付　　録

1.　調査団対処方針

付録1：調査団対処方針

ASEAN人造りプロジェクト（インドネシア）事前調査団対処方針（案）

57. 10. 1

技　協　2

1. 明年早々，実施協議チームを派遣し，R/D に署名の上プロジェクト実施段階に入るべく訓練内容，賃金手当，タイムスケジュール，機材の大枠等の実施体制につき先方との間で暫定的かつ原則的合意を得る。

2. 計画作定にあたっては，現実的かつ合理的目標を設定する。

3. 総予算の限度額は40億円とし，無償資金協力及び技術協力の配分については，5年間の協力期間において無償資金協力30億円，技術協力10億円とする。先方との協議にあたっては，調査団内部で調整済みの予算配分を念頭に協力内容を中心に協議することとして「イ」側に対しては総予算の限度額のみを明示し，予算の配分については明らかにしない。

4. 建物については，無償チームが「イ」側と協議するが，技術協力計画案にそった合理的なものとせざるを得なく，職員宿舎及び訓練生寄宿舎建設については無償資金協力の対象とならないであろう旨説明する。

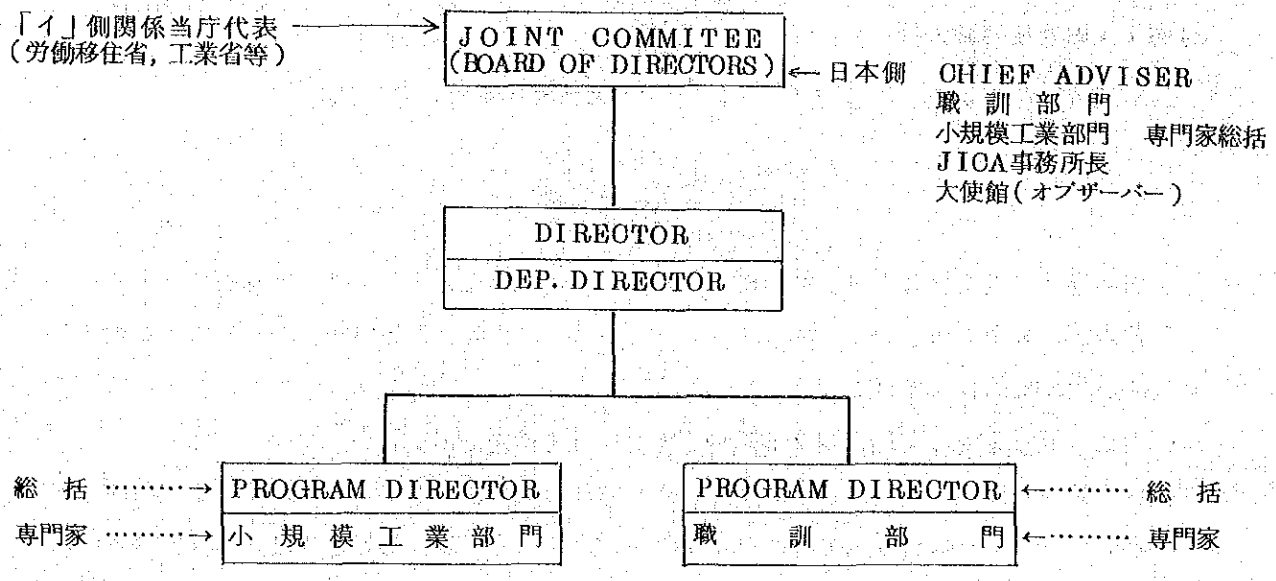
5. 機材リストについては，ノン・コミッタルベースで「イ」側との協議を行い，右結果を踏まえ，基本設計段階で確定する。

6. 長期専門家派遣数については，ノン・コミッタルベースが「イ」側との協議を行う。（短期専門家はプロジェクトの円滑な実施に必要な場合は適宜派遣する。）

7. 研修員受入数については，特に明示せず各部門毎に年間数名という表現にとどめる。

8. (1) 本年6月5日に行われた外務，通産，労働3省の打合せ議事録には，必要に応じシミッツR/Dの添付等に「イ」国工業省の位置付け，責任を明記することを考慮する旨記されている。

(2) 組織図に関するわが方案については下記の通りとする。



9. 事前調査団派遣後のスケジュール

(1) 明年早々，実施協議チームを派遣しR/Dに署名する。

(2) 今年度末又は明年度早々，基本設計チームを派遣する。

(3) 58年度のできる限り早い時期にチームリーダー，プログラムリーダー，調査員等の専門家を派遣し，建物完成後円滑な技術協力が行えるよう諸般の準備を整える。

(4) 58年2～3月頃　ドラフト説明ミッションを派遣する。

(5) 58年3～4月頃　Final Repot 作成

(6) 58年5月頃　閣議論議

(7) 58年7月頃　E/N署名

(8) 58年8月頃　コンサル契約

(9) 58年11月頃　工事契約及び工事着工

(10) 60年3月頃　建物完成

10. 協議の結果得られた両者の暫定合意は，合意議事録（Minutes of Discussion）の形で残す。

付録２：指導員養成訓練タイプＩカリキュラム

1. 共通教科　（900時間）

A　一般教科　（450時間）

教　　科	時　　間	内　　容
特　別　講　義		
教　育　原　理		1. 教育訓練史
		2. 教育思想
		3. 教育訓練社会学
		4. 教育訓練管理
訓 練 指 導 技 法		1. 訓練方法概説
		2. 実技指導の実際

MINUTES OF DISCUSSIONS
BETWEEN
THE JAPANESE PRELIMINARY SURVEY TEAM
AND
THE INDONESIAN AUTHORITIES CONCERNED
ON THE
JAPANESE TECHNICAL COOPERATION
FOR THE ESTABLISHMENT
OF THE CENTER FOR VOCATIONAL AND
EXTENSION SERVICE TRAINING
(CEVEST)

OCTOBER 16, 1982
JAKARTA
INDONESIA

MINUTES OF DISCUSSIONS BETWEEN
THE JAPANESE PRELIMINARY SURVEY TEAM
AND THE INDONESIAN AUTHORITIES CONCERNED ON THE
JAPANESE TECHNICAL COOPERATION FOR THE ESTABLISHMENT OF THE
CENTER FOR VOCATIONAL AND EXTENSION SERVICE TRAINING (CEVEST)

1. The Preliminary Survey Team (hereinafter referred to as "Team") organized by the Japan International Cooperation Agency, executing agency for the technical cooperation of the Government of Japan (hereinafter referred to as "JICA") and headed by Mr. KATSUHIRO ICHIOKA, Director of the Planning Department of JICA, was sent to the Republic of Indonesia from 6 to 16 October 1982, for the purpose of consulting with the Indonesian Authorities concerned on the establishment of the Center for Vocational and Extension Service Training (hereinafter referred to as "CEVEST"), ASEAN Human Resources Development Project in Indonesia agreed upon at the Second JAPAN-ASEAN Meeting held in Jakarta on 6-7 October 1981. The list of participants of both sides at the consultation is attached in Annex 1.

The objectives of the Team are:

(1) to discuss and reach tentative understanding on the framework of the Japanese technical cooperation programme for the establishment of CEVEST;

(2) to establish mutual understanding on the necessary measures to be taken by the Government of Japan and the Government of Indonesia for the implementation of the CEVEST; and

(3) to discuss the tentative implementation schedule of technical cooperation for CEVEST.

2. Tentative Understanding on the Framework of CEVEST

After several rounds of discussions, the Team and the Indonesian Authorities concerned reached tentative understanding on the framework for the establishment of CEVEST. It was understood that the Record of Discussions, to be jointly signed by the Indonesian Authorities concerned and the Japanese Implementation Survey Team which is expected to be dispatched to Indonesia at the end of 1982 or at the beginning of 1983 in accordance with the time schedule indicated in paragraph 7. below, would be based on the present document. The tentative understanding as mutually agreed upon between the Team and the Indonesian Authorities concerned covers the following points:

(1) Framework of the technical cooperation:

a) Technical cooperation for Vocational Training;
b) Technical cooperation for Extension Service Training;

(2) Facilities;

(3) Institutional framework;

(4) Measures to be taken by both Governments;

(5) Tentative time schedule to be followed.

