マレイシア金属工業技術センターにおける
金属加工第三国研修５８年度実施計画案

THE RECORD OF DISCUSSIONS BETWEEN THE JAPANESE CONSULTATION TEAM AND THE AUTHORITIES CONCERNED OF THE GOVERNMENT OF MALAYSIA ON THE THIRD COUNTRY TRAINING PROGRAMME IN THE FIELD OF METAL-WORKING TECHNOLOGY

The Japanese Consultation Team (hereinafter referred to as the "Team"), dispatched by the Japan International Cooperation Agency (hereinafter referred to as "JICA") and headed by Mr. Akihiko Hashimoto, Head of Third Training Division, Training Affairs Department, JICA visited Malaysia from August 21, 1983 to August 27, 1983 for the purpose of working out the Third-Country Training Programme in the field of Metal-Working Technology at Metal Industry Technology Center of Standards and Industrial Research Institute of Malaysia (hereinafter referred to as "MITEC, SIRIM"), supported by the technical cooperation scheme of the Government of Japan.

During its stay in Malaysia, the Team had a series of discussions with the authorities concerned of the Government of Malaysia with respect to the measures to be taken by both governments for the successful implementation of the Third Country Training Programme.

As the result of the discussions the Team and the authorities concerned of the Government of Malaysia agreed to recommend to their respective governments the matters referred to in the attached documents.

Kuala Lumpur, August 25, 1983.

AKIHIKO HASHIMOTO
Head of Japanese
Consultation Team.

MOHAMAD BIN OMAR
Director, Foreign Assistance
and General Services,
Economic Planning Unit.

THE ATTACHED DOCUMENT

The Government of Japan and the Government of Malaysia will co-operate with each other in implementing the Third-Country Training Programme in the field of Metal-Working Technology at MITEC, SIRIM (hereinafter referred to as "the Programme").

The Programme will be conducted by the Government of Malaysia with the support of the Government of Japan under its technical cooperation scheme. The Programme will be conducted once a year from the Japanese fiscal year of 1983 (April 1, 1983 - March 31, 1984) onward, subject to annual agreement between the authorities concerned of the two governments.

The Programme in the Japanese fiscal year of 1983 will be implemented in accordance with the following items:

1. TITLE

The Programme will be entitled "Regional Training Programme in Metal-Working Technology" consisting of the two courses of "Welding Course" and "Electroplating Course".

2. PURPOSE

The Programme is designed to provide an opportunity of refreshing and updating relevant techniques and knowledge for technical officials in the government/public industrial organizations in the field of metal working technology involved in the instruction and extention work in the related fields.

3. DURATION

The Programme will be conducted from 19 February, 1984 to 25 March, 1984.

4. CURRICULUM

A tentative curriculum for the Programme is attached as in ANNEX I.

5. PARTICIPATING COUNTRIES

The following countries are invited to nominate applicants: Thailand, the Philippines, Indonesia, Singapore, Burma, Bangladesh, Sri Lanka, Nepal, Fiji and Papua New Guinea.

6. NUMBER OF PARTICIPANTS

The number of participants from the third countries specified in 5 above will be sixteen (16), and the allocation of training seats will be as follows:

1) Welding Course
   One (1) training seat each for Fiji, Papua New Guinea, The Philippines, Indonesia, Burma, Bangladesh, Sri Lanka and Nepal.
2) Electroplating Course
   One (1) training seat each for Singapore, Thailand, The Philippines, Indonesia, Burma, Bangladesh, Sri Lanka and Nepal.

The number of participants from Malaysia will be eight (8) comprising four (4) in each of the two courses.

7. QUALIFICATIONS OF APPLICANTS

Applicants to the Programme are to:

1) be technical officials who are engaged in the works of instruction and extension of metal working technology in the government/public industrial organizations;
2) have more than five (5) years of work experience;
3) have a good command of spoken and written English;
4) be local citizens of the nominating countries;
5) be under forty (40) years of age; and
6) be healthy enough to participate in and complete the Programme.

8. PROCEDURE OF APPLICATION

1) The Governments desiring to nominate applicant(s) for the Programme should complete five (5) copies of the designated application form for each and forward them to the Government of Malaysia through their respective diplomatic channels not later than November 30, 1983.

