

Appendix for Chapter 7

Appendix 7.1.1 The Instance of Harbor Limit and Waterfront Area in Japan

1 Harbor Limit

Harbor limit is the minimum water area needed to manage the port. It is also to consider the safety of plying vessels. Harbor limit must be made public when established or modified. To demarcate harbor limit effectively, following items are clarified in laws and regulations.

(1) Definition of port facility

For comprehensive control of the port, facilities existing in the harbor limit are regarded as port facilities irrespective of whether or not they are involved in port activities.

(2) Competence of port administrator

Port administrator can implement port construction work, reclamation, regulation of use of facilities and so on within the harbor limit. Harbor limit clarifies competence of port administrator.

(3) Approval of construction work

Certain activities, such as use of harbor limit, gathering soil or construction work in harbor limit and so on, must have permission of port administrator as these activities can obstruct port development, use or conservation.

(4) Collection of port fees

Port administrator collects port fees from all vessels entering harbor limits.

2 Waterfront Area

Waterfront area is where various port activities such as cargo handling and industrial activities are practiced. Port can fulfill its function sufficiently when water area and land area are unified. Hence, in waterfront area, port administrator can regulate certain activities in order to facilitate port activities and secure port functions. Waterfront area of urban port is prescribed in city planning also because urban port is closely related to city functions.

To demarcate the waterfront area effectively, following items are clarified in laws and regulations.

(1) Role of port administrator

Port administrators can create land, assist in loading/unloading, storage and handling of cargo, advise on improvement of transportation and finance for related activities within waterfront area.

(2) Supervision of construction work

Port administrator must secure safe port operations and protect the port environment. Therefore, an entity which intends to conduct construction works is required to inform port administrator of work contents. Port administrator may request entity to make changes in the construction plan if he deems necessary.

(3) Control of waterfront area

In order to facilitate port management, the waterfront area is divided into some sections, such as sections for commerce, industry, fishery, marina and scenic view/welfare, etc., where use of structures is restricted. And, port administrator has competence to remove any structure which markedly obstructs the designated purpose.

(4) Definition of port facility

Certain facilities existing in waterfront area and managed by port administrators are to be port facilities automatically. These facilities can obtain some benefit such as subsidy from national government.

(5) Contribution of waterfront area enterprises

Port administrators have competence to extract a certain contribution from enterprises situated in the waterfront area. In this way, for example, enterprises are forced to share part of the cost of environmental conservation.

Appendix 7.1.3 Policy for Special Port

(1) General Explanation of Special Port in Japan

In order to support the rapid growth of the Japanese economy which started in the late 1950's, it became necessary to urgently develop and strengthen the heavy and chemical industries. This led to a greater demand for sea-front industrial sites. Port authorities began to reclaim land for such use with loans from the national government (bond-issuing), then sold the reclaimed land to private sector. As a result, such plants as steel, petro-chemical, and electric became concentrated in sea front areas, where each company constructed its own private berths on this purchased land in order to facilitate its import and export activities. This is why there are so many private berths seen in Japan.

At the Port of "Nagoya"(third largest container port in Japan), there are currently 166 private berths, which account for 56% of its total of 297 berths. Land area of 24 million square meters, comprising 60% of the total area of 40 million square meters, has been sold to private companies.

The management and operation of these private berths nationwide are conducted by individual companies and they are beyond the authority of port administrators. These lands, however, have been sold under the condition that they be used for a designated purpose, and altering this purpose is subject to the approval of the port authorities.

(2) Example of Kashima Port in Japan

1) Outline

Kashima area is located around 80km east of Tokyo, in Ibaraki prefecture. In 1963, this area was designated as one of the "Special Industrial Development Areas" on the basis of the "Law for Promotion of Special Regional Industrial Development", enacted in 1964. The designation of these "Special Industrial Development Areas" were implemented for the purpose of regional industrial development in the period of Japan's rapid economy growth, according to the governmental policy. (See Chapter 3.2.5).

Port of Kashima was developed as the core infrastructure in the "Kashima Special Industrial Development Area", and it was opened in 1969.

2) Characteristics of the Development

The characteristics of the development are as follows;

① Total Planning Coordination under the Government's Positive Guidance

The development plan was composed of many projects by each sectors, such as the construction of port, railway, road, industrial zone, residential zone, and so on. The government coordinated the planning and implementation of these projects by each sectors. In addition, the government positively made efforts to attract private industrial enterprises in the industrial zone, for example, by means of establishment of financial loan to enterprises, in order to equip their facilities.

② Reduction of Construction Cost to the Private Sector by Cost-Sharing with Public Sector

Investment funds for this development area were supplied from the central and the local government and from the private sector. Funds for the basic infrastructures such as highways, roads and industrial water supplies were borne by the government. In addition, funds for basic port facilities including construction of breakwaters and quay walls for public berth, dredging of navigation channels and harbor basins were also borne by the government. However, if the navigation channel and harbor basin required extra depth for a particular industry, the extra cost was charged to the beneficiaries. (See Chapter 6.1.2 / Obligation of Beneficiary).

The land prepared by the local government was sold to private industrial. Similarly, the port facilities, attached to the land, for exclusive use of the enterprises were built by the enterprises.

As a result, the total investment by the public and private sector could be more reduced compared to the investment of the case that the public and private sector individually invest as the respective project.

③ Various Incentives for Investment

The central government provided various incentives for investment as follows;

- (a) Increasing the ratio of the state subsidy for the projects of basic infrastructures implemented by the local government
- (b) Sharing the interest of bonds issued by the local government for the projects
- (c) Tax reductions concerning land possession, and so on, for enterprises
- (d) Low-interest financing for enterprises and so on.

These arrangements effectively promoted not only the development of basic infrastructures, but also the participation of the private sector in the industrial zone.

④ Effective Impact to the Regional Development

Table A 7.2.1 Composition of Port Master Plan in Japan

Planning matters	Decision matters	Purpose	Consideration matters
I Policy	1.Position & function 2.Construction & use 3.Landuse 4.Environmental conservation 5.Security 6.Conservation of adjacent area Target year		<ul style="list-style-type: none"> • Natural condition • Socio-economic condition • Function of adjacent port • Traffic condition • Impact on environment • Impact on fishery
II Capacity	Cargo handling volume Number of users Others		<ul style="list-style-type: none"> • Natural condition • Socio-economic condition • Function • Measures for change of transport and loading • Traffic condition • Security and environment
III Scale & disposition	Integrated and comprehensive scale/disposition	Responding to the capacity	<ul style="list-style-type: none"> • Natural condition • Socio-economic condition • Condition of existing port facilities • Conservation of local area
① Harbor facilities	Scale Disposition	<ul style="list-style-type: none"> • Ensuring the function • Security 	<ul style="list-style-type: none"> • Kind, type and number of vessels • Condition of use • Calmness
② Outer facilities	Scale Disposition	Displaying facility's capacity	Using condition of facilities
③ Mooring facilities	Scale Disposition	<ul style="list-style-type: none"> • Security • Efficiency 	<ul style="list-style-type: none"> • Kind, type and number of vessels • Kind and volume of cargo • Handling system • Using condition of harbor facilities

Table A 7.2.1 (continued)

④Traffic facilities	Scale Disposition	Fitting with quality and quantity of demand Safety and smoothness	<ul style="list-style-type: none"> • Traffic condition • Using condition of facilities
⑤Passenger facilities	Scale of site Disposition of site	Displaying facility's capacity	Number of passenger
⑥Handling and storage facilities	Scale of site Disposition of site		<ul style="list-style-type: none"> • Kind and volume of cargo • Using condition of facilities
IV Environmental conservation		Maintenance and improvement of environment	<ul style="list-style-type: none"> • Natural condition • Condition of business activities • Labor condition • Circumstances of waste occurrence • Adjustment for related plan
①Waste disposal	<ul style="list-style-type: none"> • Kind and volume of wastes • Scale and disposition of main facilities 	Satisfactory maintenance of environment	<ul style="list-style-type: none"> • Natural condition • Condition of land use and business activities • Adjustment for related plan
②Pollution prevention facilities	<ul style="list-style-type: none"> • Scale and disposition of main facilities 	Prevention of pollution	<ul style="list-style-type: none"> • Natural condition • Condition of land use and business activities • Adjustment for related plan
③ Environmental related facilities	<ul style="list-style-type: none"> • Scale and disposition of main facilities 	Maintenance and improvement of environment	<ul style="list-style-type: none"> • Natural condition • Condition of land use and business activities
V Others			
① Conservation of local area	<ul style="list-style-type: none"> • Scale and disposition of main facilities for prevention of disasters 	Prevention of disasters	<ul style="list-style-type: none"> • Natural condition • Scale of port • Condition of land use • Adjustment for related plan
②Creation of land	Scale and disposition	Effective and proper use of coastal line	<ul style="list-style-type: none"> • Natural condition • Condition of port use • Security • Impact on environment
③Land use	Classification	Effective and proper use of port	<ul style="list-style-type: none"> • Condition of land use • Security • Impact on environment
④Use of facilities	Distinction of public or special use	<ul style="list-style-type: none"> • Proper management • Safe and effective use 	<ul style="list-style-type: none"> • Vessels • Kind and volume of cargo • Condition of port use

A.7.3 Improvement of Port Operation

A.7.3.1 Management of cargo handling

(1) The port of Tanjung Priok

The port of Tanjung Priok and Tanjung Priok Container Terminal are branch of IPC II. Whole organization of the IPC II is shown in Table A.7.3.1.1 to Table A.7.3.1.6. And Table A.7.3.1.7 shows the organization of Tanjung Priok Container Terminal.

(2) The port of Tanjung Perak

The port of Tanjung Perak and Tanjung Perak Container Terminal are branch of IPC III. Whole organization of the IPC III is shown in Table A.7.3.1.8 to Table A.7.3.1.12 show whole organization of IPC III's head office. And Table A.7.3.1.13 shows organization of the Tanjung Perak Container Terminal.

A.7.3.2 Procedure of documentation

(1) The port of Tanjung Priok

The port of Tanjung Priok employs "one roof center" system since 1995. The procedure of the system are detailed below.

Table A.7.3.2.1 shows the system and structure of ships and loading/unloading goods service. Table A.7.3.2.2 shows the system and structure of incoming vessels service. Table A.7.3.2.3 shows the system and structure of outgoing ships service, Table A.7.3.2.4 shows the system and structure of stacking of unloaded/imported and inter island commodities. Table A.7.3.2.5 shows the system and structure of release of unloaded imported/inter island commodities from stacking area, Table A.7.3.2.6 shows the system and structure of release of unloading imported/inter island commodities from direct transportation, Table A.7.3.2.7 shows the system and structure of stacking of loaded/exported and inter island commodities, Table A.7.3.2.8 shows the system and structure of loading of exported/inter island goods to ship from stacking storage, Table A.7.3.2.9 shows the system and structure of loading of exported/inter island goods to ship by direct transportation, and Table A.7.3.2.10 shows the abbreviations in the above Tables.