3. Framework of the Technical Cooperation.

(1) Term of technical cooperation is five years.

(2) Technical Cooperation for Vocational Training.
Both parties agreed on the technical cooperation programme for the Training to be carried out by Japan as attached in Annex II.

(3) Technical Cooperation for Extension Service Training.
Both parties agreed on the technical cooperation programme for Extension Service Training as attached in Annex III.

4. Facilities

(1) As to the site of the Project, the Indonesian side informed that the decision on the site selection is still awaited and the Government will make its best efforts to reach a final decision on the matter within a month. The Japanese side stressed that prompt decision on the matter is very vital for the launching of the Project as scheduled and strongly expressed that the decision must be made at the earliest possible time, at latest before the forthcoming visit of the Japanese Basic Design Team which is, as shown in Paragraph 7. below, expected to be in Jakarta in December, 1982.
The Indonesian side shared the Japanese view above.

(2) The Japanese side is prepared to construct buildings necessary to carry out technical cooperation for the Project, main components of which are shown in Annex IV. It was understood that the buildings referred to above would be constructed in accordance with the established procedure of the Japanese grant aid scheme. Actual construction will be carried out in consultation with the Indonesian authorities concerned.
The Indonesian side stressed the great importance of the construction of a dormitory as a part of the Extension Service Training Department for the smooth implementation of training programme of CEVEST. The Indonesian side also stressed the necessity of an additional building for three workshops for Vocational Training which would be constructed under this grant aid scheme even without such Japanese assistance as expert assignment, equipment supply and training fellowships. Both sides agreed to settle these matters through mutual consultation when the Basic Design Team visits Indonesia.

5. Institutional Framework

The Indonesian side informed the Japanese side that the institutional framework of CEVEST would be as indicated in Annex V. The Japanese side expressed its strong hope that a Japan-Indonesia Joint Committee could be set up to ensure smooth and effective implementation of the Japanese technical assistance.

The Indonesian side agreed on the Japanese view and it was understood that the Joint Committee will be composed of the representatives of the Ministries concerned, such as the Ministry of Manpower and Transmigration and the Ministry of Industry, as well as Principal of CEVEST from Indonesian side, and Japanese chief advisor, programme representative(s) of the Project, representative of the JICA office in Jakarta, and the representative of Japanese Embassy as observer, from Japanese side.

6. Measures to be taken by the both Governments

(1) Measures to be taken by the Government of Japan

a) to extend assistance within the limit of 4 billion yen to cover both grant aid and the technical cooperation;

b) to extend technical cooperation in terms of dispatching of experts, training of Indonesian personnel in Japan, as shown in Annex II and III, and to supply a small quantity of equipment and,

c) to extend grant aid in terms of construction of buildings and supply of the major portion of the equipment required.

(2) Measures to be taken by the Government of Indonesia

a) to secure a suitable site for the construction of buildings and to prepare basic infrastructure, such as electricity-supply, water-supply, drainage, access road and other incidental facilities,

b) to assign Indonesian counterparts and administration personnel as well as to secure running costs to cover necessary charges of electricity and water consumption etc., for the effective implementation of the Project,

c) to secure the necessary expenses for the maintenance and operation of machinery and equipment,

d) to provide the priviledges, exemptions and benefits to the Japanese experts normally accorded under other Japan-Indonesia technical cooperation scheme,

e) to take necessary measures to meet customs duties, internal taxes and any other charges imposed in Indonesia on the machinery and equipment, and

f) to provide necessary facilities including office space to Japanese experts, who will be dispatched before the completion of the buildings.

(3) As to the running costs necessary for the implementation of the Project, the Indonesian side informed that the budget concerned would be financed by both the Ministry of Manpower and Transmigration and the Ministry of Industry, and disbursed appropriately to meet the requirements of both departments in accordance with the arrangement mutually agreed on by the two Ministries. The Japanese side took note of the information.

7. Tentative Time Schedule to be followed

(1) Dispatch of the Basic Design Survey Team (upon selection of the site and in the end of 1982).

(2) Dispatch of Implementation Survey Team and signing of the Record of Discussions (at the end of 1982 or at the beginning of 1983).

(3) Dispatch of Confirmation Team on the Draft Report (February 1983).

(4) Approval of the draft of Exchange of Notes by the Cabinet of the Japanese Government (May 1983).

(5) Presentation of draft of Exchange of Notes (June 1983).

(6) Signing of the Exchange of Notes (July 1983).

(7) Conclusion of consultant contract (August 1983).

(8) Commencement of building construction (November 1983).

(9) Completion of building construction (March 1985).

Signed :	Signed :	Signed :
(KATSUHIRO ICHIOKA)	(DANANG D. JOEDONAGORO)	(GITOSEWOJO)
Chief Negotiator for Japan International Cooperation Agency	Chief Negotiator for the Ministry of Manpower and Transmigration, Indonesia	Chief Negotiator for the Ministry of Industry, Indonesia

October 16, 1982
Jakarta.

LIST OF PARTICIPANTS

1. Japanese participants

(1) Mr. Katsuhiro Ichioka	Leader	Director of Planning Department, JICA
(2) Mr. Susumu Inoue	Technical Cooperation	Official, Second Technical Cooperation Div., Economic Cooperation Bureau, Ministry of Foreign Affairs
(3) Mr. Makoto Nakamura	Cooperation Planning	Head, Technical Cooperation Div., Mining and Industrial Development Cooperation Dept., JICA
(4) Mr. Kinjiro Wada	Cooperation Planning	Deputy Head, Overseas Centers Div., Social Development Cooperation Dept., JICA

(Vocational Training Department)

(1) Mr. Kiyoshi Kumagawa	Chief	Chief Vocational Training Supervisor, Training Div., Vocational Training Bureau, Ministry of Labour
(2) Mr. Moriaki Nagae	Technical Cooperation	International Liaison Officer, International Labour Affairs Div., Minister's Secretariat, Ministry of Labour
(3) Mr. Yasunobu Sawada	Research Development	Sub-Division Chief, Overseas Technical Cooperation Div., Vocational Training Bureau, Ministry of Labour
(4) Mr. Yukio Utsumi	Automobile Maintenance	Instructor, Chiba General Advanced Vocational Training Center, Employment Promotion Projects Corporation

(5) Mr. Takeshi Ejiri	Machining	Instructor, Matsumoto General Advanced Vocational Training Center, Employment Promotion Projects Corporation
(6) Mr. Satoru Tanokura	Electric Electronic	Instructor, Kimitsu General Advanced Vocational Training Center, Employment Promotion Projects Corporation
(7) Mr. Akira Kawada	Sheet Metal Welding	Instructor, Osaka General Advanced Vocational Training Center, Employment Promotion Projects Corporation
(8) Mr. Yasuyuki Uehara	Coordinator	Staff, Overseas Centers Div., Social Development Dept., JICA

(Extension Service Training Department)

(1) Mr. Masamitsu Kumazawa	Chief	Director, Trade and Wholesale Div., Guidance Dept., Small and Medium Enterprise Agency, Ministry of International Trade and Industry
(2) Mr. Masaki Komurasaki	Technical Cooperation	Section Chief, Technical Cooperation Div., Economic Cooperation Dept., International Trade Policy Bureau, Ministry of International Trade and Industry
(3) Mr. Hideharu Kasama	Promotion Policy for Small & Medium Enterprise	Senior Officer, Trade & Wholesale Div., Guidance Dept., Small and Medium Enterprise Agency, Ministry of International Trade and Industry
(4) Mr. Yuzo Ohno	Training Affairs	Staff, International Business Affairs Office, Information & Research Dept., Japan Small Business Corporation
(5) Mr. Tadao Hashimoto	Coordinator	Staff, Technical Cooperation Div., Mining and Industrial Development Cooperation Dept., JICA