2) The Government of Malaysia will inform the applying governments whether or not the nominee(s) is/are accepted to the Programme not later than January 15, 1984.

9. LECTURERS/INSTRUCTORS

9-1 SIRIM under the Ministry of Science, Technology and the Environment (hereinafter referred to as "SIRIM, MSTE") will assign necessary teaching staff as lecturers/ instructors for the Programme.

9-2 Upon request of the Government of Malaysia the Government of Japan will dispatch two (2) short-term experts under its Expert-Assignment Programme for the purpose of giving advice and guidance to the MITEC staff and of giving lectures on such subjects as mentioned in ANNEX I.

9-3 The Government of Malaysia, through Economic Planning Unit (hereinafter referred to as "EPU", will submit to the Government of Japan Form A-1 in request for the experts mentioned in 9-2 above in accordance with the procedures required under the Colombo Plan technical cooperation scheme.

10 UNDERTAKING OF BOTH GOVERNMENTS

In preparing for and implementing the Programme both governments will undertake the following responsibilities.

10-1 The Government of Malaysia

10-1-1 Economic Planning Unit

1) To forward the General Information brochures (G.I) of the Programme to the government of participating countries through its diplomatic channels.
2) To receive application forms and to convene a selection committee meeting with SIRIM, MSTE.
3) To notify the results of selection of participants to their respective governments through its diplomatic channels and to JICA Kuala Lumpur Office in Malaysia.

10-1-2 MITEC, SIRIM/MSTE

1) To formulate curriculum.
2) To draft and print G.I.
3) To submit Form A-1 to the Economic Planning Unit.
4) To assign lecturers in accordance with 9-1 above.
5) To arrange training and accommodation facilities for the participants.
6) To screen applicants together with EPU.
7) To arrange meeting and sending services for participants at the airport.
8) To arrange international travel for participants and domestic study tours.
9) To take budgetary measures for the expenses necessary for implementing the Programme that are not financed by the Government of Japan.
10) To submit a course report to JICA Kuala Lumpur Office in Malaysia after the termination of the Programme.
11) To co-ordinate any matters related to the Programme.

10-2 The Government of Japan

To bear the following expenses for the Programme

1) such expenses relevant to the participants outside of Malaysia as international economy-class flight fare, accommodation, per diem and medical insurance premium;

2) such expenses relevant to MITEC, SIRIM for operating the Programme as honoraria for external lecturers, meeting, teaching aids, material procurement, duplication and secretarial services.

11. FINANCIAL ARRANGEMENT

Financial arrangement for the training expenses to be borne by the Government of Japan will be made in accordance with the following procedures.

1) SIRIM, MSTE will submit to JICA Kuala Lumpur Office a bill of estimate for expenses to be borne by the Government of Japan not later than sixty (60) days before the opening of the Programme.
2) JICA Kuala Lumpur Office will assess the amount stated on the bill of estimate, manage the expenses mentioned in 10-2 1) above and pay to SIRIM, MSTE the appropriate amount of expenses mentioned in 10-2 2) above with fifty (50) days after the receipt of the bill.
3) Upon confirmation of receiving the payment, SIRIM, MSTE will submit to JICA Kuala Lumpur Office a receipt for the amount.
4) SIRIM, MSTE will submit to Kuala Lumpur Office a statement of expenditure within thirty (30) days after the closing of the Programme.
5) In case any amount left unused is stated in the above-mentioned statement of expenditures, SIRIM, MSTE will reimburse the amount to JICA Kuala Lumpur Office in accordance with the instructions given by the latter.
6) SIRIM, MSTE will make available for JICA's reference all the receipts and other documentary evidence to certify the expenditures stated in 4) above if requested by the latter.

12. SCHEDULE OF IMPLEMENTATION

A recommended schedule of implementation of the Programme is attached as in ANNEX II.