Table A7.3.1.1 Whole Organization of IPC II

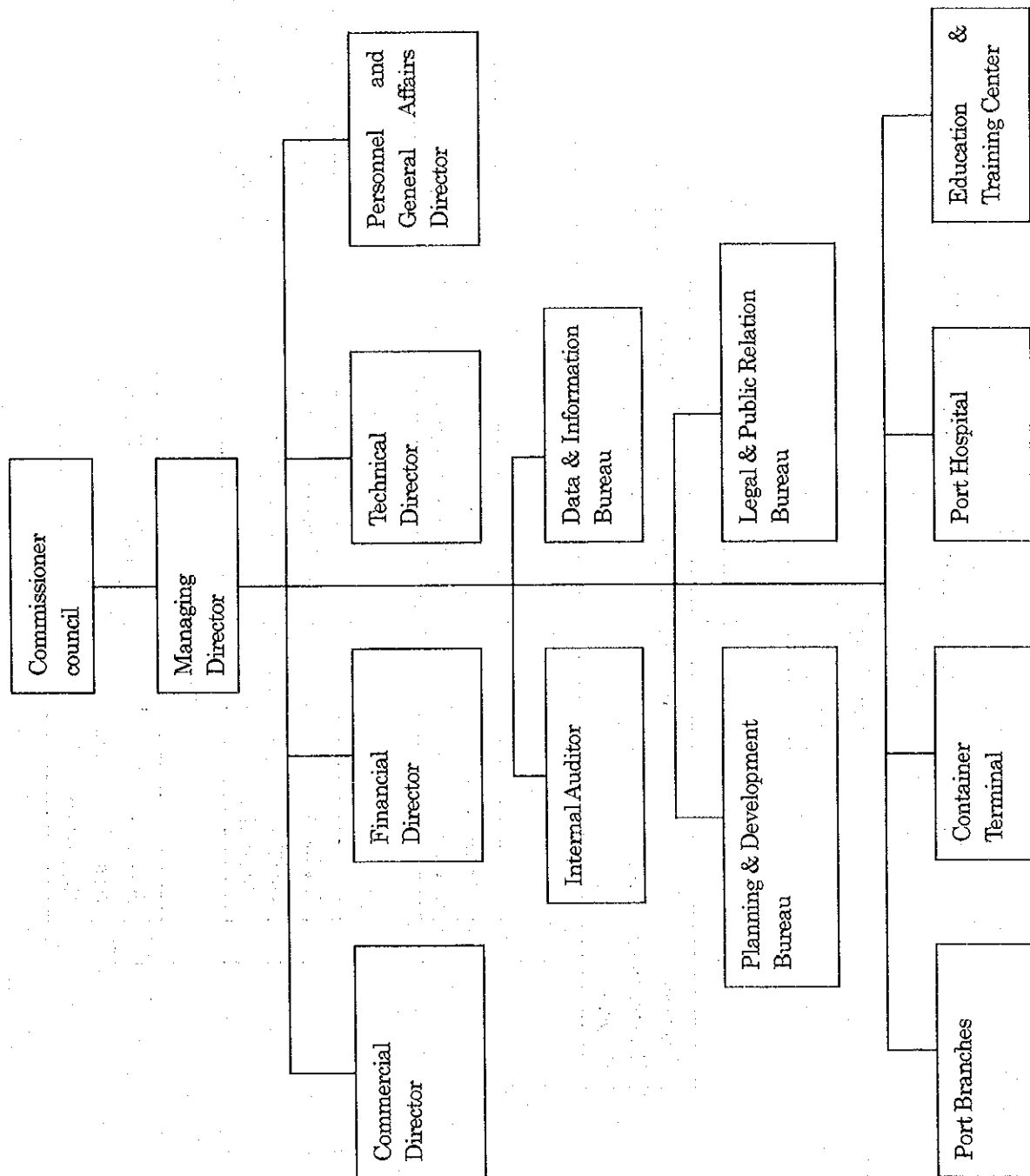


Table A7.3.1.2 Organization of Commercial Director of IPC II

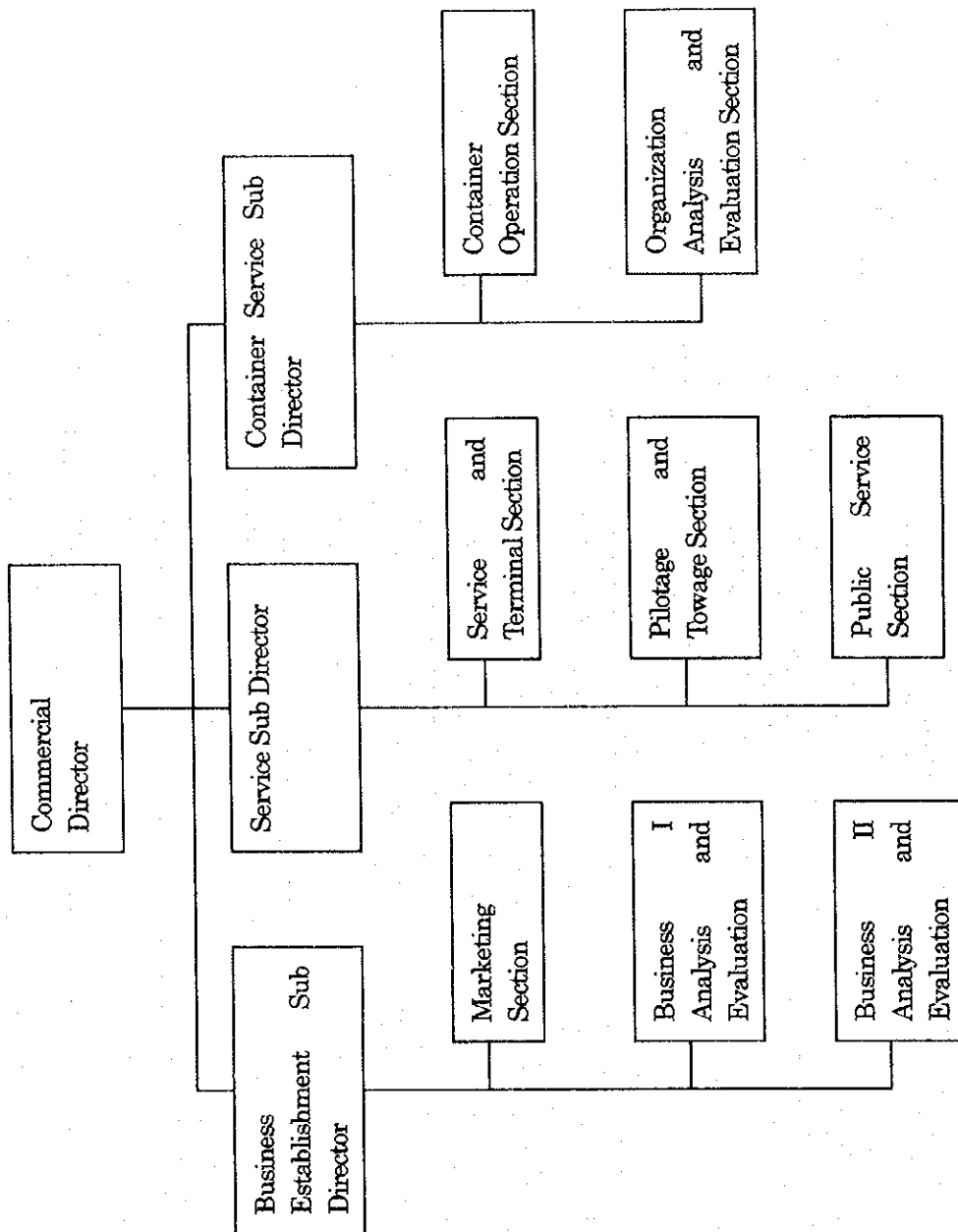


Table A7.3.1.3 Organization of Technical Director of IPC II

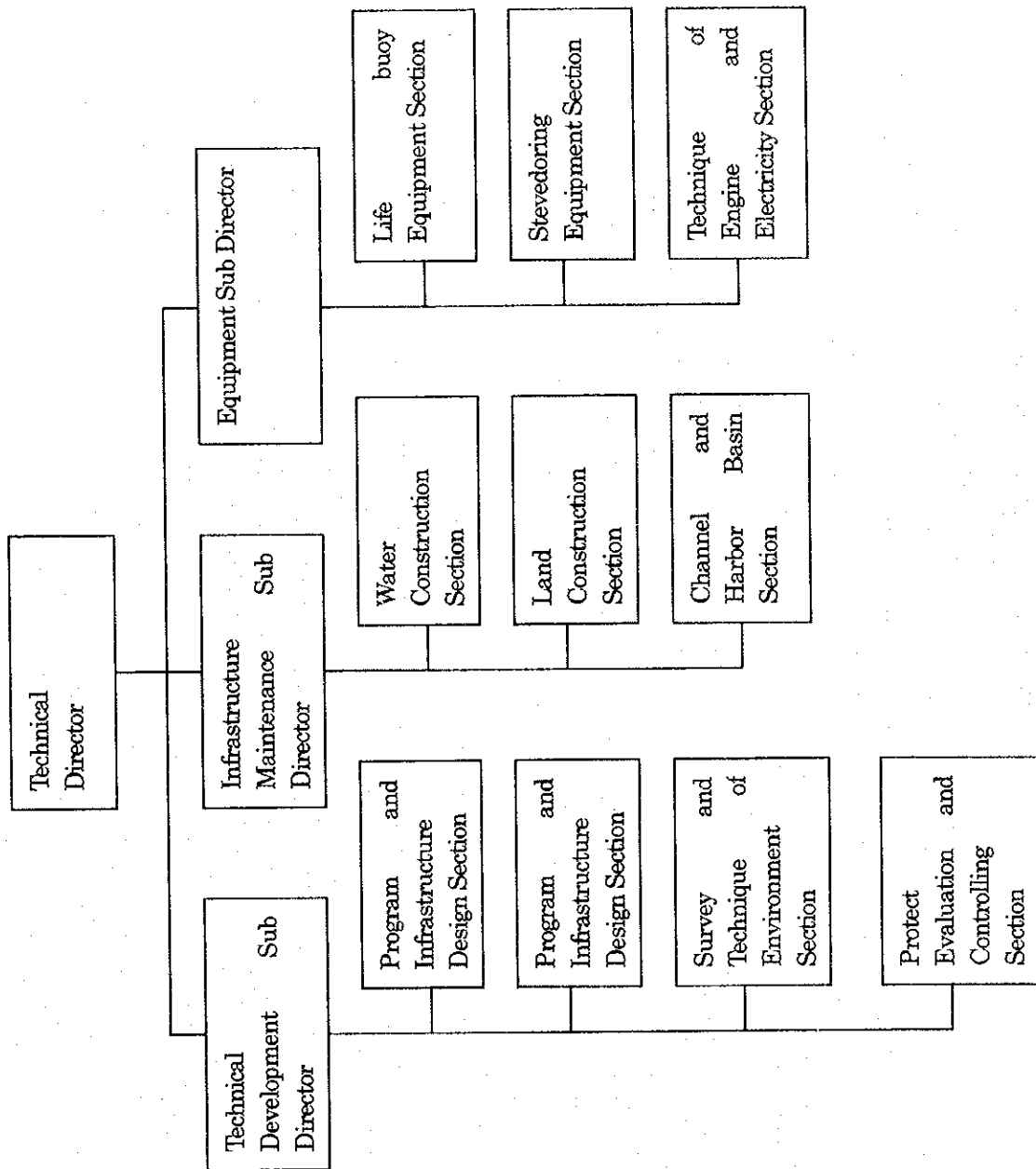


Table A7.3.1.4 Organization of Financial Director of IPC II

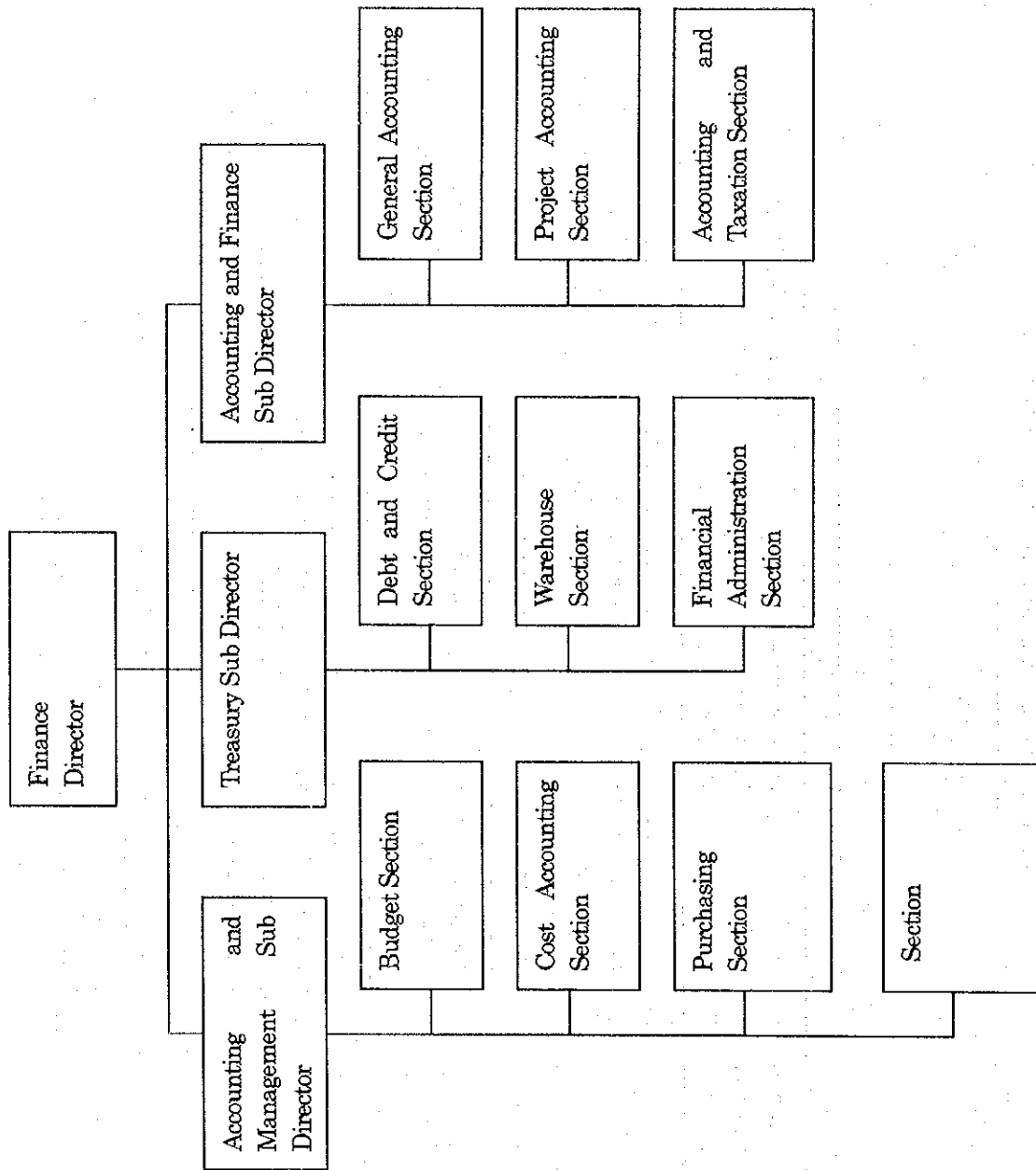


Table A7.3.1.5 Organization of Personnel and General Affairs Director of IPC II