2. LIST OF THE INDONESIAN PARTICIPANTS

Ministry of Manpower and Transmigration :

1.	Mr. Danang D. Joedonagoro,	- Director General for Manpower Development and Utilization;
2.	Mr. H. Aburisman	- Head Sub- Directorate of Training Systems;
3.	Mr. Ali Sakti Harahap	- Head Division of Industrial Vocational Training, Institute of Manpower Development;
4.	Mr. Affandi Ismail	- Head Sub- Directorate of Training Materials Development and Control;
5.	Mr. Djoko Detojo	- Chief International Technical Cooperation Division;
6.	Mr. Koesmartono	- Staff member of Directorate General of Manpower Development and Utilization;
7.	Mr. Saruli Sinurat	- Staff member of Institute of Manpower Development;
8.	Mr. Amris Ibrahim	- Staff member of Institute of Manpower Development ;
9.	Miss. Tien Soenoto	- Staff member of Bureau of Technical Cooperation ;
10.	Mr. Syamsuddin	- Staff member of the Bureau of Technical Cooperation ;
11.	Mr. M. Sihite	- Staff member of the Directorate General of Manpower Development and Utilization;

Ministry of Industry

1.	Mr. Gitosewojo	- Director General of Small Industry ;
2.	Mr. Djoko Mulyanto	- Director of Entrepreneur Development, Directorate General of Small Industry ;
3.	Mr. Machdi Ichsani	- Head, Education and Training Division ;
4.	Mr. S. Sjarief	- International Relation Division ;
5.	Mr. Mangin	- Staff member of the Directorate General of Small Industry ;
6.	Mr. Hidayat Suwandi	- Senior Official of Ministry of Industry ;
7.	Mr. Bambang Djatmiko	- Senior Official of Ministry of Industry ;
8.	Mr. Sakri Widhianto	- Senior Official of Ministry of Industry ;
9.	Mr. Ahmad Djaffar	- Senior Official of Ministry of Industry ;

Annex II

TENTATIVE COOPERATION PROGRAMME
FOR
THE VOCATIONAL TRAINING DEPARTMENT
OF
THE CENTER FOR VOCATIONAL
AND EXTENSION SERVICE TRAINING
(CEVEST)
TO BE CARRIED OUT BY JAPAN

TENTATIVE COOPERATION PROGRAMME FOR THE
VOCATIONAL TRAINING DEPARTMENT OF THE CENTER
FOR VOCATIONAL AND EXTENSION SERVICE TRAINING (CEVEST)
TO BE CARRIED OUT BY JAPAN

1. Justification

The Government of Indonesia gives high priority to the skill training in Pelita III for the development of skilled manpower resources and the reinforcement of the active employment promotion policy and has been taking various measures for their implementation.
The Government of Indonesia, however, faces difficulties due to lack of enough supply of appropriate number of vocational training facilities, well qualified instructors, well developed and unified training software and skill testing procedures which are indispensable for the smooth achievement of its measures.
To cope with these difficulties, the Government of Indonesia will establish the Center for Vocational and Extension Service Training in cooperation with the Government of Japan.

2. Activities (Attached Sheet No. 1)

A. Vocational Training

a. Instructor Training Type I (Attached Sheet No. 2)
To train for two years those who graduated from senior technical/vocational high schools with minimum two years of practical experience or those who graduated from academies for cultivating assistant instructors.

b. Instructor Training Type II
To train those who have enough skills and professional knowledge by providing them with training methodology for three months and teaching practice for one month for cultivating assistant instructors.

c. Upgrading and Retraining (Attached Sheet No. 3)
To train the instructors for three months to upgrade and retrain their skills and knowledge.

d. Training of Directors of Vocational Training Facilities
To provide managerial and administrative skills for those who are or to be directors for vocational training facilities.

e. Training for Instructors of Enterprises
For the purpose of promoting vocational training in enterprises, including private vocational training institutions, to train the instructors, training officers and training managers who belong to enterprises in training methodology, curriculum development, supervisory training etc.

B. Research and Development

a. Research and development on training methods and standardization of training curricula and programmes for vocational training.

b. Research and development on training materials including audio-visual aids.

c. Research and development on trade skill evaluation and certification.

d. Basic studies to provide necessary input to the Ministry of Manpower and Transmigration as recommendations for its policy making on the national vocational training administration.

3. Technical Cooperation

A. Dispatch of Japanese Experts (Attached Sheet No. 4)

a. Long-Term Experts

(1) Chief Advisor for CEVEST
(2) Materials/Curricula/Methods/Programmes
(3) Skill Evaluation/Certification
(4) Machining
(5) Welding
(6) Sheet Metal
(7) Pipe Fitting
(8) Automobile Repairing
(9) Electricity
(10) Airconditioning/Refrigeration
(11) Electronics

b. Short-Term Experts
Short-Term Experts will be dispatched when necessity arises.

B. Machinery and Equipment
Supplementary machinery and equipment will be provided by the Technical Cooperation while major portion of machinery and equipment (Attached Sheet No. 5) will be provided by the Japanese Grant Aid.

C. Training of Indonesian Personnel in Japan
JICA will receive Indonesian counterparts for their technical training.

COURSES OFFERED AND ANNUAL CAPACITY OF THE CENTER FOR VOCATIONAL AND EXTENSION SERVICE TRAINING

(VOCATIONAL TRAINING DEPARTMENT)

FIELD	TRADE \ COURSE	INSTRUCTOR TRAINING		UPGRADING / RETRAINING			DIRECTOR TRAINING	TRAINING FOR INSTRUCTOR IN ENTERPRISES
		TYPE I	TYPE II	ASS. INSTR. JUNIOR INST.	JUNIOR INSTR. INSTRUCTOR	INSTRUCTOR SENIOR INSTR.		
Machining	Machining	20		15	11	8		
Metal Processing	Welding	20		15	11	8		
	Sheet Metal	10		7	5	4		
Automotive	Automobile Reparing	45		33	24	18		
Electric Work	Electricity	20		15	11	8		
	Electronics	30		22	16	12		
Total		145	230	107	78	58	120	400
Remarks		*2 year training *Recruitment once a year *Qualification over 2 year experiance after high school education or academy education	*4 month training *Lecture only (training methodology) *Recruitment three times a year *Qualificati enough skills & knowledge	*3 month training *Training operation once a year *Over 5 year experience as an assistant Instructor.	*3 month training *Training operation once a year *Over 5 year experiance as a Junior Instructor	*3 month training *Training Operation once a year *Over 5 year experiance as an Instructor	* 2 month training * Several — time a year	* 1~2 week or more. * About 20~ times.

Attached Sheet no. 1

Attached Sheet no. 2

SYLLABI
FOR
THE INSTRUCTOR TRAINING
TYPE I

1. Common Subject (900Hours)

A. Basic Training (450Hours)

a. General Subject (450Hours)

+Subject	+Contents
Special Lecture	
Principle of Education	1.History of Education and Training 2.Thought of Education 3.Educational Training Sociology 4.Management of Educational Training
Training Methodology	1.General Methodology 2.Practical Teaching and Demonstration 3.Making of Training Programme 4.Research of Teaching Materials 5.Teaching Aids 6.Safety and Health
Regulation of Vocational Training	1.Vocational Training Law 2.Labour Standards Law 3.Regulations of Safety and Health
Pedagogical Psychology	
Foreign Language	
Mathematics	
Physics	
Gymnastics	

B. On the Job Training (450Hours)

+Subject	+Contents
Training within Industry	
Teaching Practice	

2. <u>Specific Subject</u> (2500Hours)

A. Machining (2500Hours)

a. Technical Subject(600Hours)

+Subject	+Contents
Introduction of Mechanical Engineering(40Hours)	1.Industrial Standard 2.Mechanism 3.Prime Mover 4.Industrial Machinery 5.Introduction of Electrical Engineering
Machine Materials(80Hours)	1.Metal Materials 2.Carbon Steel 3.Non-Ferron Metals 4.Non-Metal Materials 5.Test of Materials 6.Heat Treatment
Machine Element Design(40Hours)	1.Material Dynamics 2.Bolt,Nut,Shaft,Bearing and etc. 3.Gear and Belt Transmission 4.Others
Mechanical Drawing(40Hours)	1.Reading Mechanical Drawing 2.First and Third Angle Projection