ANNEX I

TENTATIVE SCHEDULE IN ELECTROPLATING TECHNOLOGY COURSE FOR THE THIRD COUNTRY TRAINING PROGRAM

Date	Morning session (a.m.)	Person in charge	Afternoon session (p.m.)	Person in charge
19th Feb Sun.	Arrival at Kuala Lumpur.	MITEC	Arrival at Kuala Lumpur.	MITEC
20th Feb Mon.	Registration. Opening ceremony.	MITEC	Orientation. Welcome party.	MITEC
21st Feb Tues.	Briefing on MITEC and metal industry in Malaysia.	MITEC	Continued.	MITEC
22nd Feb Wed.	Surface Treatment and electroplating.	JICA	Advanced plating equipment.	JICA
23rd Feb Thurs.	Electrochemistry with respect to electro-plating.	Invited lecturer	Electrical engineering with respect to electro-plating.	Invited lecturer
24th Feb Fri.	Plating materials, impurity limitations and quality control.	JICA	Metallurgical character-istics of various base materials.	JICA
25th Feb Sat.	Plating process on different base materials, derusting.	MITEC	Free	
26th Feb Sun.	Free		Free	
27th Feb Mon.	Buffing for vehicle parts.	MITEC	Continued.	MITEC
28th Feb Tues.	Advanced pre-treatment, post-treatment and quality control.	JICA	Various standard plating solutions.	JICA
29th Feb Wed.	Quality tests of platings.	MITEC	Safety management.	MITEC

Date	Morning session (a.m.)	Person in charge	Afternoon session (p.m.)	Person in charge
1st Mac Thurs.	Equipment for solutions control.	MITEC	Analysis of solutions.	MITEC
2nd Mac Fri.	Analysis of solutions.	MITEC	Continued.	MITEC
3rd Mac Sat.	Hull Cell test and thickness test.	MITEC	Free	
4th Mac Sun.	Free		Free	
5th Mac Mon.	Jigging techniques.	MITEC	Application of barrel polishing.	MITEC
6th Mac Tues.	Stripping of plated layer.	JICA	Application of water honning.	MITEC
7th Mac Wed.	Modern nickel plating	MITEC	Decorative and industrial chrome plating.	JICA
8th Mac Thurs.	Public holiday		Public holiday.	
9th Mac Fri.	Copper, nickel and chrome plating.	JICA	Zinc plating as a means of cheaper protection against corrosion.	JICA
10th Mac Sat.	Barrel zinc plating.	MITEC	Free	
11th Mac Sun.	Free		Free	
12th Mac Mon.	Tin plating on electronic parts.	MITEC	Continued	MITEC
13th Mac Tues.	Industrial gold plating.	MITEC	Continued.	MITEC

Date	Morning session (a.m.)	Person in charge	Afternoon session (p.m.)	Person in charge
14th Mac Wed.	Industrial silver plating.	MITEC	Continued.	MITEC
15th Mac Thurs.	Statistical quality control methods.	JICA	Continued.	JICA
16th Mac Fri.	Newer electroplating technology.	JICA	Continued.	JICA
17th Mac Sat.	Modern waste effluent treatment.	MITEC	Free	
18th Mac Sun.	Free		Free	
19th Mac Mon.	Plating on plastics for decorative and industrial uses.	JICA	Continued.	JICA
20th Mac Tues.	Field study tour	MITEC	Continued.	MITEC
21st Mac Wed.	Field study tour	MITEC	Continued.	MITEC
22nd Mac Thurs.	Preparation of final report.	MITEC	Continued.	MITEC
23rd Mac Fri.	Presentation of final report.	MITEC	Continued.	MITEC
24th Mac Sat.	Closing ceremony Farewell party.	MITEC	Free	
25th Mac Sun.	Leaving Kuala Lumpur.	MITEC		

NOTE:

a.m. 8.30 - 12.45

p.m. 2.00 - 4.15

TENTATIVE SCHEDULE IN WELDING TECHNOLOGY COURSE FOR THE THIRD COUNTRY TRAINING PROGRAM

Date	Morning session (a.m.)	Person in charge	Afternoon session (p.m.)	Person in charge
19th Feb Sun.	Arrival at Kuala Lumpur	MITEC	Arrival at Kuala Lumpur	MITEC
20th Feb Mon.	Registration Opening Ceremony.	MITEC	Orientation. Welcome party	MITEC
21st Feb Tues.	Briefing on MITEC and metal industry in Malaysia.	MITEC	Continued.	MITEC
22nd Feb Wed.	Perspective of welding technology (study of welding systems, performance and applications).	MITEC	Safety and Health in Welding Production.	JICA
23rd Feb Thurs.	Shielded metal arc welding (techniques and skill development)	MITEC	Properties and selection of SMAW consummables.	JICA
24th Feb Fri.	Shielded metal arc welding (techniques and skill development).	MITEC	Properties and selection of SMAW consummables.	MITEC & invited lecturer
25th Feb Sat.	Shielded metal arc welding (technique and skill development).	MITEC	Free	
26th Feb Sun.	Free		Free	
27th Feb Mon.	Shielded metal arc welding (techniques and skill development)	MITEC	Costing and estimation for welding production.	MITEC
28th Feb Tues.	SMAW/Gravity welding (Operation techniques and application).	MITEC	Welding economics	MITEC

Date	Morning session (a.m.)	Person in charge	Afternoon session (p.m.)	Person in charge
29th Feb Wed.	CO_2 welding (Performance characteristic of GMAW process)	MITEC	Welding metallurgy (Macro and micro-structure of weldment)	MITEC
1st Mac. Thurs.	CO_2 welding (Maintenance of GMAW systems. Techniques and skill development).	MITEC	Welding metallurgy	Invited lecturer
2nd Mac. Fri.	CO_2 welding (Techniques and skill development).	MITEC	Welding consummables for GMAW, GTAW, SAW and ESW process.	MITEC
3rd Mac, Sat.	Repair welding	JICA	Free	
4th Mac. Sun.	Free		Free	
5th Mac. Mon.	MIG welding (Welding techniques and application).	MITEC	Welding inspection (defects identification)	MITEC
6th Mac. Tues.	TIG welding (Welding techniques and application).	MITEC	Welding inspection (QC by NDT method)	MITEC
7th Mac. Wed.	Submerged arc welding (operation technique and application).	MITEC	Welding inspection (QC by NDT and DT methods).	MITEC
8th Mac. Thurs.	Public Holiday		Public Holiday	
9th Mac. Fri.	Resistance spot seam welding (operation technique and application)	MITEC	Welding inspection (interpretation and judgment of weld quality by multi-national standards).	JICA
10th Mac. Sat.	Welding Inspection (causes and corrective actions for welding quality control).	JICA	Free	

Date	Morning session (a.m.)	Person in charge	Afternoon session (p.m.)	Person in charge
11th Mac Sun.	Free		Free	
12th Mac Mon.	Electroslag welding (operation techniques and application)	MITEC	Welding design (selection and design of welding joints).	MITEC
13th Mac Tues.	Fuel, gas welding and brazing (welding technique and application).	MITEC	Welding design (application in engineering fabrication)	MITEC
14th Mac Wed.	Plasma cutting Arc Gouging (application in welding fabrication).	MITEC	Welding performance qualification (based on welding standards).	MITEC
15th Mac Thurs.	Welding consultancy	MITEC	Welding procedure qualification (based on welding standards).	MITEC
16th Mac Fri.	Technology development (Process and application of low cost automatic and robotic welding).	JICA	Welding production (welding design and fabrication of structures and vessels by code of practice).	MITEC & Invited lecturer
17th Mac Sat.	Technology development (new applications in welding).	JICA	Free	
18th Mac Sun.	Free		Free	
19th Mac Mon.	New welding process	JICA	Continued	JICA
20th Mac Tues.	Field study tour	MITEC	Continued	MITEC
21st Mac Wed.	Field study tour.	MITEC	Continued	MITEC

Date	Morning session (a.m.)	Person in charge	Afternoon session (p.m.)	Person in charge
22nd Mac Thurs.	Preparation of final report.	MITEC	Continued.	MITEC
23rd Mac Fri.	Presentation of final report.	MITEC	Continued.	MITEC
24th Mac Sat.	Closing ceremony Farewell party.	MITEC	Free	
25th Mac Sun.	Leaving Kuala Lumpur	MITEC		