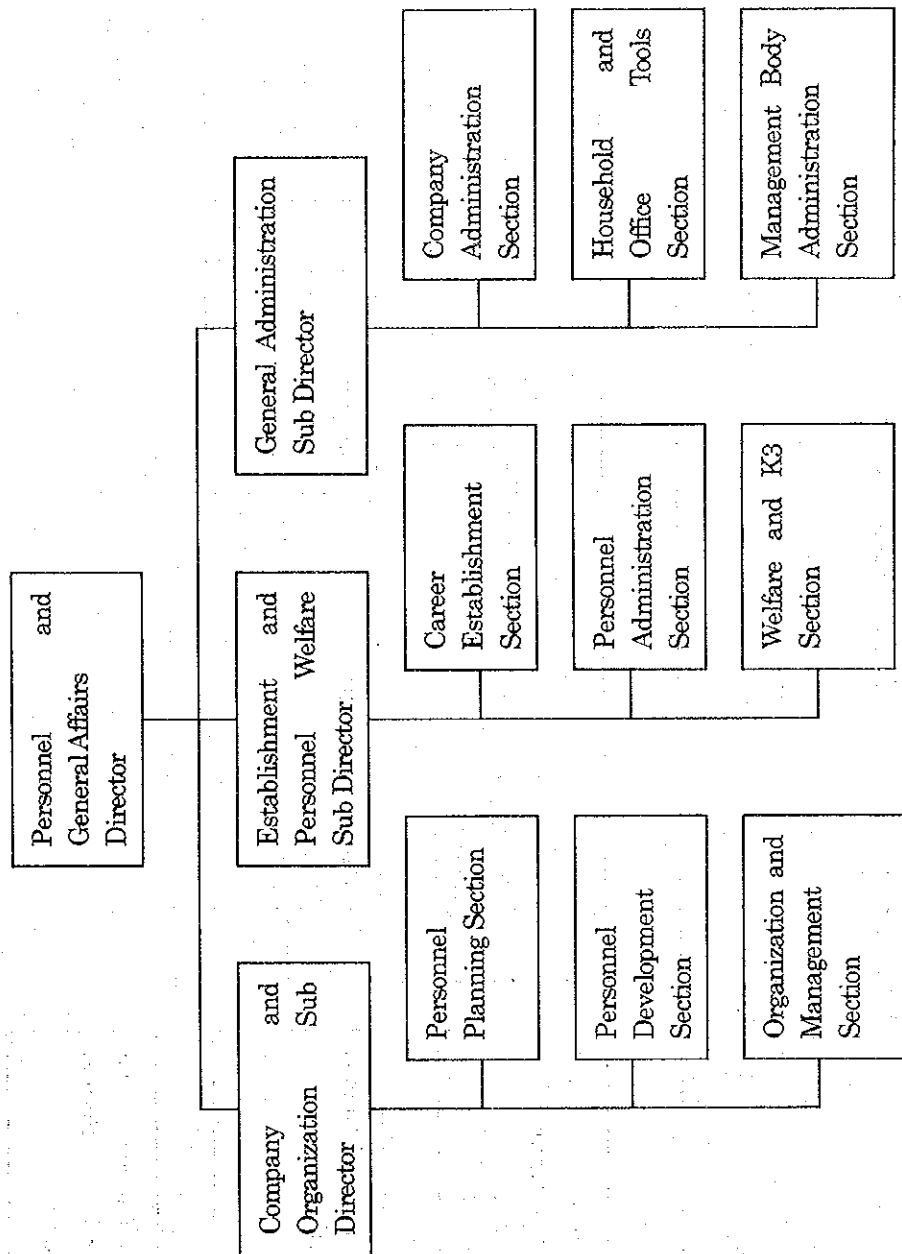


Table A7.3.1.6 Organization of Each Bureaus of IPC II

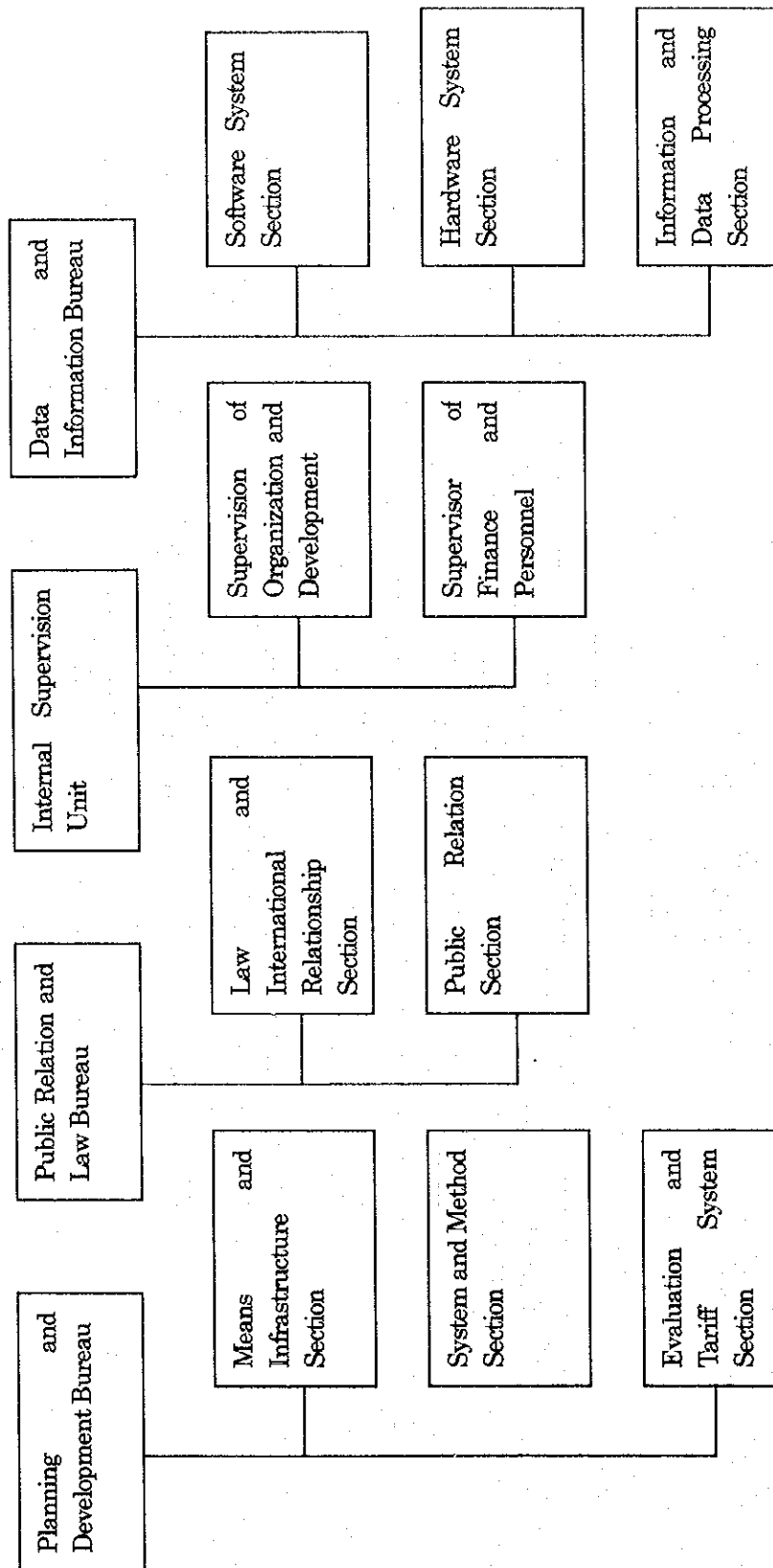


Table A7.3.1.7 Organization of the port of Tanjung Priok

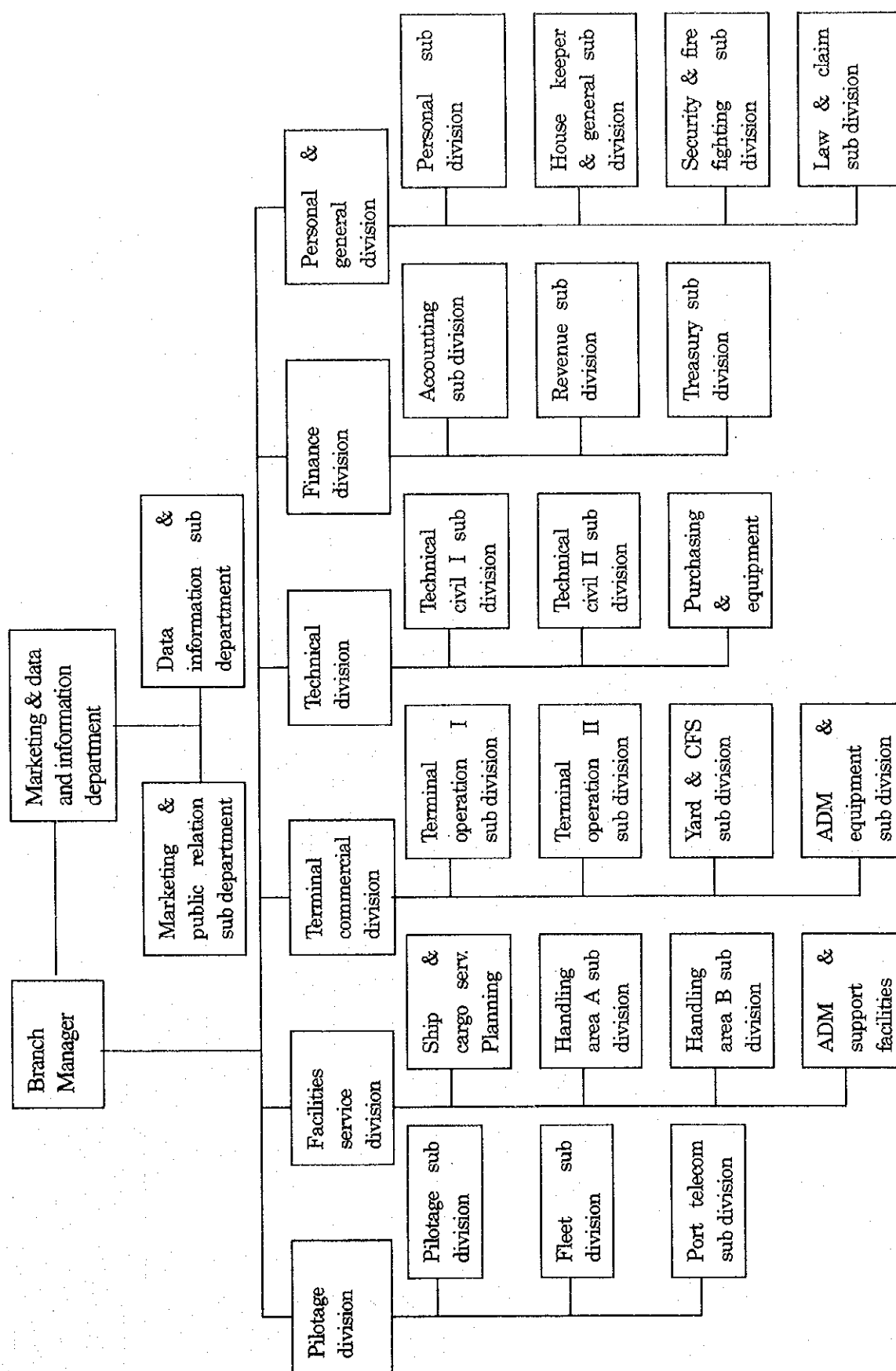


Table A7.3.1.8 Whole Organization of IPC III

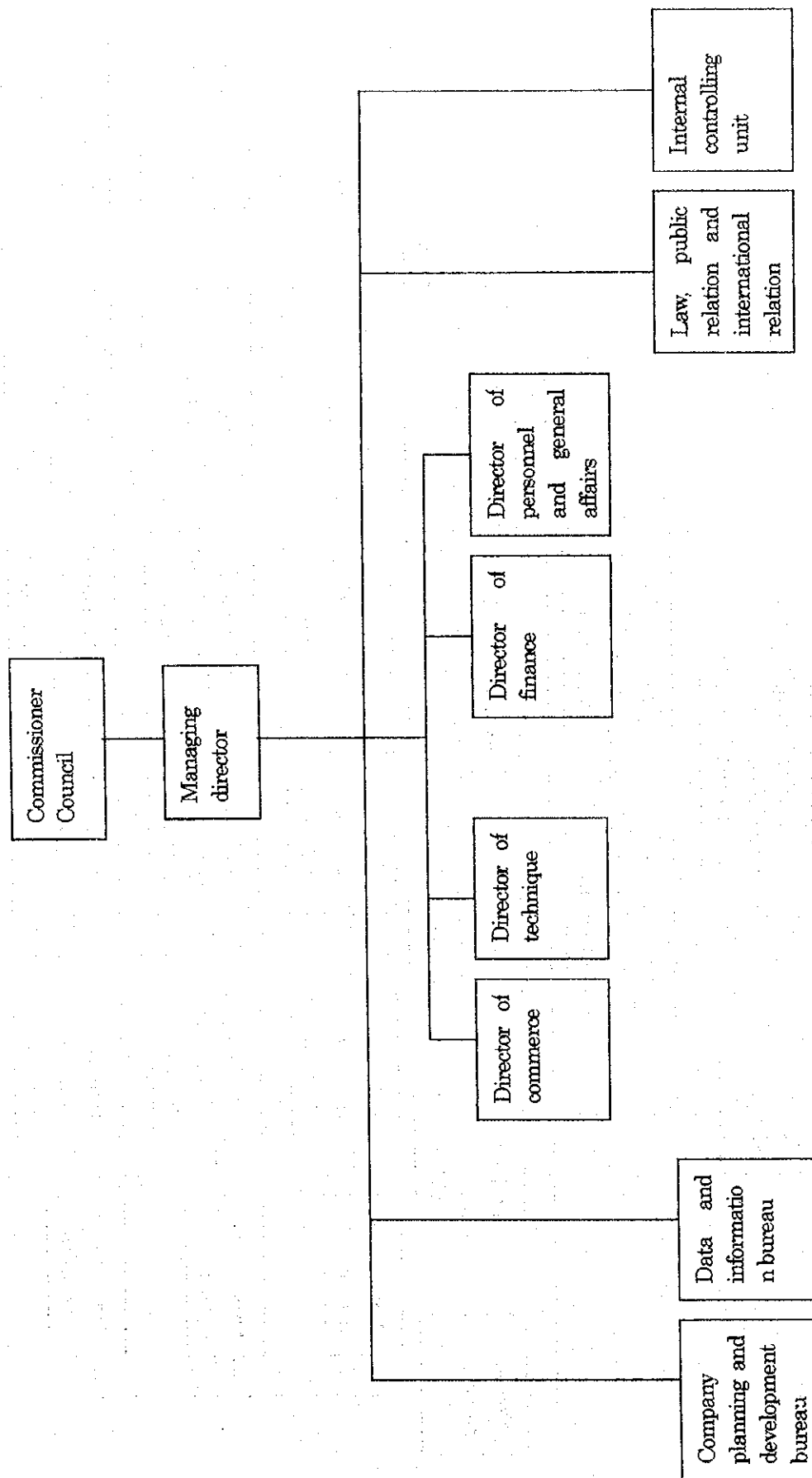


Table A7.3.1.9 Organization of commercial directorate

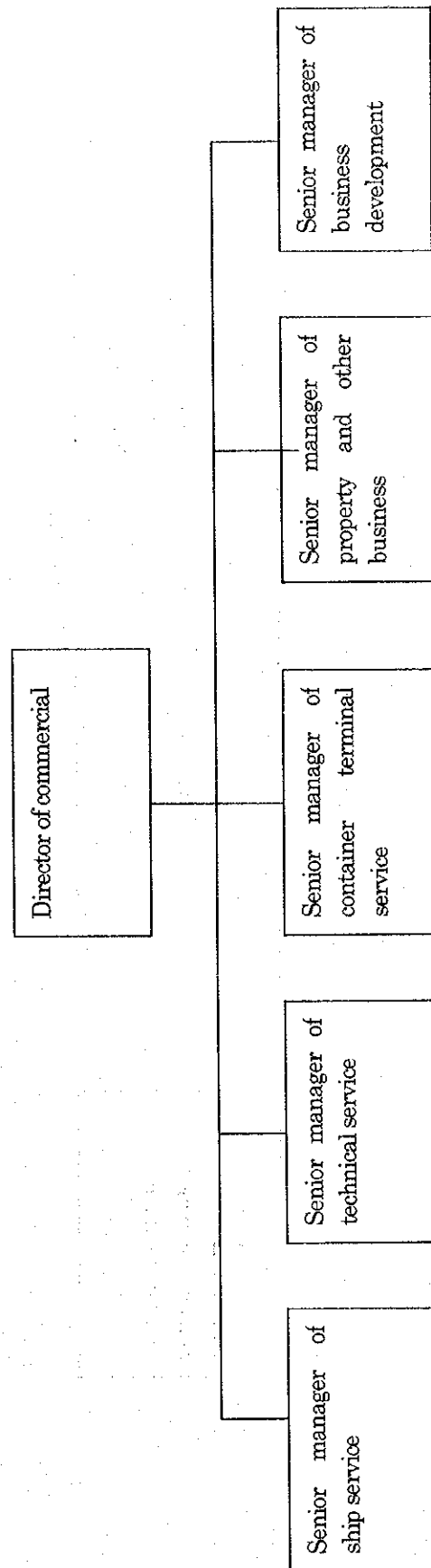