+Subject	+Contents
	3.Components and Assembly Drawing 4.Sketching
Precision Measuring(40Hours)	1.Measuring of Length,Angle, Surface,Finishing and etc. 2.Measuring of Thread and Gear 3.Measuring of Temperature, Pressure and Weight
Finishing,Fitting and Tools (40Hours)	1.Accurate Finishing Process 2.Assembling 3.Tools for Fitting and Finishing 4.Others
Machine Works (200Hours)	1.Band Saw,Double Headed Grinder and Shaper Work 2.Lathe Work 3.Milling Machine Work 4.Drilling Machine Work 5.Numerical Control Machine Work 6.Surface Grinding and Cylindrical Grinding Work
Tool Grinding Works(40Hours)	1.Drill Grinding Work 2.Universal Tools Grinding Work 3.Cemented Carbide Tipped Tools Grinding Work 4.Test of Tools
Maintenance of Machine Tools (40Hours)	1.Maintenance 2.Overhauling and Reassembling 3.Electric Circuit of Machine Tools 4.Lubrication of Machine Tools

+Subject	+Contents
Automatic Control(20Hours)	Control Methods
Maintenance of Industrial Machinery(20Hours)	1.Maintenance 2.Overhauling and Repairing

b. Basic Practice(1200Hours)

+Subject	+Contents
Heat Treatment of Metals(50Hours)	1.Anealing,Quenching, Hardening and Tempering 2.Forging 3.Welding 4.Test of Materials
Mechnical Design and Drawing (150Hours)	1.Drawing of Mechanical Components 2.Drawing of Machine Assembling 3.Sketching
Precision Measuring(50Hours)	1.Measuring of Length, Angle, Surface,Bolt,Nut,Gear and etc.
Fitting and Finishing(250Hours)	1.Marking 2.Filing 3.Tapping and Dies Work 4.Rimer Work 5.Scraper Work
Machine Work(600Hours)	1.Band Saw,Double Headed Grinder and Shaper Work 2.Lathe Work 3.Milling Machine Work 4.Drilling Machine Work 5.Numerical Control Machine Work 6.Surface Grinding and Cylindrical Grinding Work

+Subject	+Contents
Tool Grinding Work(50Hours)	1.Drill Grinding Work 2.Universal Tools Grinding Work 3.Cemented Carbide Tipped Tools Grinding Work 4.Test of Tools
Maintenance of Machine Tools (30Hours)	1.Maintenance 2.Overhauling and Reparing 3.Test of Accuracy
Maintenance of Industrial Machinery(20Hours)	1.Overhauling and Repairing

c. Applied Practice(700Hours)

+Subject	+Contents
Practice of Product	1.Practice of Components Production Fitting and Assembling

B . Welding(2,500Hours)

a. Technical Subject(760Hours)

+Subject	+Contents
Welding Engineering(400Hours)	1.Manual Metal Arc Welding 2.Gas Welding and Cutting 3.Automatic and Semi-Automatic Welding 4.Non-Iron Metal Welding 5.Resistance Welding and Others

+Subject	+Contents
Mechanical Engineering (80Hours)	1.Machine Elements 2.Mechanism and prime Mover 3.Measurement Marking and Finishing 4.Machine Tools
Design and Drawing(80Hours)	1.General Drawing 2.Mechnical Drawing 3.Welding Drawing
Materials(80Hours)	1.Metal Materials 2.Non-Iron Metal Materials 3.Material Dynamics
Electrical Engineering (60Hours)	1.Direct Current and Alternative Current 2. Electric Apparatus Circuit
Material Inspection (60Hours)	1.Destructive and Nondestructive Inspection 2.Radiographic Inspection 3.Ultrasonic Inspection

b. Basic Practice(1660Hours)

+Subject	+Contents
Fundamental Practice of Measurment(50Hours)	1.Measuring 2.Marking and Drawing 3.Finishing
Fundamental Machines Practice(50Hours)	1.Machine Work 2.Others
Welding Practice(1280Hours)	1.Manual Metal Arc Welding 2.Gas Welding and Cutting 3.Co2Arc Welding and MAG Welding 4.TIG and MIG Welding 5.Plasma Welding and Cutting 6.Non-Gas Arc Welding 7.Submerged Arc Welding 8.Resistance Welding

+Subject	+Contents
Materials Inspection(80Hours)	1.Destructive Inspection 2.Non-Destructive Inspection
Fundamental Sheet Metal Practice (60Hours)	1.Cutting 2.Drawing 3.Bending
Fundamental Forging Practice (60Hours)	1.Hammering 2.Heating and Forging 3.Making of Subject 4.Heat Treatment
Safety and Health(80Hours)	1.Safety Control regarding Machinery and Equipments 2.Safety Control regarding Electrical Equipments 3.First Aid 4.Sanitation in Environment

c. Applied Practice(80Hours)

+Subject	+Contents
Making of Subject(80Hours)	1.Pressure Vessel 2.Others

C. Sheet Metal/Pipe Fitting (2500Hours)

a. Technical Subject(700Hours)

+Subject	+Contents
Plasticity Engineering (200Hours)	1.Sheet Metal Working 2.Method of Body Repairing 3.Introduction of Press Processing
Welding Engineering(80Hours)	1.Gas Welding 2.Manual Metal Arc Welding 3.CO_2Arc Welding 4.Resistance Welding

+Subject	+Contents
Pipe Fitting(60Hours)	1.Pipe Fitting of Water Supply Facility 2.Pipe Fitting of Water Drain Draft 3.Pipe Fitting of Hot Water Supply 4.Pipe Fitting of Gas Facility
Pipe Processing(60Hours)	1.Pipe Joining 2.Pipe Bending 3.Boring 4.Leakage Test
Mechanical Engineering(80Hours)	1.Machine Element 2.Mechanism and Prime Mover 3.Measurement,Marking and Finishing 4.Machine Tools
Design and Drawing(80Hours)	1.General Drawing 2.Mechanical Drawing 3.Welding Drawing
Materials(80Hours)	1.Metal Materials 2.Non-Iron Metal Materials 3.Material Dynamics
Electrical Engineering(60Hours)	1.Direct Current and Alternative Current 2.Electric Apparatus and Circuit

b. Basic Practice(1670Hours)

+Subject	+Contents
Fundamental Measurement Practice (50Hours)	1.Measurment 2.Marking and Drawing 3.Fitting and Finishing
Fundamental Machines Practice (50Hours)	1.Processing Machines 2.Others

+Subject	+Contents
Welding Practice(260Hours)	1.Manual Metal Arc Welding 2.Gas Welding and Cutting 3.Co2Ark Welding 4.Resistance Welding
Fundamental Sheet Metal Practice(620Hours)	1.Sheet Metal Processing 2.Body Repairing 3.Press Processing
Fundamental Metal Painting Practice(150Hours)	1.Putty Work 2.Foundation Treatment 3.Painting 4.Polishing
Fundamental Pipe Fitting Practice(100Hours)	1.Work of Water Pupply Facility 2.Work of Water Drain,Draft and Sanitary Facility 3.Work of Hot Water Supply Facility 4.Work of Gas Supply Facility
Fundamental Pipe Processing Practice(220Hours)	1.Joining of Steel, Zinc and Cast Iron Pipes 2.Joining of Polyvinule Chloride Pipe 3.Pipe Bending 4.Boring
Materials Inspection(80Hours)	1.Destructive Inspection 2.Non-Destructive Inspection 3.Bending Test
Fundamental Forging Practice (60Hours)	1.Hammering 2.Heating and Forging 3.Making of Subject 4.Heat Treatment
Safety and Health(80Hours)	1.Safety Control regarding Machinery and Equipment 2.Safety Control regarding Electrical Equipment 3.First Aid 4.Sanitation in Enviroment

c. Applied Practice(130Hours)