NOTE :

a.m. 8.30 - 12.45

p.m. 2.00 - 4.15

ANNEX II

A SCHEDULE OF IMPLEMENTATION OF THE PROGRAMME

Month	Malaysia Side	Japanese Side
1983		
Late in August	Signing of R/D	
Early in September	Submission of application form for the experts	
Late in September	Distribution of G.I.	Recruitment of experts
Late in November	Deadline of Acceptance of Applications.	
Middle of December	Submission of bill of estimate of expenses.	
1984		
Middle of January	Notification of acceptance	Remittance of expenses
Middle of February	Conduct of the Programme	Dispatch of experts
Late in March	Submission of statement expenditures	
Late in April	Submission of course report	

マレイシア金属工業技術センターにおける
金属加工第三国研修５８年度実施計画案

TENTATIVE SCHEDULE OF IMPLEMENTATION FOR THE THIRD COUNTRY TRAINING PROGRAMME

SHAH ALAM

AUGUST 26, 1983

JAPAN INTERNATIONAL COOPERATION AGENCY

AND

STANDARDS AND INDUSTRIAL RESEARCH INSTITUTE OF MALAYSIA

The Japanese Consultation Team and the Controller of Standards and Industrial Research Institute of Malaysia have jointly formulated the Tentative Schedule of Implementation with respect to the Curriculum and Estimates of Expenses as annexed hereto, with regard to The Record of Discussion signed on August 25, 1983 between the Japanese Consultation Team and authorities concerned of the Government of Malaysia on the Third Country Training Programme in the Field of Metal-Working Technology.

In formulating the above-mentioned schedule, it was mutually understood that both sides should exert their utmost efforts for the success of the said programme.

Akihiko Hashimoto
Head
Japanese Consultation Team

Abdullah bin Mohd Yusof
Controller
Standards and Industrial
Research Institute of
Malaysia.

MINUTES OF DISCUSSION ON THIRD COUNTRY TRAINING PROGRAMME HELD BETWEEN JAPANESE CONSULTATION TEAM AND SIRIM

Venue : SIRIM
Date : 23rd August & 24th August 1983
Attendance : As attached in Annex 1.

1. Introduction

This meeting was held between the Japanese Consultation Team and SIRIM to look into the proposals and drafts on the subjects of curriculum and budget as submitted by both parties. Discussions were held to reach the agreement as outlined in this minute.

2. Curriculum

2.1 Curriculum for Welding Course & Electroplating Course

Proposals for the details of curriculum for the Welding and Electroplating Courses were thoroughly discussed and favourably agreed by both sides.

The curriculums for both courses as agreed on the day is attached in Annex II and Annex III.

2.2 Curriculum for Die-making and Presswork Course

Proposals for the curriculum fo the above two courses were also submitted for discussion to be used for future Third Country training programmes. Both parties have agreed to the curriculum as attached in Annex IV and Annex V.

3. Budget

The expenditures and costings for the Third Country training programme were discussed in detail and favourably agreed upon as attached in Annex VI.

4. Requests

In order to facilitate the successful operations of the Third Country Training Programme, SIRIM has requested to JICA several additional equipment to be brought by Japanese short term experts as listed below:-

i) electronic typewriter
iii) transparancies film copier
iii) off-setting machine
iv) surface tension tester for electroplating solution
v) Lecture materials used in JICA Training Centre (English Edition)

In addition, the difference of curriculum between the Third Country Training Programme and the Malaysian Technical Cooperation Programme was taken up for discussion at the Meeting.

As a result both sides acknowledged that the former one will stress the theoretical matters for the participants, who are mainly instructors and extension officers in governmental/public sectors, to facilitate their propagation work in their home countries, on the other hand, the latter will stress the practical work for the participants, who are mainly form private sectors, to upgrade the efficiency in their enterprise.

The discussions held have been fruitful as proposals from both parties have been well received to enable compilation of the curriculums and other related matters.

There being no further matters, the meeting ended at 12.30 p.m. on the 24th. August, 1983.

Date: 24th August, 1983

DISCUSSION ON THE THIRD COUNTRY TRAINING PROGRAMME

DAY 1 (23.8.1983)

Discussion on the curriculum and courses content

Place : SIRIM HQ
Time : 9.30 a.m.