Table A7.3.1.10 Organization of technique directorate

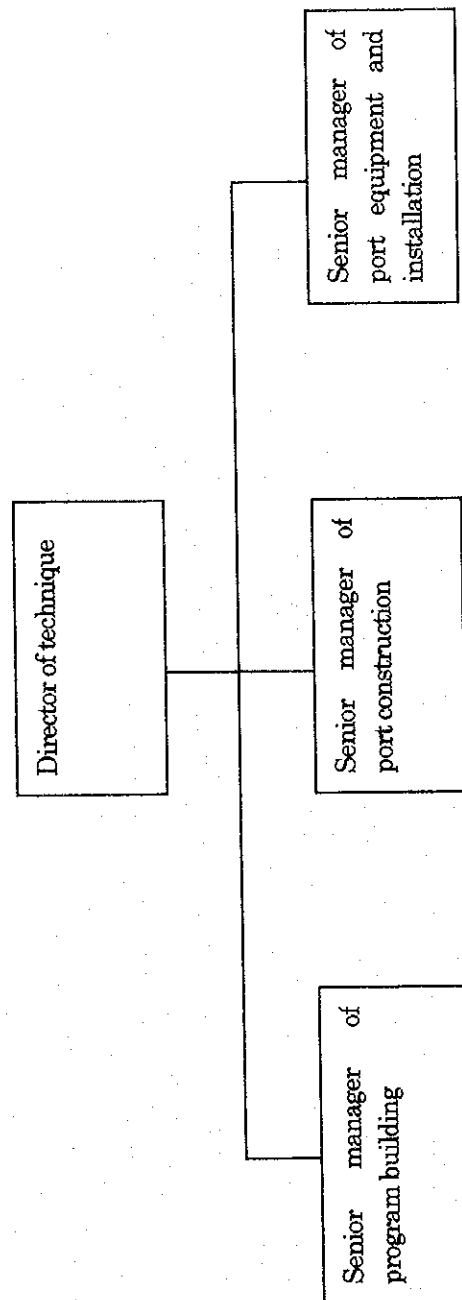


Table A7.3.1.11 Organization of financial directorate

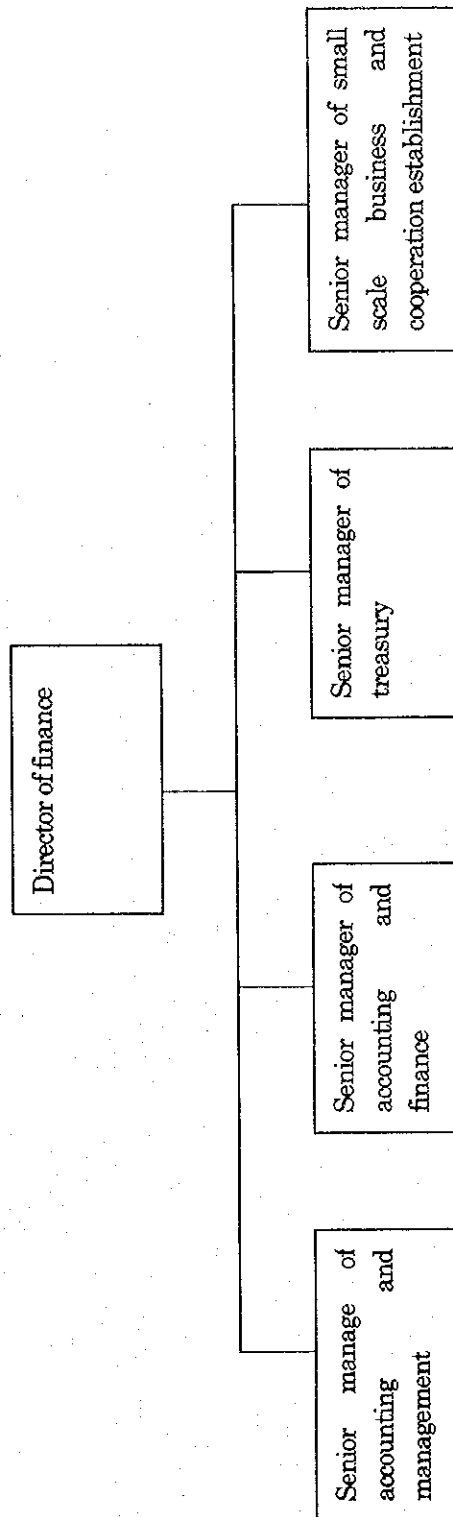


Table A7.3.1.12 Organization of personnel and general affairs directorate

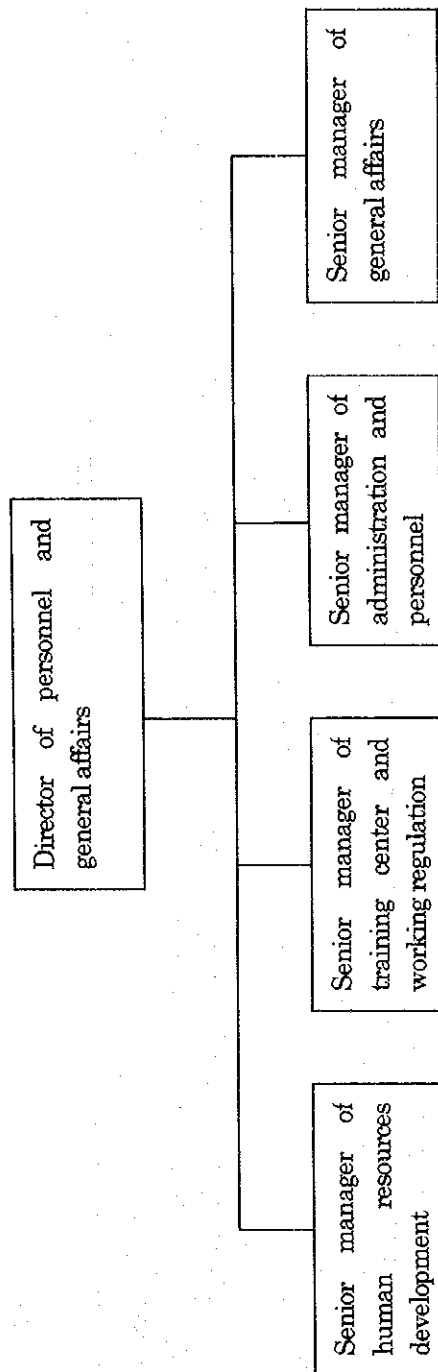


Table A7.3.1.13 Organization of Container Terminal

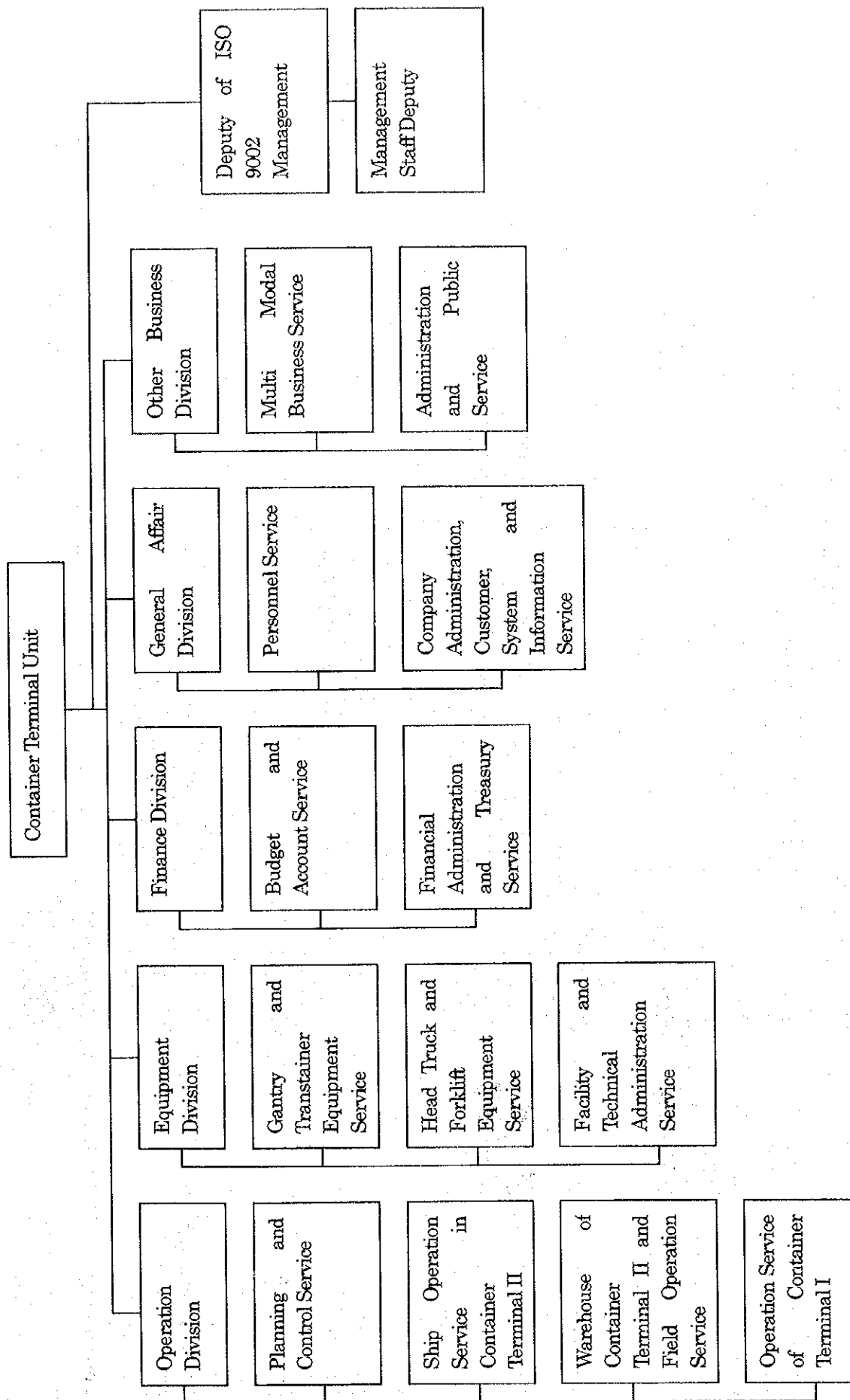


Table 7.3.2.1 The system and procedure of ships and loading/unloading goods service