+Subject	+Contents
Making of Subject(130Hours)	

D. Automobile Repairing (2500Hours)

a. Technical Subject (750Hours)

+Subject	+Contents
Automobile Engineering (350Hours)	1.Ignition Engine 2.Diesel Engine 3.Bodies Frames And Chassis 4.Vehicle Electricty
Repairing Technique (200Hours)	1.Measuring Methods 2.Machine And Hand Finishing Work 3.Engine Repairing Methods 4.Bodies,Frames And Chassis Repairing Methods
Materials (100Hours)	1.Material Dynamics 2.Metal Materials 3.Non-Metal Materials
Drawing (100Hours)	1.Mechanical Drawing 2.Vehicle Electricity Drawing

b. Basic Practice(1750Hours)

+Subject	+Contents
General Fitting Work (400Hours)	1.Measuring 2.Machining And Hand Finishing Work 3.Gas And Arc Welding 4.Basic Forging 5.Sheet Metal Work And Painting
Ignition Engine Repairing (400Hours)	1.Engine Overhauling 2.Repairing of Fuel System

	3.Repairing of Lubricating And Cooling System 4.Repairing of Other Systems 5.Engine Tuning Up
Diesel Engine Repairing (250Hours)	1.Engine Overhauling 2.Repairing of Injection Fuel Pump System 3.Repairing of Other Systems
Bodies, Frames And Chasis Repairing(400Hours)	1.Repairing of Transmission System 2.Repairing of Suspention And Steering System 3.Repairing of Brake System 4.Repairing of Bodies And Frames
Repairing Electrical System (300Hours)	1.Repairing of Lighting System 2.Repairing of Starting System 3.Repairing of Ignition System 4.Repairing of Charging System 5.Repairing of Other Systems

E. Electric Work (2500Hours)

a. Technical Subject(1000Hours)

+Subject	+Contents
Basic Electric Engineering (200Hours)	1.Electricity And Magnetics 2.Electrical Circuits
Electric Application (100Hours)	1.Lighting Apparatus 2.Heating Apparatus 3.Motor Application 4.Electronics Application
Electric Machine(200Hours)	1.Materials for Electrical Machine 2.Transformer 3.Motors And Control 4.Maintenance And Repairing 5.Power Distribution System

+Subject	+Contents
Measurement And Testing (100Hours)	1.Measurement Methods 2.Testing of Motors And Transformers 3.Measurement of Electrical And Electronics Curcuits
General Fitting (50Hours)	1.Mechanical Measurement 2.Hand Finishing 3.Machine Tools
Drawing(50Hours)	1.Basic Drawing 2.Electrical Circuits Reading
Wiring(150Hours)	1.Wiring Methods 2.Wiring Design 3.Wiring Tools And Materials 4.Wiring Regulations
Refrigeration And Air Conditioning(150Hours)	1.Refrigeration System 2.Air Conditioning System

b.Basic Practice(1500Hours)

+Subject	+Contents
Electrical Measurement (250Hours)	1.Measurement of Electrical Circuits 2.Measurement of Circuit Components 3.Measurement of Electronics Circuits
General Fitting(100Hours)	1.Mechanical Measurement 2.Hand Finishing
Electrical Machine Practice (300Hours)	1.Assembling And Testing of Transformer And Motors 2.Winding of Transformer And Motors 3.Repairing of Domestic Electrification Apparatus

+Subject	+Contents
Assembling And Testing of Sequential Control Circuits(200Hours)	1.Testing of Control Component 2.Assembling And Testing of Sequential Control
Wiring(200Hours)	1.Basic Wiring Works 2.House Wiring 3.Testing And Measurement 4.Testing And Measurement of Domestic Power Distribution System
Refrigeration And Air Conditioning (450Hours)	1.Operation And Testing of Refrigeration 2.Operation And Testing of Air Conditioners

F. Electronics Appliances (2500Hours)

a. Technical Subject(1000Hours)

+Subject	+Contents
Electronics(250Hours)	1.Electrophysics 2.Electronic Circuits 3.Digital Circuits
Basic Electrical Engineering (150Hours)	1.Electricity And Magnetics 2.Electrical Circuits
Electronics Apparatus(250Hours)	1.Wireless Apparatus 2.Audio Apparatus 3.Wave Propagation
Measurement And Testing (100Hours)	1.Measurement Methods 2.Testing of Radio And TV 3.Measurement of Electronics Circuits
General Fitting(30Hours)	1.Mechanical Measurement 2.Hand finishing 3.Machine Tools

+Subject	+Contents
Electronic Parts And Materials (100Hours)	1.Conductive Materials 2.Insulating Materials 3.Semi-Conductive Materials 4.Electronic Parts
Drawing(20Hours)	1.Basic Drawing 2.Electronic Circuit Reading
Electronics Application(100Hours)	1.Electronical Automatic Control System 2.Microprossesor And Application
b. Basic Practice (1500Hours)	
Electrical Measurement(450Hours)	1.Measurement of Electrical Circuits 2.Measurement of Circuits Components 3.Measurement of Electronics Circuits
Design and Testing of Electronics Circuits(300Hours)	1.Hand Finishing 2.Design And Testing of Fundamental Electronic Circuits
Assembling And Testing of Domestic Apparatus(300Hours)	1.Assembling And Testingof Radio 2.Testing of TV 3.Testing of Domestic Electrification Apparatus
Repairing And Adjusting of Domestic Apparatus(450Hours)	1.Repairing And Adjusting of Radio 2.Repairing And Adjusting of TV 3.Repairing And Adjusting of Domestic Apparatus 4.Repairing And Maintenance of Transmitter And Receiver

A: Advanced Skill Training
B: Intermediate Skill Training
C: Basic Skill Training

UPGRADING / RETRAINING.

1. MACHINING.

NO	TRAINING CONTENTS.	INSTRUCTOR TRAINING	UPGRADING / RETRAINING. ASSISTANT INS. ↓ JUNIOR INS.	JUNIOR INS. ↓ INSTRUCTOR.	INSTRUCTOR ↓ SENIOR INS.	REMARKS.
1.	Fitting, assembling practice.	B	A	A	A	
2.	Various machine tools practice.	C	B	A	A	
3.	Various tools grinding practice.	C	B	A	A	
4.	Precision measuring of components.	B	A	A	A	
5.	Reading of engeering drawing.	A	A			
6.	Knowledge of machine materials.	B	A	A		
7.	Heat treatment of metals.	B	A	A		
8.	Knowledge and ability of machine design and related calculation.	B	A	A		
9.	Knowledge and ability of machine maintenance.	B	A	A		
10.	Knowledge of automatic control.	C	B	A	A	

Attached Sheet no. 3

2. WELDING.

NO	TRAINING CONTENTS.	INSTRUCTOR TRAINING	UPGRADING / RETRAINING.			REMARKS.
			ASSISTANT INS. ↓ JUNIOR INS.	JUNIOR INS. ↓ INSTRUCTOR.	INSTRUCTOR ↓ SENIOR INS.	
1.	Measuring and finishing practice.	A				
2.	Welding practice of steel plate and pipe by Manual metal arc - Welding.	B	A	A	A	
3.	Welding and cutting practice of steel plate and pipe by - gas welding and cutting.	B	A	A		
4.	Welding practice of steel plate and pipe by automatic and - semi - automatic welding (Co2 welding MAG welding, Submerged-arc welding).	C	B	A	A	
5.	Welding and cutting practice of non- iron alloy materials by TIG welding, MIG Welding, plasma welding and cutting.	C	B	A	A	
6.	Resistance welding.	A				
7.	Sheet metal practice.	C	B			
8.	Forging practice.	C	B			
9.	Destructive and non-destructive inspection.	C	B	A		
10.	Safety and health.	A.				