Japanese mission:

1)	Mr. Akihiko Hashimoto (Leader)	Head, Third Training Division, Training Affairs Department JICA
2)	Mr. Takami Yoda (Member)	Technical Cooperation Division, Trade Policy Bureau, Ministry of International Trade and Industry,
3)	Miss Teiko Matsui	Administration Division, Training Affairs Department, JICA.

Japanese experts:

1.	Dr. Kenji Tomita	Chief Adviser MITEC
2.	Mr. Ryohei Nonaka	Electroplating Expert
3.	Mr. Kazuhiko Tanaka	Information Expert

SIRIM Officials:

1)	En. Abdullah b. Mohd. Yusof	Controller of SIRIM.
2)	En. Mohamad bin Abas	Director of Administration
3)	En. Faisal Hj. Ismail	Acting Head of MITEC
4)	Cik Chen Sau Soon	MITEC Information Officer

DAY 2 (24.8.1983)

Discussion on the cost estimation for the Third Country Training Programme.

Place: MITEC Conference Room

Time: 10.30 a.m.

Attendance:

The attendance is the same as in Day 1 and also present in Day 2 was En. Ahmad Sukarno Ahmad who is the Senior Accounts Officer in SIRIM.

ANNEX II

TENTATIVE SCHEDULE IN WELDING TECHNOLOGY COURSE FOR THE THIRD COUNTRY TRAINING PROGRAM

Date	Morning session (a.m.)	Person in charge	Afternoon session (p.m.)	Person in charge
19th Feb Sun.	Arrival at Kuala Lumpur	MITEC	Arrival at Kuala Lumpur	MITEC
20th Feb Mon.	Registration Opening Ceremony.	MITEC	Orientation. Welcome party	MITEC
21st Feb Tues.	Briefing on MITEC and metal industry in Malaysia.	MITEC	Continued.	MITEC
22nd Feb Wed.	Perspective of welding technology (study of welding systems, performance and applications).	MITEC	Safety and Health in Welding Production.	JICA
23rd Feb Thurs.	Shielded metal arc welding (techniques and skill development)	MITEC	Properties and selection of SMAW consumaables.	JICA
24th Feb Fri.	Shielded metal arc welding (techniques and skill development).	MITEC	Properties and selection of SMAW consummables.	MITEC & invited lecturer
25th Feb Sat.	Shielded metal arc welding (technique and skill development).	MITEC	Free	
26th Feb Sun.	Free		Free	
27th Feb Mon.	Shielded metal arc welding (techniques and skill development)	MITEC	Costing and estimation for welding production.	MITEC
28th Feb Tues.	SMAW/Gravity welding (Operation techniques and application).	MITEC	Welding economics	MITEC

Date	Morning session (a.m.)	Person in charge	Afternoon session (p.m.)	Person in charge
Thurs.	Die drafting	MITEC	Continued	MITEC
Fri.	Progressive die	JICA	Continued	JICA
Sat.	Type of die consturction	MITEC	Free	
WEEK 3 Sun.	Free		Free	
Mon.	Machining of die-components - punch	MITEC	Continued	MITEC
Tues.	Machining of die components - punch	MITEC	Machining of die components - die	MITEC
Wed.	Machining of die components - die	MITEC	Continued	MITEC
Thurs.	Consultation in die making	JICA	Trouble shooting in Diemaking	JICA/ MITEC
Fri.	Future trend in advanced die-making equipment	JICA	New techniques (including CAD/CAM)	JICA
Sat.	Quality control - general	JICA	Free	
WEEK 4 Sun.	Free		Free	
Mon.	Quality control - measurement.	JICA	Continued	JICA
Tues.	Quality control - standardization.	JICA	Continued	JICA
Wed.	Die assembly and try-out	MITEC	Die try-out	MITEC