Activity	Shipping company	One roof service Center	Loading/Unloading Company	Custom Immigration Quarantine	Harbor master	Explanation
Preparation	PPKB A	PPKB A				The ship company submits the PPKB to the PPSA to establish the ship's mooring, loading/unloading and stacking plan.
Planning	PPKB T	PPKB D	PPKB T	PPKB T	PPKB T	The established the PPKB by PPSA Submitted to the Harbor masters, Custom, Immigration, Quarantine And Shipping company and PBM.
Incomming ship		PBM Reference		Free of Quarantine		The ship's mooring is done after the Ship is declared free of quarantine.
Mooring ship		Ship mooring				
Loading/unloading Ship			Loading Unloading Stacking			The referenced PBM does the loading/unloading activities.
Outgoing ship					SIB	Ship goes out after getting the sailing Permit from the Harbor master.

Table 7.3.2.1 The system and procedure of ships and loading/unloading goods service

Activity	Shipping company	One roof service Center	Loading/Unloading Company	Custom Immigration Quarantine	Harbor master	Explanation
Preparation	PPKB A	PPKB A				The ship company submits the PPKB to the PPSA to establish the ship's mooring, loading/unloading and stacking plan.
Planning	PPKB T	PPKB D PBM Reference	PPKB T	PPKB T Free of Quarantine	PPKB T	The established the PPKB by PPSA Submitted to the Harbor masters. Custom, Immigration, Quarantine And Shipping company and PBM.
Incomming ship						The ship's mooring is done after the Ship is declared free of quarantine.
Mooring ship		Ship mooring				
Loading/unloading Ship			Loading Unloading Stacking			The referenced PBM does the loading/unloading activities.
Outgoing ship		Outgoing Ship			SIB	Ship goes out after getting the sailing Permit from the Harbor master.

Table A.7.3.2.2 Incoming vessel service

Shipping Company/ Agent	Port		Bank	Pilotage	Explanation
	Service establishment PPSA	Service Counter			
<div>PPKB A</div>	<div>PPKB A</div>				<p>The shipping company / agent submits the original PPKB to the PPSA alternate the location / docking time establishment.</p> <p>The administration service is rendered by the service counter.</p> <p>The implementation of the location / standard time alteration is done.</p> <p>a. Directly if without guarantee fee.. b. Indirectly because of having to pay guarantee fee first..</p>
	<div>PPKB D</div>				
	<div>PBM reference</div>				
	<div>Establishment</div>				
	<div>PPKB D</div>	<div>PPKB D</div>			
		<div>Payment</div>		<div>Incoming vessel</div>	
				<div>2A1</div> <div>2A2</div>	

Table A.7.3.2.2 Incoming vessel service

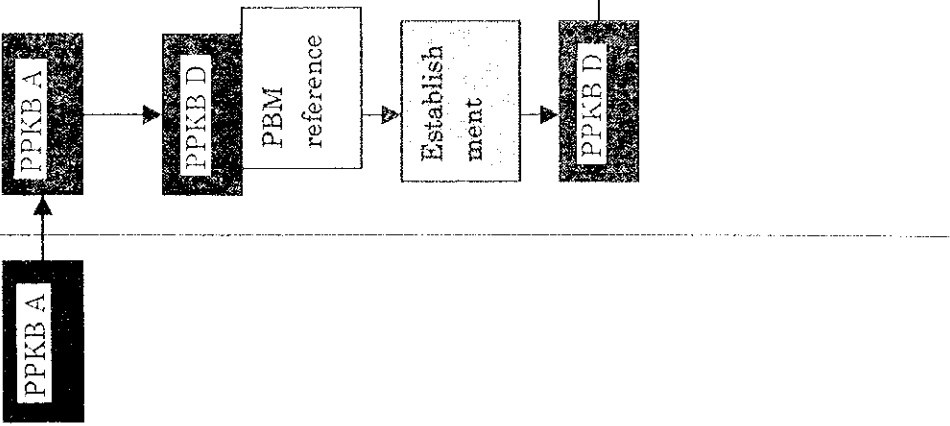


Shipping Company/ Agent	Port		Bank	Pilotage	Explanation
	Service establishment PPSA	Service Counter			
 <pre> graph TD A[PPKB A] --> B[PPKB A] B --> C[PPKB D] C --> D[PBM reference] D --> E[Establishment] E --> F[PPKB D] F --> G[PPKB D] G --> H[Administration settlement] H --> I[Payment] I --> J[Incoming vessel] J --> K[2A1] K --> L[2A2] </pre>					The shipping company / agent submits the original PPKB to the PPSA alternate the location / docking time establishment.
					The administration service is rendered by the service counter.
					The implementation of the location / standard time alteration is done.
					a. Directly if without guarantee fee.. b. Indirectly because of having to pay guarantee fee first..

Table A.7.3.2.3 Outgoing ships service

Shipping Company/agent			Branch of port		Bank	Service Implementation	Explanation
Service Establishment PPSA		Service Counter					
<div>PPKB A</div>			<div>PPKB A</div>			<div>Outgoing ships</div> <div>2A12A2</div>	The shipping company / agent submits the original PPKB to the service counter.
			<div>Administration settlement</div>				The shipping company settled the administration to give the pilotage service to the outgoing ships.

Table A.7.3.2.3 Outgoing ships service

Shipping Company/agent		Branch of port		Bank	Service Implementation		Explanation
		Service Establishment PPSA	Service Counter			Pilotage/base	
<div>PPKB A</div>			<div>PPKB A</div>			<div>Outgoing ships</div> <div><div>2A1</div><div>2A2</div></div>	<p>The shipping company / agent submits the original PPKB to the service counter.</p> <p>The shipping company settled the administration to give the pilotage service to the outgoing ships.</p>

Table A.7.3.2.4 Stacking of unloaded/imported and inter island commodities

Shipping Company/agent	PBM / TO	Base/ Operation Supervision	Explanation
<div>Manifest</div> <div>PPKB D</div>	<div>Manifest</div> <div>PPKB D</div> <div></div>	<div>Supervision</div> <div>BPRP/JD</div> <div>BPRP/JD</div>	<p>The shipping company submits the manifest and PPKB to the PBM / TO</p> <p>The PBM / TO implements stacking of commodities.</p> <p>The base / operational supervisor supervise the stacking implementation.</p> <p>The PBM / TO produce to BPRP / JD</p>

Table A.7.3.2.4 Stacking of unloaded/imported and inter island commodities

Shipping Company/ agent	PBM / TO	Base/ Operation Supervision	Explanation
<div> <div>Manifest</div> <div>PPKB D</div> </div>	<div> <div>Manifest</div> <div>PPKB D</div> </div>	<div> <div>Supervision</div> <div>Stacking implement ation</div> <div>BPRP/JD</div> <div>BPRP/JD</div> </div>	<p>The shipping company submits the manifest and PPKB to the PBM / TO</p> <p>The PBM / TO implements stacking of commodities.</p> <p>The base / operational supervisor supervise the stacking implementation.</p> <p>The PBM / TO produce to BPRP / JD</p>

Table A.7.3.2.5 Release of unloaded imported / inter island commodities from stacking area

Table A.7.3.2.5 Release of unloaded imported / inter island Commodities from stacking area						
Shipping Company/ agent	PBM / TO	One-counter service		Bank	Base / Operational division	Explanation
		Facilities Service division	Finance division			
<div>D/O</div>	<div>D/O</div> <div>PPKB D</div>	<div>D/O</div> <div>PPKB D</div>	<div>4 B</div>	<div>4 B</div> <div>Payment</div> <div>4B Paid</div>		<p>The shipping company / agent submits the D / O to the PBM / TO submits the PPKB D enclosed with D / O and BPRP/JD to the service counter.</p> <p>The service counter produce the 4.B.</p> <p>In accordance with the 4.B format, the bank receive payment and submits payment warranty.</p> <p>The base / operational supervise the release of commodities from stacking storage / area.</p>

Table A.7.3.2.6 Release of unloaded imported / inter island commodities from direct transportation

TABLE A.1.3.2-3 Release of unloaded imported commodities						
Shipping Company/ agent	PBM / TO	One-counter service		Bank	Base / Operational division	Explanation
		Facilities Service division	Finance division			
<div><div>D/O</div></div>	<div><div>D/O</div><div>PPKB D</div></div>	<div><div>D/O</div><div>PPKB D</div></div>	<div><div>4 B</div></div>	<div><div>4 B</div><div>Payment</div></div>	<div><div>4B Paid</div></div>	<p>The shipping company / agent submits the D / O to the PBM / TO submits the PPKB D by enclosing with manifest, BPRP/JD to the service counter.</p> <p>The service counter produce the 4.B.</p> <p>The bank receive payment according to the 4.B and give payment warranty.</p> <p>The base / operational supervision supervise the release of commodities from stacking of goods implementation.</p>

Table A.7.3.2.7 Stacking of loaded / exported and inter island commodities


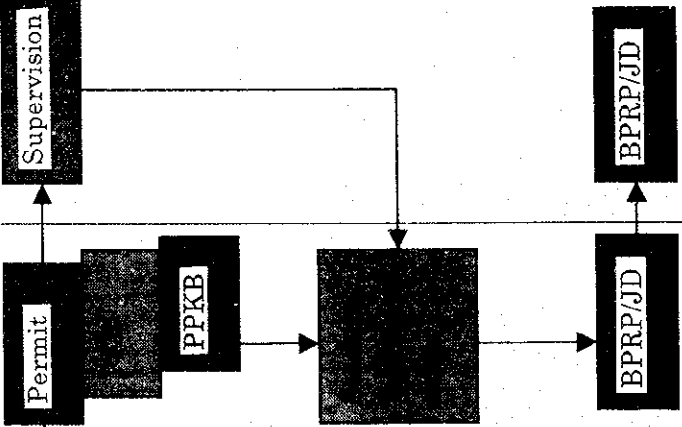
Shipping Company/ agent	PBM / TO	Base/ Operation supervision	Explanation
		<p>The commodities owner submits the permit to the PBM / TO.</p> <p>In accordance with the permit and PEB, the PBM / TO stack commodities.</p> <p>The base / operational supervision supervise the stacking implementation.</p> <p>The PBM / TO produce to BPRP / JD</p>	