3. SHEET METAL / PIPE FITTING.

NO	TRAINING CONTENTS.	INSTRUCTOR TRAINING	UPGRADING / RETRAINING.			REMARKS.
			ASSISTANT INS. ↓ JUNIOR INS.	JUNIOR INS. ↓ INSTRUCTOR.	INSTRUCTOR ↓ SENIOR INS.	
1.	Developing, forming practice of sheet metal.	B	B	A	A	
2.	Car body repairing practice.	B	A	A	A.	
3.	Sheet metal processing by machine and tools.	B	B	A	A	
4.	Press machines practice.	C	B	A	A	
5.	Pipe processing machine and handling tools.	B	B	A	A	
6.	Pipe fitting practice of water, water drain, delete, hot water and gas.	D	B	A	A	
7.	Metal painting practice.	B	A	A	A	
8.	Welding practice.	C	B	A	A	
9.	Forging practice.	C	B	A		
10.	Measuring and finishing practice.	A				
11.	Safety and health control.	A				

4. AUTOMOBILE REPAIRING.

NO	TRAINING CONTENTS.	INSTRUCTOR TRAINING	UPGRADING / RETRAINING.			REMARKS.
			ASSISTANT INS. ↓ JUNIOR INS.	JUNIOR INS. ↓ INSTRUCTOR.	INSTRUCTOR ↓ SENIOR INS.	
1.	Measuring practice.	B				
2.	Hand finishing practice.	B				
3.	Machining practice.	B				
4.	Sheet metal work and painting practice.	C				
5.	Welding practice.	C	B			
6.	Forging practice.	C				
7.	Repairing of engine.	B	A			
8.	Repairing of bodies, frames and chassis.	B	A			
9.	Repairing of vehicle electricity.	B	A	A		
10.	Repairing of air conditioner.		B	A		
11.	Performance test of engine and vehicle.			C	B	
12.	Repairing of hydroulic system.		C.			

5. ELECTRICITY.

NO	TRAINING CONTENTS.	INSTRUCTOR TRAINING	UPGRADING / RETRAINING.			REMARKS.
			ASSISTANT INS. ↓ JUNIOR INS.	JUNIOR INS. ↓ INSTRUCTOR.	INSTRUCTOR ↓ SENIOR INS.	
1.	Repairing and adjusting of domestic electrification apparatus.	B	A			
2.	Design and assembling of sequential control circuits.	C	B	A		
3.	Installation and alignment of refrigeration and air conditioner.	C	C	B	A	

6. ELECTRONICS.

NO	T R A I N I N G _ C O N T E N T S .	INSTRUCTOR TRAINING	UPGRADING / RETRAINING.			REMARKS.
			ASSISTANT INS. ↓ JUNIOR INS .	JUNIOR INS. ↓ INSTRUCTOR.	INSTRUCTOR ↓ SENIOR INS.	
1.	Repairing and adjusting of domestic eletronics apparatus.	B	A			
2.	Repairing and alignment of colour TV.	B	A			
3.	Design and assembling of digital control Circuits.	C	B	A		
4.	Application of micro computers.	C	C	B	A	

Attached Sheet no. 4

Tentative Schedule of Technical Cooperation for CEVEST (Vocational Training Dept.)

Year	1983					1984					1985					1986					1987					'88
Month	1	4	7	10	12	1	4	7	10	12	1	4	7	10	12	1	4	7	10	12	1	4	7	10	12	1
1. Cooperation Period																										
2. Training Course																										
a. Instructor Training Type I													(Half of The Limited Number of Trainee)													
b. Instructor Training Type II																										
c. Upgrading/Retraining																		(Half of The Limited Number of Trainee)								
d. Director Training																										
e. Training for Instructors in Enterprises																										
3. Dispatch of Experts																										
a. Long-term Experts																										
i. Chief Adviser for CEVEST																										
ii. Materials/Curriculn/Methods/Programmes																										
iii. Skill Evaluation/Certification																										
iv. Machining																										
v. Welding																										
vi. Sheet Metal																										
vii. Pipe Fitting																										
viii. Automobile Repairing																										
ix. Electricity																										
x. Airconditioning and Refrigeration																										
xi. Electronics																										
b. Short-term Experts			When necessity arises																							
4. Training in Japan																										

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Attached Sheet no. 5

MACHINERY AND EQUIPMENT

(Major Articles)

I. MACHINING.

1. Lathe.
2. Universal Milling Machine.
3. Vertical Milling Machine.
4. Shaping Machine.
5. Radial drilling machine.
6. Upright Drilling Machine.
7. Bench Drilling Machine.
8. Surface Grinding Machine.
9. Cylindrical Grinding Machine.
10. Universal Cylindrical Grinding Machine.
11. Carbon Tool Grinder.
12. Double Headed Grinder.
13. Drill Grinding Machine.
14. Band Saw.
15. Furnace (Heat Treatment Equipment).
16. High Speed Cutting Machine.
17. Compressor.
18. Universal Shadowing Machine.
19. Metal Microscope.
20. Metal Polishing Equipment.
21. Gear Inspecting Machine.
22. Surface Roughness Inspection Machine (Tracer Type).
23. Auto Collimeter.
24. Comparing Tester of the Length.
25. Eightmaster.
26. Measuring / Instrument.
27. Tools.
28. Parts.

II. W E L D I N G.

1. A.C. Arc Welding Machine.
2. D.C. Arc Welding Machine.
3. Engine Welder.
4. TIG Welding Machine.
5. MIG Welding Machine.
6. CO2 Arc Welding Machine.
7. Non-Gas Arc Welding Machine.
8. Plasuma Welding / Cutting Machine.
9. Submerged Arc Welding Machine.
10. Oxy-Acetylene Gas Equipment.
11. Power Shearing Machine.

12. Piller Drilling Machine.
13. Bench Drilling Machine.
14. Hack-Sawing Machine.
15. Electrod Drying Machine.
16. Tension Tester.
17. X-ray Equipment.
18. Ultrasonic Equipment.
19. Hardness Tester.
20. Automatic Gas Cutting Machine.
21. Universal Shadow Machine.
22. Buff Grinder.
23. Bending Tester.
24. Belt Surfacer.
25. Bevel Angle Processing Machine.
26. High Speed Cutting Machine.
27. Grinding Machine.
28. Shaping Machine.
29. Welding Positioner.
30. Foot Shear.
31. Air Compressor.
32. Spot Welding Machine.
33. Heavy Oil Furnace.
34. Measuring Instruments.
35. Tools.
36. Parts.

III. SHEET METAL / PIPE FITTING.

1. Press Brake.
2. Crank Press.
3. Frame Aligner.
4. Portable Spot Welder.
5. Beading Rollers.
6. Screw Press.
7. Hydrauric Press.
8. Bending Rollers.
9. Vibro Shear.
10. Universal Bender.
11. Power Shearing Machine.
12. Foot Shear.
13. Pipe Bender.
14. A.C. Arc Welding Machine.
15. CO2 Arc Welding Machine.
16. Pillar Drilling Machine.
17. Bench Drilling Machine.
18. Electrode Drying Machine.

19. High Speed Cutting Machine.
20. Grinding Machine.
21. Pipe and Bolt Threading Machine.
22. Air Compressor.
23. Lift.
24. Portable Hydrauric Press.
25. Ultra Red Ray Dryer.
26. Oxy-Acetylene Gas Equipment.
27. Measuring Instruments.
28. Tools.
29. Parts.

IV. AUTOMOBILE REPAIRING.

1. Chassis Dynamometer.
2. Brake Tester.
3. Side Slip Tester.
4. Head Light Tester.
5. Auto Lift.
6. Hydraulic Press.
7. Car Washer.
8. Steam Cleaner.
9. Parts Cleaner.
10. Tire Changer.
11. Wheel Balancer.
12. Brake Drum Lathe.
13. Brake Lining Bonding Oven.
14. Brake Shoe Grinder.
15. Air Compressor.
16. Portable Hydraulic Press.
17. A.C. Arc Welder.
18. Double Headed Grinder.
19. Universal test bench.
20. Auto Analyzer.
21. Battery Charger.
22. Sample Hydraulic System.
23. Valve Refacer.
24. Valve Seat Grinder.
25. Valve Spring Tester.
26. Injection Pump Tester.
27. Hydraulic Baby Crane.
28. Pinhole Honing Machine.
29. Horn Tester.
30. Vehicles.
31. Engines.

