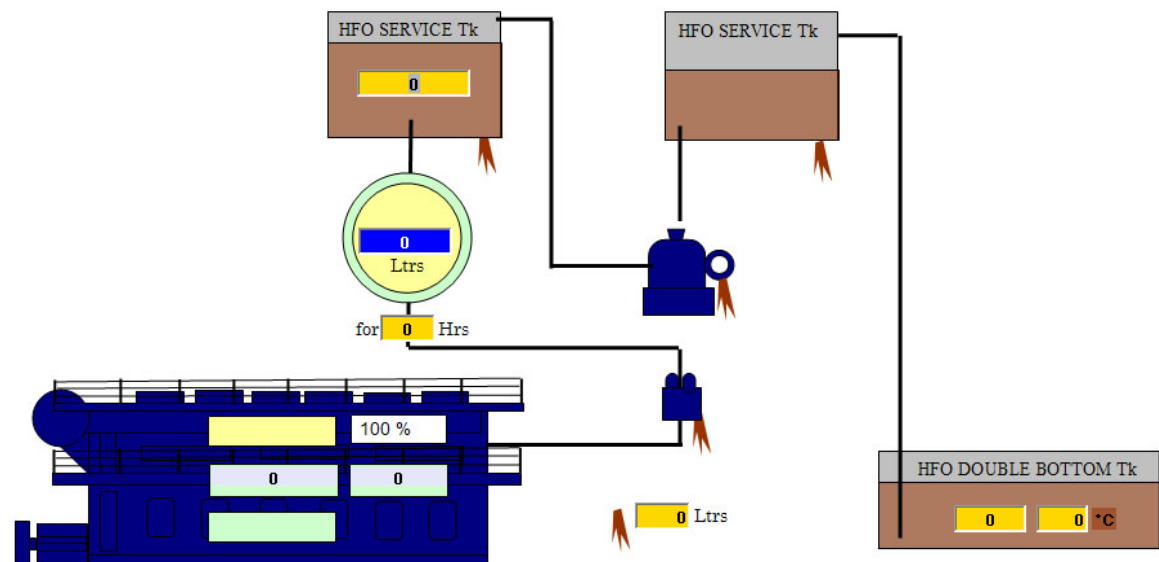
STT.....Temperature of HFO at Service Tank

K/L.....FO Consumption by Flow meter per hr (or day)

FOCR.....FO Consumption Recio (g/kw/hr)

M Hrs.....FO consumption measured hours

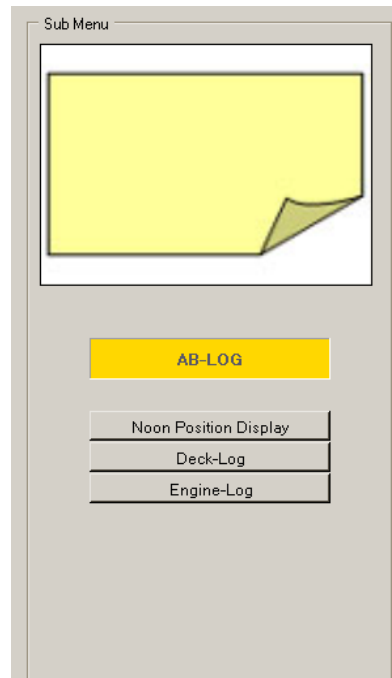
Calculate
Close



Chapter 11 Ship Inspection Form

This chapter should be developed in proper timing.

Chapter 12 AB-log



01 Noon Position Display

This program displays noon position data and operating condition of vessel. The data can be shared using certain computer and TV monitor in the company. It will avoid omitting contact or arrangement.

02 Deck-log

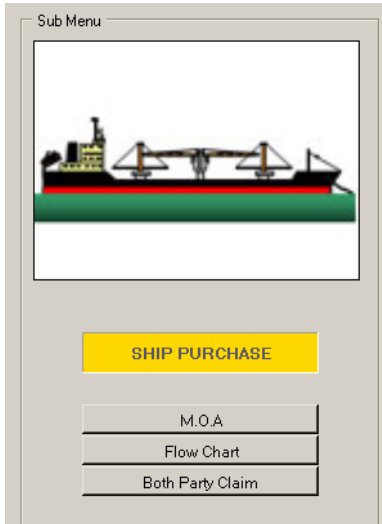
This program can calculate and manage the data automatically relating to a voyage par each voyage.