Figure 3: The "Stacking" component and inter-related components

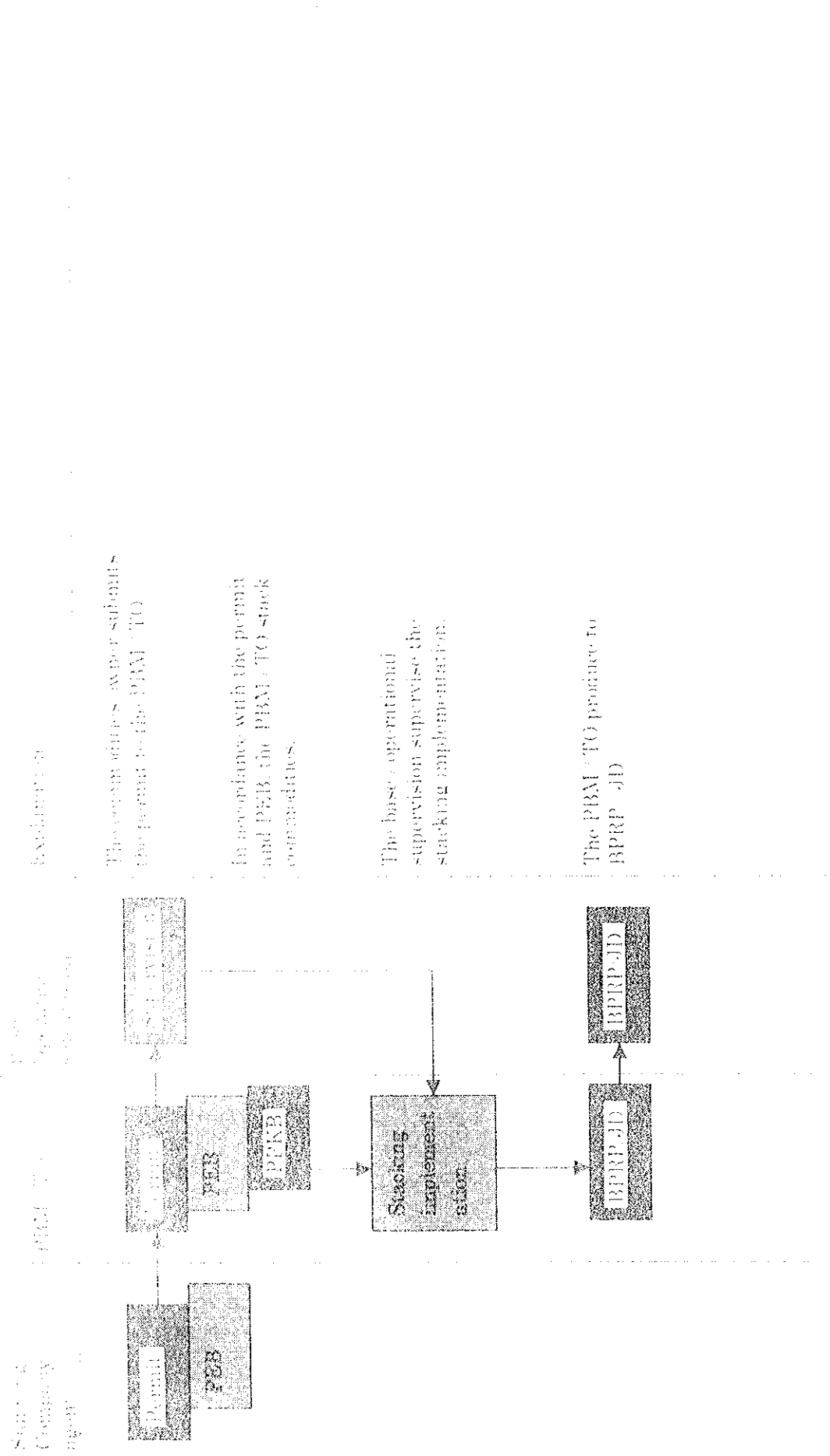


Table A.7.3.2.8 Loading of exported / inter island goods to ship from stacking storage

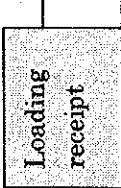







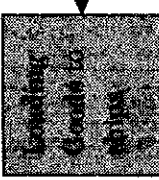





Shipping Company/ agent	PBM / TO	One-counter service		Bank	Base / Operational division	Explanation
		Facilities Service Division	Finance division			
	  					<p>The shipping company / agent submits loading receipt and PEB (for export) to the PEM / TO.</p> <p>In accordance with PPKB D, the PBM / TO accomplish its administration duties by enclosing the loading receipt, PEB and BPRP/JD to the service counter.</p> <p>The service counter produce the 4.B format.</p> <p>The bank receive payment according to the 4.B and give payment warranty.</p> <p>The base / operational supervision supervise the loading of goods from the stacking.</p>
			 			

Table A.7.3.2.9 Loading of exported / inter island goods to ship by direct transportation




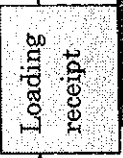





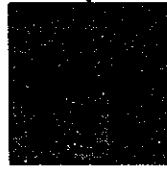

Shipping Company/ agent	PBM / TO	One-counter service		Bank	Base / Operational division	Explanation
		Facilities Service Division	Finance division			
	 	 				The shipping company / agent submits permit and PEB (for export) to the PEM / TO.
						The PBM / TO submits the PPKB D enclosed with the loading receipt, PEB and BPRP/JD to the service counter.
						The service counter produce the 4.B format.
						The bank receive payment according to the 4.B and give payment warranty.
						The base / operational supervision supervise the loading of goods from the stacking.

Table A.7.3.2.10 Abbreviation

Organization
PPSA : One roof service center
Service counter :
PBM : Stevedoring company
Bank : Located at the service counter
Document or procedure
PPKB : The ship and commodities service request
PPKB A : Original document of ship commodities service request
PPKB D : Ship and commodities service request establishment
PPKB T : Duplicate document of ship and commodities service request establishment
D/O : Delivery order which must be approved by the custom office
PEB : The export commodities notice for exported goods only
4B : Commodities note of debtor
Permit
SIB : Sailing permit
Warranty
2A1 : Pilotage and service usage warranty
2A2 : Tie / untie warranty
BPRP/JD : Stacking room usage / pier service warranty

(2) Procedure of KOJA Container Terminal

1) Vessel Discharge

- (a) Vessel Planner send Bayplan and Disch. Sequence List to Solo (Hard Copy)
- (b) Execute Command (by Voice)
- (c) Records Container & Truck ID by Hand Held Terminal. SPARCS will automatically plans container to a yard.
- (d) Assign Position
- (e) SPARCS automatically activates the move to the job list on VMT (Vehicle Mounted Terminal)
- (f) RTG Opr. completing move or change the planned position by VMT. SPARCS will update the position.

2) Import Delivery

- (a) Truck Driver send SP2 to In-Gate Operator
- (b) In-GateProcessing:
 - Gate Opr. Gives BAT number to truck driver
 - In-Gate Transaction on EXPRESS
 - EXPRESS send ingate transaction to SPARCS
 - SPARCS gives container and automatically plan container to TIP (Truck In Progress) and this will activate the moves on VMT.
 - Gate Opr. Gives container position to Truck Drivers.
- (c) Truck goes to the container position
- (d) Yard Operation:
 - Opr. Assist collect a copy of SP2 from Truck Driver and guide the RTG Driver
 - Truck Driver shows BAT number to RTG Driver
 - RTG Driver select job list on VMT and completing the move
- (e) Truck Goes to the Out-Gate
- (f) Out-Gate Processing:
 - Truck Driver gives BAT number to Gate Operator
 - Gate Operator doing out-gate transaction on EXPRESS
 - EXPRESS will send out-gate transaction to SPARCS
 - SPARCS will update the container position to community

3) Export Receival

- (a) Truck Driver send Export Card to In-Gate Operator
- (b) In-GateProcessing:
 - Gate Opr. Gives BAT number to truck driver

In-Gate Transaction on EXPRESS

EXPRESS send ingate transaction to SPARCS

SPARCS will automatically plan container position on yard using Yard Allocation, and send the Planned position to EXPRESS. This will activate the moves on VMT.

Gate Opr. Gives planned position to Truck Drivers.

(c) Truck goes to the planned position

(d) Yard Operation:

Opr. Assist collect a copy of Export Card from Truck Driver and guide the RTG Driver

Truck Driver shows BAT number to RTG Driver

RTG Driver select job list on VMT and completing the move and SPARCS will update the container position.

(e) Truck Goes to the Out-Gate

(f) Out-Gate Processing:

Truck Driver gives BAT number to Gate Operator

Gate Operator doing out-gate transaction on EXPRESS

(g) Transaction Complete

4) Vessel Loading

(a) Planner / Dispatcher:

Plan the Vessel Load

Assign RTG and Truck to Equipment Pool Servicing each crane

Set Automatically point of work on SPARCS

Control Room

Monitoring Loading Operation

Solve Planning Problem when occurs

(b)

Vessel Planner gives Load Plan to Solo, Whiskey & Opr. Assist (hardcopy)

Yard Planner gives Yard Position to Opr. Assist (hardcopy)

Dispatcher manually dispatches first moves on SPARCS, and that will be appearing on VMT as the first moves on job list

(c) RTG Opr. Select the move on VMT and completing that move

(d) SPARCS assign Planned Position

(e) Assign Position (by voice)

(f)

Solo completing move or update planned position by HHT

SPARCS will update the container position on vessel, and automatically adding the next moves on VMT.

(3) Import container process at the KOJA container terminal

1) Shipping lines send ships data to TPK Kojá, such as CVIA, Ship Profile, Vessel Rotation, Vessel Voyage Rotation, etc. Beside that shipper data and consignees, trucking company, etc must be input to reference table at express (note. for delivery, gate, etc)

2) When vessel class already exist in reference table, go to next process. When not exist ship planner has to make a new ship profile for new vessel class.

Ship Editor : Ship Planner (SP) make new ship profile with file name format xxx.xxxx.xxxxxxxxxx

Express : Ship Planner (SP) input new vessel class data with vessel class ID xxxx

menu : reference Table ; submenu : vessel class

Sparcs : Sparcs admin (SA) input new vessel class id into SPARCS code with format xxxx

3) Input existing new vessel data / vessel data update if changed

Express : if data vessel none, Ship Planner input new data with Vessel Name ID format xxx

menu : reference Table ; submenu : vessel

Sparcs : Sparcs admin (SA) input vessel code and new vessel name in sparcs codes

4) If vessel service data exist at database, go to next process

Express : if data vessel service none, Ship Planner input new data with Vessel Service ID Name format xxx

menu : vessel operations ; submenu : vessel service

Sparcs : Ship planner input new vessel service data, Sparcs Admin input data into sparcs codes

menu : vessel ; menuitem : vessel service

5) Express : Ship Planner input data with new Vessel Voyage Rotation

menu : vessel operations ; submenu : vessel voyage rotation

6) Express : Ship Planner input data with new Vessel Schedule into express database such as input estimated time arrival/departure (ETA/ETD)

menu : vessel operations ; submenu : vessel schedule

Sparcs : Ship planner can see new vessel schedule information at sparcs

menu : vessel ; menuitem : vessel schedule

7) Sparcs : Yard planner (YP) allocate import container location at the Yard

menu : yard ; menuitem : satellite menu

menu : yard ; menuitem : show allocation

Select allocation filter, allocation group and allocation range

8) Express : Ship planner input imported container data

menu : vessel operation ; submenu : vessel stow plan

Spares : Ship planner can see imported container information on ship

menu : vessel ; menuitem : open

Open Ship profile on each bay and see imported container information

9) Spares : Ship planner make schedule container unloading plan from ship to yard for each bay.

Use tools on toolbar to choose flow stack wise unloading method , tier wise, or power flow. drag container which will be unloading and drop at planned yard allocation

10) Express : Ship docking at the port and ship planner input Actual Time Arrival data (ATA) into express.

menu : vessel operations ; submenu : vessel schedule

11) MDT : Upon unloading schedule plan, MDT operator (Solo) press 'commit key' for each unloaded container from ship.

RGT operator press 'commit key' at RDT for each stacked container at the yard

Spares : Yard Planner can see executed container information

executed stack container at yard

Express : ship planner and yard planner can see executed container location information

menu : vessel operation ; submenu : vessel discharge

menu : yard operation ; submenu : container position

12) Express : Import Clerk (IC) input data PIN release number for each executed imported container from ship so can be delivered from yard

menu : import processing ; submenu : import delivery requirement

13) In order to go to the next process, container must be labeled ' released'

If not, Import Clerk can be contacted at the related department such as shipping line and Customs for checking container status

(4) The port of Tanjung Perak

The port of Tanjung Priok employs "one roof center" system since 1995. The procedure of

container terminal is detailed below.

1) Container receiving / export

(a) Proposal of container receiving service

The service user submits

- a) The stacking proposal
- b) The cost calculation
- c) The fund WARKAT

(each is four sheets) to transfer to the export service officer in the export counter

(b) Delivery / Checking and document printing

After the document is checked, the export service officer prints CEIR to be approval by Ksatpal export (Staff head of the export service officer), and then transfer to the service user. Transferred to the service user -> User -> The service user transfers CEIR to the trailer driver.

(c) Trailer entering

The trailer driver enters the gate to deliver CEIR for the officer in gate

The trailer goes to in gate

(d) Job slip printing

The officer in gate receives CEIR from the trailer driver to check the condition of container and to print out in gate terminal job slip according to CEIR to transfer to the trailer driver along with CEIR (the third and fourth sheet)

Then the trailer driver goes to the container stacking location according to the location decided in the job slip.

(e) Container transferring

The trailer driver deliver in gate terminal job slip and CEIR to field tally.

(f) Process of container stacking

The field tally orders the equipment operation to implement the process of container stacking from the trailer to the container yard according to the location decided in the job slip.

(g) Trailer exiting

After the process of stacking is finished, the trailer driver receives CEIR and in gate terminal job slip again from the field tally, and then the trailer driver goes to out gate to deliver in gate terminal job slip and CEIR (the third sheet) for the officer of out gate.

The trailer goes to out gate.

Explanation:

The service user transfers the document of PEB to the container terminal unit, after the container is stacked in the container yard / open storage.

2) Container delivery / import

(a) Proposal of container delivery service

The service user submits:

- a) The delivery proposal
- b) The delivery order(O/D)
- c) The letter of goods export agreement (SPPB)
- d) The license of goods handling from the importer
- e) The cost estimate
- f) The payment, that can use:
 - The fund WARKAT
 - Bank guarantee

(each is original and 3 sheets of copy) to transfer for the import service officer in the locate of import.

(b) Receiving / checking and printing of document

After the document is checked, the import service officer prints out CEIR and approved by Kasatpe import (Staff head of the import service officer) and then CEIR is transferred to the service user.

Transferred to the service user, -> The service user transfers CEIR to the trailer driver.

(c) Trailer entering

The trailer driver goes to in gate to deliver CEIR for the officer of in gate.

The trailer goes to in gate.