32. Measuring Instruments.
33. Tools.

V. ELECTRICITY.

1. High-Low Voltage Power Distribution System.
2. Sequence Control Training Equipment.
3. Logic Circuit Training Equipment.
4. Electric Locomotive Control Model.
5. Automatic Warehouse Control Model.
6. Testing Generator.
7. Single Phase Induction Voltage Regurator.
8. Rectifier.
9. Coil Winding Machine.
10. Transformer.
11. Load Rheostat.
12. Three Phase Balancer Load.
13. Variable Reactor.
14. Oil pressure Bending Machine.
15. Oil pressure Press Tool.
16. Oil Pressure Puncher.
17. Electric Pipe Screw Machine.
18. Bench-Drilling Machine.
19. Double Headed Grinder.
20. House Wiring Training Board.
21. Small-Sized Refrigeration.
22. Middle-Sized Refrigeration.
23. Refrigeration Showcase.
24. Chilling Unit.
25. Cooling Tower.
26. Package Type Air Conditioner.
27. Fan Coil Unit.
28. Room Cooler.
29. Refrigeration Equipment Training Unit.
30. Domestic Air Conditioning Control Training Unit.
31. Refrigeration Equipment Electric Circuit Training Unit.
32. Motor - Pump.
33. Measuring Instruments.
34. Tools.
35. Parts.

VI. ELECTRONICS.

1. Oscilloscope.
2. Universal Counter.
3. X-Y Recorder.
4. Pulse Generator.
5. L.C.R. Bridge.
6. Transistor Checker.
7. Q Meter.
8. Synchroscope.
9. Variable Air Condenser.
10. Variable Filter Training Set.
11. Color Television Expansion Set.
12. Color Television and Monochrome Sets.
13. Color Bar Generator.
14. Standard Signal Generator.
15. Video Tape Recorder.
16. Wireless / Amplifier.
17. Interphone.
18. Transceiver.
19. SSB Equipment.
20. Electronic Circuit Training Unit.
21. Modulation-Demoduration Training Unit.
22. Transistor Circuit Training Unit.
23. DC Circuit Training Unit.
24. Pulse Circuit Training Unit.
25. AC - DC Conberter.
26. Micro Computer.
27. DC - AC Converter.
28. Bench Drilling Machine.
29. Measuring Instruments.
30. Tools.
31. Parts.

VII. RESEARCH AND DEVELOPMENT.

1. Video Camera.
2. Camera Control Unit.
3. Video TV Recorder.
4. Telecine.
5. 16 mm TV Film Projector.
6. 35 mm Slide Projector.
7. Teaching Aids Presentation Equipment.
8. Switcher.
9. Flexible Wire Controler.
10. Tripod.

11. Camera Cable.
12. Monitor TV.Set.
13. Editing Control Unit.
14. Audio Mixer.
15. Tape Recorder.
16. Vector Scope.
17. Oscilloscope.
18. 35 mm Camera.
19. Copy Machine.
20. Printing Machine.
21. Transparency Maker.
22. Typewriter.
23. Related Equipments & Attachments.

VIII. AUDIOVISUAL / LIBRARY.

1. Audiovisual Equipments.
2. 16 mm Cineprojector.
3. Slide and Filmstrip Projector.
4. Overhead Projector.
5. Video-film Reproduction Equipment.
6. Related Equipments.
7. Related Books.

Annex III

TENTATIVE COOPERATION PROGRAMME
FOR
THE EXTENSION SERVICE TRAINING DEPARTMENT
OF
THE CENTER FOR VOCATIONAL
AND EXTENSION SERVICE TRAINING
(CEVEST)
TO BE CARRIED OUT BY JAPAN

1. The main functions of Extension Service Training Department of CEVEST.

Ministry of Industry of the Republic of Indonesia has the policy for implementing various measures to develop and promote small industries in Indonesia and along with the above policy CEVEST conducts the following three activities.

A. Training Activity.
B. Survey on Small Industries Development Activity.
C. Guidance, Consultation and Advisory Service Activity.

2. Activities.

A. Training Activity (Attached Sheets 1 and 2)
For the purpose of developing and promoting small industries, CEVEST organizes;

a. Training courses for different level of extension service workers.

b. Training courses for entrepreneurs to develop their entrepreneurship.

c. Various other types of training courses for the government officials and staff of the related authorities.

B. Survey on Small Industries Development Activity (Attached Sheet 3).

a. Statistical survey on small industries.

b. Survey on development of production process of small industries.

c. Survey on marketing system of small industries production.

d. Survey on trend of consumption of small industries products.

C. Guidance, Consultation and Advisory Service Activity.

a. In order to solve the problems with respect to management and production process of small industries, extension service workers conduct diagnosis with clusters and individual small industries.

b. Various seminars and symposia will be held to develop entrepreneurship.

c. Necessary instruction manuals will be updated and published for the purpose of improving the activities of extension service workers.

d. Necessary consultancy and advisory services will be given to extension service workers at CEVEST as well as to the regional small industry development centers (PPIK) by sending roving teams from CEVEST.

Consultancy and advisory service activity will also cover problems such as the promotion of subcontracting system of small industries.

3. Technical Cooperation.

A. Dispatch of Japanese Experts.

a. Long-term experts will be dispatched in the following fields:

(1) Planning and management of training.
(2) Development of teaching materials.
(3) Surveys and analyses.
(4) Planning and Management of Guidance and Consultation.
(5) Promotion of subcontracting in small industries.

b. Short-term experts will be provided, if necessary.

B. Training of Indonesian Counterpart Personnel in Japan.

JICA will receive Indonesian counterpart personnel for technical training in Japan.

4. Equipment and Machinery to be provided.

List of Main Articles.

A. Equipment for surveys and development.

a. Personal computer set.
b. Printing machine including make-up machine.
c. Copy machine (Soter attached).

B. Audio Visual Aids.

a. Television receiving set.
b. Various types of projector with screen (over head, movie and slide)
c. T.V. and movie camera set
d. Video tape recorder set.

C. Equipment for practical training.

a. Low cost automation machinery system set.
b. Measuring apparatus.
c. Samples (engines, electric motors and others)

D. Vehicles

Microbus, station wagon and motor-cycles.

E. Equipment for industrial extension laboratory.

IMPLEMENTATION PLAN OF TRAINING COURSES

	Courses	Target	Enrollment	Duration	Annual number of courses	Qualification of trainees
Extension Service Workers	1. TPL* Generalist	Acquisition of basic knowledge necessary for the extension service activities for the development of small industries.	30 - 35 persons	2 months	3 courses	Those who have graduated from high school, Academy and University or with equivalent ability.
	2. TPL Specialist (Functional)	To train TPL so as to make them equipped with specialized knowledge and ability to enable them in render extension services in particular fields in small industries.	30 - 35 persons	3 months	10-12 courses	Those personnel who have about two years experience as TPL or with equivalent experience and ability.
	3. Trainer	To train TPLS** or government officials so as to make them equippped with knowledge and ability to train TPL, TPLS and entrepreneurs.	30 - 35 persons	4 months	3 - 4 courses	Those personnel who have more than two years experiences as TPLS or with equivalent experience and ability.
Others	4. Entrepreneur	To develop entrepreneurship by rendering entrepreneurs knowledge and information with a view to modernizing small industries.	30 persons	3-4 weeks	20 courses	Entrepreneurs from the priority sub-sectors of small industries.