ANNEX V

TENTATIVE SCHEDULE IN PRESSWORK TECHNOLOGY COURSE FOR THE THIRD COUNTRY TRAINING PROGRAM

Date	Morning session (a.m.)	Person in charge	Afternoon session (p.m.)	Person in charge
WEEK 1 Sun.	Arrival at Kuala Lumpur.	MITEC	Arrival at Kuala Lumpur.	MITEC
Mon.	Registration. Opening ceremony.	MITEC	Orientation. Welcome party.	MITEC
Tues.	Briefing on MITEC and metal industry in Malaysia.	MITEC	Outline of die-making Principle of presswork	JICA or MITEC
Wed.	Features and recent development of presswork technology.	MITEC	Safety aspects and devices for press-working.	MITEC
Thurs.	Basic construction of a steel press die. Types of dies and their uses.	MITEC	Disassembly and study of a blanking die.	MITEC
Fri.	Basic principles of shearing operation, types of shearing operations and their design points.	MITEC	Assembly and try-out of a blanking die.	MITEC
Sat.	Problems/defects in shearing process and parts inspection.	MITEC	Free	
WEEK 2 Sun.	Free		Free	
Mon.	Die setting/Procedure and die maintenance	MITEC	Common die setting mistakes.	MITEC
Tues.	Bending operation and its theory. Disassembly of bending dies.	MITEC	Blank development in bending operation.	MITEC
Wed.	Bending force estimation Spring back effect and	MITEC	Assembly of bending die and try-out at the power	MITEC

Date	Morning session (a.m.)	Person in charge	Afternoon session (p.m.)	Person in charge
Thurs.	Heat treatment technology	JICA	Heat treatment of various types of tool and die steels.	JICA
Fri.	Heat treatment - controlled atmosphere	JICA	Heat treatment - carburizing	JICA
Sat.	Heat treatment - vacuum	JICA	Free	
WEEK 5 Sun.	Free		Free	
Mon.	Die maintenance/repair and modification	MITEC	Continued	MITEC
Tues.	Field study tour	MITEC	Continued	MITEC
Wed.	Field study tour	MITEC	Continued	MITEC
Thurs.	Preparation of final report	MITEC	Continued	MITEC
Fri.	Presentation of final report	MITEC	Continued	MITEC
Sat.	Closing ceremony Farewell party	MITEC	Free	
Sun.	Leaving Kuala Lumpur	MITEC		

NOTE :

a.m. 8.30 - 12.45

p.m. 2.00 - 4.15

Date	Morning session (a.m.)	Person in charge	Afternoon session (p.m.)	Person in charge
	other defects and remedies.		press machine.	
Thurs.	Bending operation: parts inspection, trouble shooting and remedy.	MITEC	Uses of press brake.	MITEC
Fri.	Theories of drawing process (die/punch radius, draw limits, blank calculation, etc).	MITEC	Drawing force estimation and selection of machines. Disassembly of drawing dies.	MITEC
Sat.	Drawing process: Parts inspection, trouble shooting and remedy. Operation of hydraulic press machines.	MITEC	Free	
WEEK 3 Sun.	Free		Free	
Mon.	Sheet metals: general properties and their selection common defects, quality control	MITEC	Testing of sheet metal (Erichsen test)	MITEC
Tues.	Press machines. Types and construction and uses. Basic specifications.	MITEC	Operation/maintenance of press machines.	MITEC
Wed.	Concepts of progressive and transfer dies operation. Study of a progressive dies/transfer dies.	MITEC	Operation of transfer press machines.	MITEC
Thurs.	Fine Blanking: theory, design, operation.	JICA	Continued.	JICA
Fri.	Design theory of a progressive die and its setting on the press machine.	MITEC	Try-out of progressive and transfer dies.	MITEC
Sat.	Production control/ material handling/ feeding mechanism.	MITEC	Free	

Date	Morning session (a.m.)	Person in charge	Afternoon session (p.m.)	Person in charge
WEEK 4 Sun.	Free		Free	
Mon.	Quality control - general	JICA	Continued.	JICA
Tues.	Quality control - measurement.	JICA	Continued.	JICA
Wed.	Quality control - standardization.	JICA	Continued.	JICA
Thurs.	Quality control - Total quality control	JICA	Continued.	JICA
Fri.	Trouble shooting in pressworking.	MITEC	Lubrication	MITEC
Sat.	Costing in Presswork	JICA	Free	
WEEK 5 Sun.	Free		Free	
Mon.	Safety of presswork operations.	MITEC	Continued.	MITEC
Tues.	Field study tour.	MITEC	Continued.	MITEC
Wed.	Field study tour	MITEC	Continued.	MITEC
Thurs.	Preparation of final report.	MITEC	Continued.	MITEC
Fri.	Presentation of final report.	MITEC	Continued.	MITEC
Sat.	Closing ceremony Farewell party.	MITEC	Free	
Sun.	Leaving Kuala Lumpur.	MITEC		

NOTE: 8.30 - 12.45 (a.m.) 2.00 - 4.15 (p.m.)