(d) Job slip printing

The officer of in gate receives CEIR from the trailer driver and to print out in gate terminal job slip according to CEIR to be transferred to the trailer driver along with CEIR (The third and fourth sheet).

Then the trailer driver goes to the container stacking location according to the location decided in the job slip.

(e) Container receiving

The trailer driver delivers in gate terminal job slip and CEIR to the field tally.

(f) Process of container transferring

The field tally orders the equipment operator to implement the process of container loading from the container yard to the trailer, according to the position of container decided in job slip.

The trailer goes to out gate.

(g) Container transferring

After the process of loading is finished, the trailer driver receives CEIR and in gate terminal job slip again from the field tally, then the trailer driver goes to out gate to deliver in gate terminal job slip along with CEIR for the officer of out gate.

(h) Confirmation of trailer

The officer of out gate receives CEIR and in gate terminal job slip from the trailer driver,

then the officer of out gate confirms the vehicle registration number. The trailer, according to in gate terminal job slip, gives CEIR of the fourth sheet to the trailer driver.

3) Container discharge service

(a) The shipping company submit:

- a) Master cable
- b) CVIA
- c) Statement of fact
- d) ISL (Import Summary List)
- e) Dangerous cargo list
- f) Crane sequence list
- g) General plan discharging
- h) Bay plan discharging
- i) Manifest

(Each is 4 sheets) to transfer for the controlling and planning service of container terminal unit of Tanjung Perak.

The shipping company goes to P2 service.

(b) After the document is checked, the planning and controlling service makes the list of meeting plan with the shipping company.

(c) The planning and controlling service along with the equipment service makes the GC and TT, HT and FK hold a meeting with the shipping company to decide the working schedule of stevedoring activity.

After the process of meeting is finished.

(d) The planning and controlling service of entry ISL and crane sequence list from the meeting result, issues the discharge job slip and CEIR to send to the ship operation service.

The ship operation service transfer the discharge job slip and CEIR to the loading tally.

The equipment service of GC and TT, HT and the FK orders the equipment operator to serve the unloading activity.

Head truck + chassis goes to the wharf.

(e) The ship operation service (unloading tally), which is based on the discharge job slip and CEIR, orders the operator of QC equipment to move the container from the ship to the chassis head truck to carry to the open storage.

(f) After the process of container unloading from the ship to the chassis head truck is finished, the unloading tally transfers the discharge job slip and CEIR to the operator of head truck toward the open storage according to the location decided in the discharge job slip.

Head truck + container goes to container yard or open storage.

(g) After the head truck arrives in the open storage, the operator of head truck transfers the discharge job slip to the field tally, then the field tally orders the equipment operator to stack

the container from the chassis head truck to the open storage according to the location decided in the discharge job slip.

(h) After the process of container stacking in the open storage is finished, the field tally orders the operator of head truck to come back to the wharf to carry the next unloading container.

Explanation:

After the process of container loading is finished at the end of shift, the field tariff reports the result of discharge activity to the gate and field operation service.

4) Container loading service

(a) The shipping company submit:

- a) Master cable
- b) CVIA
- c) Statement of fact
- d) ESL (Export Summary List)
- e) Dangerous cargo list
- f) Crane sequence list
- g) General plan loading
- h) Bay plan loading
- i) Manifest

(Each is 4 sheets) to transfer to the planning and controlling service of container terminal unit of Tanjung Perak port.

(b) After the document is checked, the service of operation controlling and planning makes the list of meeting plan with the shipping company.

(c) The planning and controlling service together with the equipment service of GC and TT, HT and FK, holds a meeting with the shipping company to decide the working schedule of stevedoring activity.

After the process of meeting is finished.

(d) The planning and controlling service of entry ISL and crane sequence list from the meeting result, issues the loading job slip and CEIR to send to the gate and field operation service.

The gate and field operation service transfers the loading job slip and CEIR to the field tally.

The equipment service of GC and TT, HT and FK orders the equipment operator to serve the stevedoring activity.

Head truck + chassis goes to the field.

(e) The ship operation service (unloading tally), which is based on the discharge job slip and CEIR, orders the equipment operator of RTG to move the container from the open storage to the chassis head truck to carry to the wharf.

(f) After the process of container loading from the yard to the chassis head truck is finished,

the field tally transfer the loading job slip and CEIR to the operator of head truck to carry to the wharf.

Head truck + container goes to the wharf.

(g) After the head truck arrives in the wharf, the operator of head truck transfers the loading job slip and CEIR to the loading tally, then the loading tally orders the equipment operator to load the container from the chassis head truck to the ship decided in the loading job slip.

(h) After the process of container loading from the head truck to the ship is finished, the loading tally orders the operator of head truck comes back to the container yard to carry the next loading container.

Explanation

After the process of container loading is finished at the end of shift, the field tally reports the result of loading activity to the stevedoring service.

5) Container behandle service

(a) Service user

submits:

a) The proposal of handle.

b) Fund

Contacts customs office

(b) Planning and controlling service

Export / import counter

The service to print out the job order handle.

Job order is transferred to the service user to the field operation service.

(c) Field operation service

Field operation service print out the movement job slip.

Movement of job slip

(d) The yard movement implements the container removal from the block to CFS.

The truck goes to CFS

(e) Various operation service (CFS), customs office and the location of CFS.

6) Status change service of container from FCL to LCL

(a) Service user or shipping

Submits:

a) status change proposal

b) Fund

c) delivery order

(b) Planning and controlling service

Import counter

The service of printing out the job order of status change from FCL to LCL.

Job order is transferred to the service user.

The service user goes to the field operation service.

(c) Field operation service

The field operation service prints out the movement job slip.

Movement job slip

(d) The field movement in implementation of the container removal.

The truck goes to CFS.

(e) The warehouse operation service implements the stripping from the container.

CFS

Document handling service after getting ISO 9002 certificate by the integrated service system.

A.7.3.3 Productivity of cargo handling in conventional terminal

(1) The port of Tanjung Priok

The port of Tanjung Priok has facilities shown in Table A.7.3.3.1.

Table A.7.3.3.1 Facilities in the port of Tanjung Priok(1997)

Conventional terminal

Description	Unit	Volume
Berth		
a. Conventional	m	9,637
Total	m	9,637
Storage		
a. Conventional storage	m2	212,610
b. Cargo distribution center	m2	11,306
Total	m2	223,916
Yard		
a. Conventional yard	m2	621,599
Total	m2	621,599

Source: IPC II

The port of Tanjung Priok has equipment shown in Table A.3 3.2.

Table A.7.3.3.2 Equipment in the port of Tanjung Priok (1997)

Conventional terminal

Description	Unit
a. Mobile crane	1
b. Forklift	16
c. Head truck	1
d. Top loader	1
e. Tug boat	5
f. Pilotage	
1) Pilot boat	9
2) Tug boat	13
3) mooring boat	7
4) Vessel traffic information system	1

Source: IPC II

The cargo volume of the conventional cargo are shown in Table A.3.3.3.

Table A.7.3.3.3 Cargo trade (1997) in conventional terminal

Type of cargo	Volume(Ton)
General cargo	8,077,846
Bag cargo	2,715,278
Liquid bulk	8,813,356
Dry bulk	6,292,173
Container	16,533,829
Total	42,432,482

Source IPC II

1) Utilization of facilities

Utilization of facilities is shown in Table A.7.3.3.4.

Table A.7.3.3.4 Utilization of facilities in 1997

Facility	Utilization	Unit	Value
Berth	BOR	%	71.00
	BTP	Ton/m	3,857.00
Storage	SOR	%	51.00
	STP	Ton/m2	16.00
Yard	YOR	%	38.00
	YTP	Ton/m2	16.00

Source: IPC II

2) Service time for ship

Table A.7.3.3.5 shows service time for vessels in conventional terminal.

Table A.7.3.3.5 Service time for vessels in 1997

Service time	Hours
International vessel	
a. Turn round time	66.33
b. Waiting time	14.14
c. Berthing time	52.16
Domestic vessel	
a. Turn round time	73.48
b. Waiting time	15.12
c. Berthing time	58.36

Source: IPC II

3) Productivity of cargo handling

Table A.7.3.3.6 shows productivity of cargo handling at conventional terminal in 1997.

Table A.7.3.3.6 Productivity of cargo handling in 1997

Type of cargo	Unit	Value
Foreign vessel		
a. General	T/G/H	26.50
b. Bag	T/G/H	34.24
c. Liquid bulk	T/P/H	147.57
d. Dry bulk	T/G/H	418.51
Domestic		
a. General	T/G/H	24.38
b. Bag	T/G/H	33.97
c. Liquid bulk	T/P/H	106.27
d. Dry bulk	T/G/H	106.27
e. Container	TEU/C/H	9 B/C/H

Source: IPC II

(2) The port of Tanjung Perak

Table A.7.3.3.7 shows wharf of conventional terminals.

Table A.7.3.3.7 Wharf of conventional terminals

NO.	Name	Length(m)	Depth(m)
1	North Jamrud	1,200	9.2
2	West Jamrud	160	8.0
3	South Jamrud	800	8.0
4	Perak	140	7.0
5	East Berlian	785	9.0
6	West Berlian	700	9.5
7	North Berlian	140	4.0
8	East Nilam	860	9.0
9	Mirah	640	7.0
10	Intan	100	4.0
11	Kalimas	2,270	2.0
Total		7,795	

Source: IC III

Table A.7.3.3.8 shows Storage facilities of conventional terminal.

Table A.7.3.3.8 Storage of conventional terminal

No.	Location	Number	Width(m2)	Capacity(m3)
A.	Transit Shed			
1	North Jamrud	7	22,391	47,021
2	South Jamrud	7	23,495	49,340
3	Perak	2	6,718	14,105
4	Mirah	4	13,700	28,770
5	East Berlian	2	8,780	18,438
*	CFS	1	4,400	8,870
6	West Berlian	2	9,166	19,249
7	Nilam	4	18,235	50,170
*	Dangerous Cargo	3	4,500	7,875
8	Kalimas	4	6,714	12,965
B.	Warehouse			
1	Central Jamrud	4	6,050	12,705
2	Perak	1	2,070	4,347
C.	Import Storage			
	North Jamrud	2	2,896	6,082
D.	Open Stacking Area			
1	Inner Harbor		82,252	17,730
2	Outer Harbor		2,300	50,190
Total		43	235,267	502,860

Source: IPC III

Table A.7.3.3.9 Equipment of conventional terminal.

Table A.7.3.3.9 Equipment of conventional terminal (1997)

Name	Capacity	IPC III	Private
Mobile crane	15-35 Ton	9	8
Floating crane	50-200 Ton		3
Forklift	2-2.5 Ton	35	24
Forklift	3-4 Ton		25
Forklift	5 Ton	3	11
Forklift	7.5 Ton	1	1
Forklift	8-12.5 Ton		4
Forklift	15-25 Ton	2	2
Payloader	1.5 Ton		1
Grab	3 Ton		3
Hopper			3

Source IPC III

Table A.7.3.3.10 shows conventional cargo handled in 1997.

Table A.7.3.3.10 Conventional Cargo volume by terminal in 1997

Name of Terminal	International		Domestic		Total	
	Import	Export	Unloading	Loading	Unloading	Loading
North Jamrud	2,733,533	212,170	3,017,304	31,107	5,750,837	243,277
South Jamrud	76,097	200	1,191,638	1,009,578	1,267,735	1,009,778
Mirah	0	0	201,287	540,103	201,287	540,103
Berlian	1,857,968	196,373	584,732	232,225	2,442,700	428,598
Nilam	1,280,061	186,386	4,543,264	893,025	5,823,325	1,079,411
Kalimas	0	0	389,923	928,970	389,923	928,970
Uster	555,454	84,733	1,353,476	1,942,782	1,908,930	2,027,515
Total	6,503,113	679,862	11,281,624	5,577,790	17,784,737	6,257,652

Source: IPC III

1) Utilization of facilities

Table A.7.3.3.11 shows utilization of facility at conventional terminal in 1997.

Table A.7.3.3.11 Utilization of facility in 1997

Facility	Utilization	Unit	Value
Berth	BOR	%	74.00
	BTP	Ton/m	1,252.00
Storage	SOR	%	29.00
	STP	Ton/m ²	13.00
Yard	YOR	%	25.00
	YTP	Ton/m ²	8.00

Source: IPC III

2) Service time for ship

Table A.7.3.3.12 shows service time for vessels at conventional terminal in 1997.

Table A.7.3.3.12 Service time for vessel in 1997

Service time	Hours
International vessel	
a. Turn round time	94.00
b. Waiting time	6.00
c. Berthing time	71.00
Domestic vessel	
a. Turn round time	102.00
b. Waiting time	8.00
c. Berthing time	72.00

Source: IPC III

3) Productivity of cargo handling

Table A.7.3.3.13 shows productivity of conventional cargo handling in 1997.

Table A.7.3.3.13 Productivity of cargo handling in 1997

Type of cargo	Unit	Value
Foreign vessel		
a. General	T/G/H	25.00
b. Bag	T/G/H	22.00
c. Liquid bulk	T/P/H	100.00
d. Dry bulk	T/G/H	125.00
Domestic		
a. General	T/G/H	21.00
b. Bag	T/G/H	21.00
c. Liquid bulk	T/P/H	59.00
d. Dry bulk	T/G/H	65.00
e. Container	TEU/C/H	8

Source: IPC III

A.7.3.4 Productivity of container handling

(1) The port of Tanjung Priok

Table A.7.3.3.14 shows facilities of container terminal in Tanjung Priok in 1997.