* Tenaga Penyuluh Lapangan (Field extension worker)

** TPLS : TPL Specialist

Attached Sheet - 2

CONTENTS OF TRAINING PROGRAMS

Courses	Contents
Extension Service Workers (ESW)	
1. T.P.L. Generalist	A. Duty of extension service worker (2 days)
	1) Frame work and content of extension service.
	2) Role and mental attitude of extension service worker.
	3) Extension motivation training.
	B. Basic knowledge of extension service worker (9 days).
	1) Present situation and future plan of small industries.
	2) Government's policy and programs for small industries.
	3) Law and regulation of small industries.
	C. Accounting business and personnel management of small industries (29 days)
	1) Basic knowledge of bookkeeping (including case studies or exercises)
	2) Procedure of settlement of accounts.
	3) Basic knowledge of personnel management.
	4) Taxation system.
	D. Field study (10 days).
	Total 50 days

2. T.P.L. Specialist (Functional)

A. Methodology of finding the actual situation of the management of small industries (20 days)

1) Specific features and problems of small industries.

2) Proper direction of promoting small industries.

3) Collection and utilization of data related to management.

4) Present situation of local clusters.

B. Financing of small industries. (35 days)

1) Significance of finance record.

2) Formation of working capital table.

3) Methodology of management analyses.

4) Benefit and budgeting plan.

5) Equipment investment and method of assessing its effects.

C. The management of quality control and process control (including field study) (20 days)

1) Basic knowledge of quality control (including case studies or exercises).

2) Improvement points of working process.

Total 75 days

3.Trainer

A. Management planning and utilization of related information (42 days)

1) Check points necessary for interview with entrepreneur.

2) Method of investigation on production plant.

3) Analysis of management and assessment of the achievement.

4) Cost accounting.

5) Analysis method of management planning.

6) Analysis method of working capital planning.

7) Analysis of working process.

B. Essential points necessary for the guidance of industries (30 days)

1) Method of reducing production cost.

2) Personnel management.

3) Case study.

C. Marketing strategy (13 days)

D. Teaching method and field training (15 days)

Total 100 days

Other Courses.

1. Entrepreneurs

1) Achievement motivation training.

2) Socio-economic situation of industries concerned (sector-wise).

3) Basic and practical knowledge required of entrepreneurs.

4) Management of stocking, inventory and sales.

5) Marketing.

6) Personnel management and leadership.

2. Officials	Necessary training courses will be organized as necessity arises.

Note: With respect to the above contents of training program, some minor modifications may be made in the course of the preparation and implementation of the project.

CONTENTS OF SURVEYS ON SMALL INDUSTRIES DEVELOPMENT ACTIVITY

Survey Items	Contents
1. Statistical survey on small industries.	In order to review precisely the present status of small industries, the collection and analysis of necessary data and information on the production and effectiveness of the industries will be conducted through extension service workers and regional small industry development center (PPIK).
2. Survey on development of production process of small industries.	Surveys will be conducted in order to review and analize present level of production process of priority sectors of small industries.
3. Survey on marketing system of small industries.	Surveys will be conducted in order to develop marketing system of small industries production.
4. Survey on trend of consumption of small industries products.	Surveys will be conducted in order to review and analize present consumption preference and the demand of the consumers of small industries products.

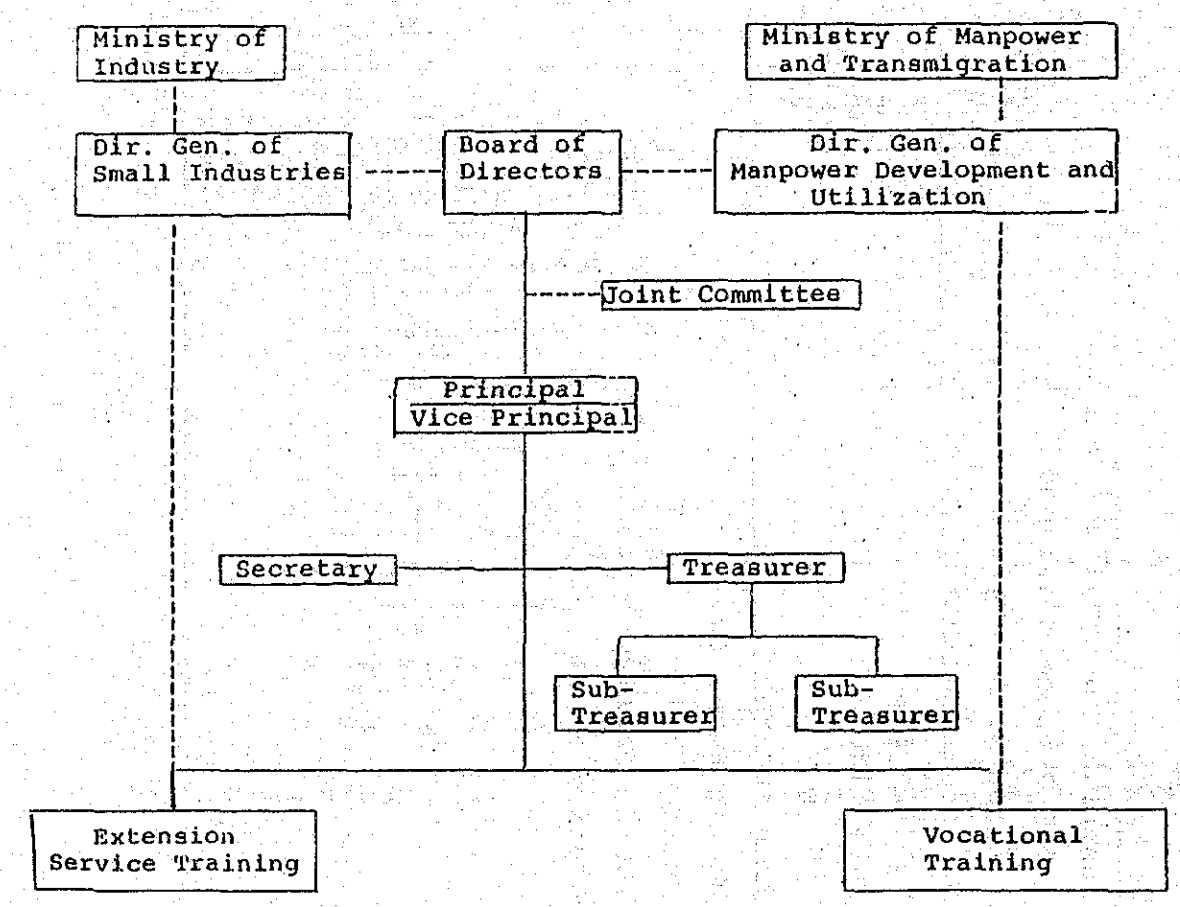
TENTATIVE SCHEDULE OF TECHNICAL COOPERATION (EXTENSION SERVICE TRAINING DEPT.)

Fiscal Year	82	83	84	85	86	87
Calendar Year	83		84	85	86	87
Phase	Phase 0 (Preparation)		Phase I (Fundamental Establishment)		Phase II (Development)	
Construction						
I. Dispatch of experts						
A. Long-term experts						
1) Planning and management of training.						
2) Development of teaching materials.						
3) Surveys and analyses.						
4) Planning and management of guidance and consultation.						
5) Promotion of subcontracting in small industries.						
B. Short-term experts	* short-term experts may be dispatched if necessity arises.					
1) Computer programmer for surveys.						
2) Development of teaching materials.						
3) Guidance and consultation						
II. Training of Indonesian personnel in Japan.	JICA will receive Indonesian counterpart personnel for technical training in Japan.					

MAIN COMPONENTS OF FACILITIES FOR CEVEST

1. Administration Office
2. Japanese Expert Room
3. Drawing Room
4. Library
5. Classroom
6. Audiovisual Classroom
7. Audiovisaul Studio and Darkroom
8. Workshop
9. Research and Development Room
10. Multi Purpose Classroom
11. Instructor Anteroom
12. Management Research Room
13. Meeting Room
14. Reception
15. Office
16. Printing Shop
17. Health Nurse Room
18. Storage
19. Public Utility Space
20. Janitor Room

THE ORGANIZATION CHART OF CEVEST



Members of Joint Committee

1. The principal of CEVEST
2. Representatives of 2 Ministries
3. JICA
4. 1 Chief Advisor
5. 1-2 Programme Representative + Observer from Embassy