03 Engine-log

This program can calculate and manage the data automatically relating to engine during a voyage par each voyage.

Example of the picture : 01 Noon Position Display

Chapter 13 Ship Purchase



01 Memorandum of Agreement

This document is the contract for purchase of second-hand vessel in Norwegian form which is used in worldwide.

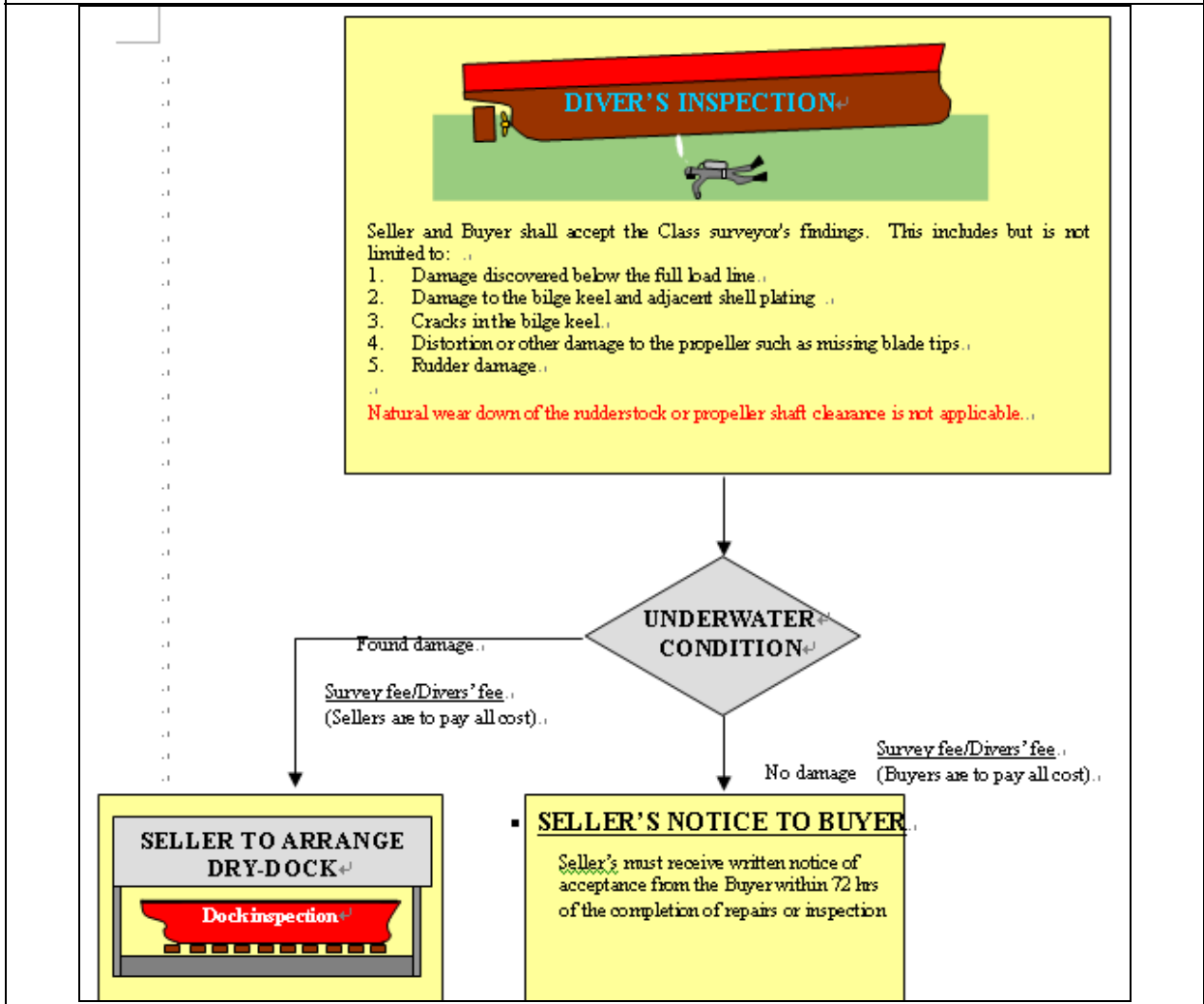
02 Flow Chart

This chart explains the procedures and works to purchase second-hand vessel.

03 Both Party Claim

This document explains the examples of both party claim and opinion of inspector of classification.

Example of the picture : 02 Flow Chart



Chapter 14 Insurance

01 Hull Insurance

This document explains the hull insurance and procedure to require the indemnity.

02 P & I Insurance

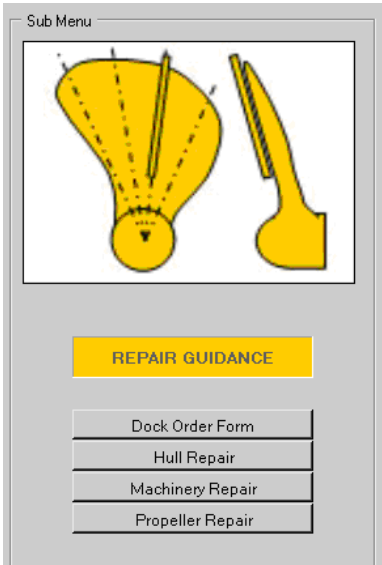
This document explains the P & I insurance and procedure to require the indemnity.

03 Insurance Clam

This document explains the examples of insurance clam.

Example of the picture :

Chapter 15 Repair Guidance



01 Dock Order Form

This is the standard form of repair works of tanker and general cargo.

02 Hull Repair

This document explains the method of repair work of hull with illustration.

03 Machinery Repair

This document explains the method of repair work of machinery with illustration.

04 Propeller repair

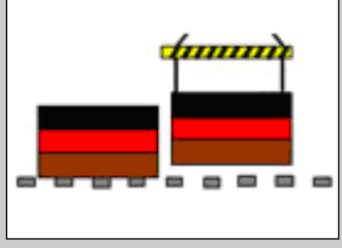
This document explains the method of repair work of propeller and running repair on board.

Example of the picture : 02 Hull Repair