Table A7.3.3.14 Facilities in the port of Tanjung Priok(1997)

Description	Unit	Value
Berth		
a. Container terminal I and II	m	1,410
b. Container terminal KOJA	m	450
Total	m	1,860
Yard		
a. Container yard I and II	m ²	393,400
b. Container yard KOJA	m ²	150,000
Total	m ²	543,400

Source: IPC II

Table A.7.3.3.15 shows equipment of container terminal in Tanjung Priok in 1997.

Table A.7.3.3.15 Equipment in the port of Tanjung Priok (1997)

Container terminal I, II and KOJA

Description	Unit
a. Container crane	13
b. Transtainer crane	45
c. Chassis	89
d. Forklift	18
e. Head truck	84
f. Top loader	4
Container terminal KOJA	
a. Container crane	5
b. Transtainer crane	20
c. Forklift	0
d. Head truck	40
e. Top loader	0
f. Chassis	50

Source: IPC II

Note: Data not include equipment owned by private company

Table A.7.3.3.16 shows container handling volume Tanjung Priok container terminal in 1997

Table A.7.3.3.16 Container handling volume(1997)

Terminal	Volume(TEUs)
Conventional	237,817
Container	1,630,912
Total	1,868,729

Source IPC II

1) Utilization of facilities

Table A.7.3.3.17 shows utilization of facilities at container terminal in 1997.

Table A.3.3.17 Utilization of facilities in 1997

Facility	Utilization	Unit	Value
Berth	CT I	BOR	%
		BTP	Ton/m
	CT II	BOR	%
		BTP	Ton/m
	KOJA	BOR	%
		BTP	Ton/m
Yard	CT I	YOR	%
		YTP	Ton/m2
	CT II	YOR	%
		YTP	Ton/m2
	KOJA	YOR	%
		YTP	Ton/m2

Source: IPC II

Note: KOJA data on December, 1997

2) Service time for ship

Table A.7.3.3.18 shows service time of vessels at container terminal in 1997.

Table A.7.3.3.18 Service time for vessels in 1997

Service time	Hours
CT I and CT II	
a. Turn round time	40.71
b. Waiting time	1.06
c. Berthing time	23.40
KOJA	
a. Turn round time	20*
b. Waiting time	0.37*
c. Berthing time	18.77*

Source: IPC II

Note: KOJA data on December, 1997

3) Productivity of cargo handling

Table A.7.3.3.19 shows productivity of container handling at container terminal in 1997.

Table A.7.3.3.19 Productivity of container handling in 1997

Terminal	Unit	Value
CT I	B/C/H	18
CT II	B/C/H	17
KOJA	B/C/H	25*

Source: IPC II

Note: KOJA data is their minimum service target

(2) The port of Tanjung Perak

Table A.7.3.3.20 shows facilities of container terminal at Tanjung Perak in 1998.

Table A.7.3.3.20 Facilities of International Container Terminal in 1998

Facilities	Value
a. Berth	
Length (M)	500
Depth (M)	10.5
Vessels	3
b. Container yard	
Groud slots	3,696
Blocks	9
Slot/Row	66 / 7
TEUs	500,000
c. CFS	
Wide (M2)	10,000
Utilization (M2)	6,500
Capacity per year(Ton)	593,125

Source: IPC III

Table A.7.3.3.21 shows equipment of container terminal in Tanjung Perak in 1998.

Table A.7.3.3.21 Equipment of International Container Terminal in 1998

Equipment	Unit	Number
a. Container crane	40 Ton	5
b. Rubber tyre gantry(7 Row)	40 Ton	11
c. Transtainer (3 Row)	40 Ton	4
d. Top loader	36 Ton	1
e. Reach stacker	40 Ton	1
f. Side container loader	7.5 Ton	2
g. Forklift diesel	5 Ton	1
h. Forklift diesel	2 Ton	6
i. Forklift electric	2.5 Ton	22
j. Head truck	40 Ton	48
k. Chassis	20 Feet	11
l. Chassis	40 Feet	88
m. Radio frequency unit(RFU)		2
n. Hand held terminal (HHT)		22
o. Display terminal		58
p. Printer		32
q. Unit power supply (UPS)		11

Source: IPC III

Table A.7.3.3.22 shows container handling volume at container terminal in Tanjung Perak in 1997. At the conventional terminals, 295,011 TEUs were handled in 1997.

Table A.7.3.3.22 Container handling volume (TEU) in 1997

Import		Export		Total		Ground Total
Full	Empty	Full	Empty	Full	Empty	Import/Export
184,497	84,472	287,072	15,112	471,569	99,584	571,153

Source: IPC III

Table A.7.3.3.23 shows container handling volume in Tanjung Perak in 1998.

Table A.7.3.3.23 Container handling volume (TEU) in 1998 (January – July)

Import		Export		Total		Ground Total
Full	Empty	Full	Empty	Full	Empty	Import/Export
50,967	99,117	158,433	1,710	209,400	100,827	310,227

Source: IPC III

1) Utilization of facilities

Table A.7.3.3.24 shows utilization of facilities at the container terminal in 1998.

Table A.7.3.3.24 Utilization of facilities in 1998 (Jan.-Jul.)

Facility	Utilization	Unit	Value
Berth	BOR	%	69.92
	BTP	Ton/m	620.47
Storage	SOR	%	54.72
	STP	Ton/m ²	25.48
Yard	YOR	%	68.73
	YTP	TEU/gls	71.41

Source: IPC III

2) Service time for ship

Table A.7.3.3.25 shows service time for vessels in 1996.

Table A.7.3.3.25 Service time for vessels in 1996

Service time	Hours
ICT I and ICT II	
a. Turn round time	103*
b. Waiting time	9*
c. Berthing time	20.79*

Source: IPC III

3) Productivity of cargo handling

Table A.7.3.3.26 shows Productivity of container handling in 1998.

Table A.7.3.3.26 Productivity of container handling in 1998(Jan.-Jul.)

Terminal	Unit	Value
International container terminal	B/C/H	21.03

Source: IPC III

A.7.3.4 Site survey on cargo handling productivity

(1) Container handling productivity

Figure A.7.3.4.1 shows the location of the survey on container handling productivity. Table A.7.3.4.1 and Table A.7.3.4.2 shows the result of site survey.

The survey was conducted for conformation of container handling productivity and for finding weak point of handling, if any, at the berth number 03 by the study team on August 12, 1998.

(2) General cargo handling productivity

The study term conducted site survey on general cargo handling productivity at the Tanjung Perak conventional terminals for confirmation of the productivity and finding, if any, weak points of the terminals on August 27, 1998. The target vessel was Amrta VII originated from Jakarta and Taruna Putra III destined to Palembang.

Figure A.7.3.4.2 shows the site of survey on general cargo handling productivity. Table A.7.3.4.3 and Table A.7.3.4.4 shows actual general cargo handling situation. Types of cargoes are pipe, box, roll, coil and bag.

A.7.3.5 Site survey on the first destination of container

The study team conducted survey on the first destination of container for consideration of accessibility with roads at exit of the Tanjung Perak container terminal. Figure A.7.3.4.2 shows the site of survey on the first destination of container at the gate of container terminal. Table A.7.3.5.1 shows the first destination of containers going out from international gate, and Table A.7.3.5.2 shows the destination of containers going out from inter island gate.

A.7.3.6 Site survey on road traffic

The study team also conducted traffic survey on roads at entrance of city road and toll road in the port of Tanjung Perak. Figure A.7.3.4.2 shows site of survey on road traffic at exits to toll road and city road. Table A.7.3.6.1 shows the traffic at the exit to city road, and Table A.7.3.6.2 shows the traffic at the exit to toll road.

Figure A.7.3.4.1 Survey site of container handling productivity

THE PORT OF TANJUNG PRIOK, JAKARTA

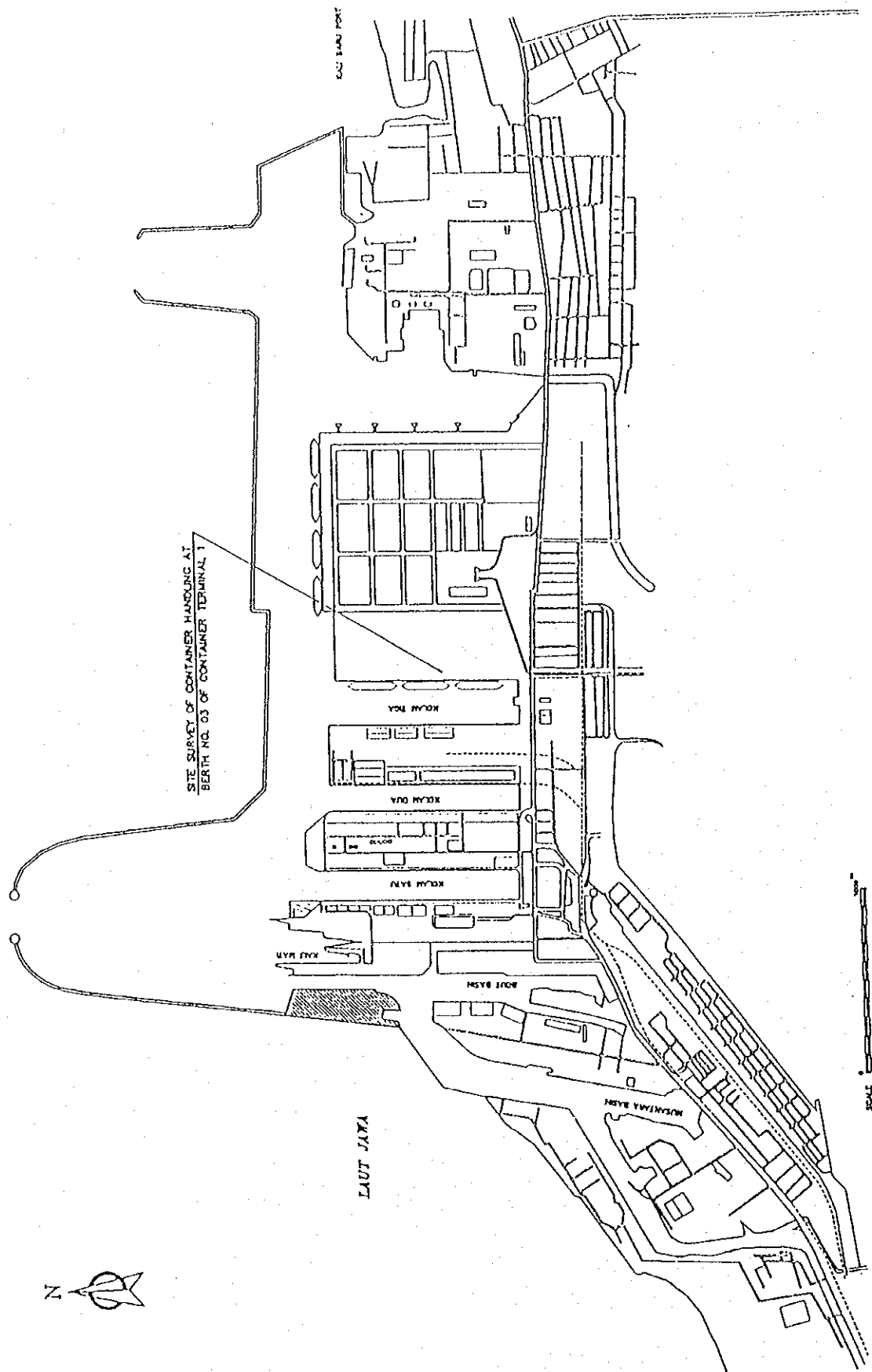


Table A.7.3.4.2 Container handling productivity of quay crane number CC4, Hyundai, Capacity 40 Ton, 1988 built, 1989 installed

Time		Time		Unloading		Loading		TEU/C/H	Remarks
Start	Stop	Working	Idling	20'(Box)	40'(Box)	20'(Box)	40'(Box)		
7:45	9:25	1:40			53			31.80	63.60
9:30	10:27	0:57	0:05		39			41.05	82.11
10:32	11:15	0:43	0:05	4	24			39.07	72.55
11:23	13:10	1:47	0:08	50	13			35.33	42.62
13:17	13:35	0:18	0:07		8			26.67	53.33
13:46	14:30	0:44	0:11	23	3			35.46	39.55
15:40	16:39	0:59	1:10			26		26.44	26.44
16:45	16:58	0:13	0:06			7		32.31	32.31
17:15	17:25	0:10	0:17			4		24.00	24.00
17:37	18:25	0:48	0:12			1	24	31.25	61.25
18:35	18:45	0:10	0:10				4	24.00	48.00
19:05	19:55	0:50	0:20			3	20	27.60	51.60
20:06	20:30	0:24	0:11	10				25.00	25.00
20:53	21:00	0:07	0:23			2	3	42.86	68.57
		9:50	3:25						
Total Box				87	140	43	51		321 Box, 512 TEUs
Total time									13:15
Productivity B/C/H									24.23 Box/C/H
Productivity TEU/C/H									38.64 TEUs/C/H

Figure A.7.3.4.2 Survey site in the port of Tanjung Perak

THE PORT OF TANJUNG PERAK, SURABAYA