	Damaged	How to Crop and Renewal
1	<p>Corrosion of gunnel at near seam line</p>	<p>Crop and insert new plate. Tab plates to be welded with shell plate.</p>
2	<p>Corrosion of gunnel at centre</p>	

Chapter 16 New Ship Building

Sub Menu



NEW SHIP BUILDING

- Draft Marks
- Steel Works Tolerance
- Stern Tube
- Engine Bed
- Piping
- Pump Fitting
- Sea Trial

- 01 Draft Marks**
 This document explains the method of confirmation and measure of draft marks which is basic and important matter to decide the vessel weight to design.
- 02 Steel Work Tolerance**
 This document explains the standard steel work tolerance and maximum tolerance.
- 03 Stern Tube**
 This document explains the method and notices about stern tube treatment.
- 04 Engine Bed**
 This document explains the method and notices of adjustment before installation of machineries.
- 05 Piping**
 This document explains the basic idea and notices of piping system which important role to draw out the capability of vessel or various machineries.
- 06 Pump Fitting**
 This document explains the method and notices to fit and confirm the pump setting.
- 07 Sea Trial**
 This document explains confirmation of capability in sea trial, since superintendents and seafarers don't have any ideas about the trial and shipowner's requirement for the purchased second-hand vessel.

Example of the picture : 02 Steel Work Tolerance

SCALLOPS OVER WELD SEAMS		
Allowable tolerance		Limit
Distance between scallop and butt weld	$SBd \geq 5 \text{ mm}$	N/A
	$r = 30 \text{ mm}$	

SHAPE :