ANNEX VI

TENTATIVE ESTIMATE OF EXPENSES AGREED UPON IN PRINCIPLE BETWEEN THE TEAM AND SIRIM

No.	Item of Expenses	Breakdown			Amount (Yen)
I.	EXPENSES FOR INVITATION				
	1. Airtickets :	Country	Airticket Fee	Amount(¥)	3,188,500
		a. Bangladesh	US$ 776 x 2 persons	372,500	
		b. Burma	US$ 576 x 2 persons	276,500	
		c. Fiji	US$2811 x 1 person	674,700	
		d. Indonesia	US$ 430 x 2 persons	206,400	
		e. Nepal	US$ 954 x 2 persons	458,000	
		f. Philippines	US$ 714 x 2 persons	342,800	
		g. Papua New Guinea	US$1420 x 1 person	340,800	
		h. Singapore	US$ 95 x 1 person	22,800	
		i. Sri Lanka	US$ 824 x 2 persons	395,600	
		j. Thailand	US$ 410 x 1 person	98,400	
		TOTAL	US$13824	3,188,500	
	2. Allowances:				5,671,100
	Living Allowance	M$35/- per day x 36 days x 16 persons x 104 yen		2,096,700	
	Accomodation	M$60/- per day x 35 days x 16 persons x 104 yen		3,494,400	
	Medical Insurance	5,000 yen x 16 persons		80,000	
		TOTAL FOR EXPENSES FOR INVITATION (I):			8,859,600
II	TRAINING EXPENSES				
	1. Honararia				291,200
	Invited lecturers	M$80/- per hour x 35 hours x 104 yen		291,200	
	2. Personnel Expenses				339,600
	Secretary services	a. M$32 x 1 person x 36 days x 2 courses x 104 yen		239,700	
		b. M$32 x 1 person x 30 days x 104 yen		99,900	

No.	Item of Expenses	Breakdown		Amount
				(Yen)
	3. Expenses for Observation Trips			
	Microbus and Chartered bus	M$6000 x 104 yen (Appendix I)	624,000	624,000
	4. Meeting Expenses			796,800
	Opening Ceremony	M$10/- per person x 70 persons x 104 yen	72,800	
	Discussion Meetings	2000 yen x 10 persons x 5 times	100,000	
	Coffe Break	M$2/- per person x 2 times x 28 days x 50 persons x 104 yen	582,400	
	Closing Ceremony	M$10/- per person x 40 persons x 104 yen	41,600	
	5. Teaching Materials			2,415,200
	Common Expenses	M$4,920 x 104 yen (Appendix II)	511,700	
	Welding Course	M$10,388 x 104 yen (Appendix III)	1,075,200	
	Electroplating Course	M$7,964 x 104 yen (Appendix IV)	828,300	
		TOTAL FOR TRAINING EXPENSES (II)		4,466,800
		GRAND TOTAL FOR (I) AND (II)		13,326,400

Date	Morning session (a.m.)	Person in charge	Afternoon session (p.m.)	Person in charge
29th Feb Wed.	CO_2 welding (Performance characteristic of GMAW process)	MITEC	Welding metallurgy (Macro and micro-structure of weldment)	MITEC
1st Mac. Thurs.	CO_2 welding (Maintenance of GMAW systems. Techniques and skill development).	MITEC	Welding metallurgy	Invited lecturer
2nd Mac. Fri.	CO_2 welding (Techniques and skill development).	MITEC	Welding consummables for GMAW, GTAW, SAW and ESW process.	MITEC
3rd Mac, Sat.	Repair welding	JICA	Free	
4th Mac. Sun.	Free		Free	
5th Mac. Mon.	MIG welding (Welding techniques and application).	MITEC	Welding inspection (defects identification)	MITEC
6th Mac. Tues.	TIG welding (Welding techniques and application).	MITEC	Welding inspection (QC by NDT method)	MITEC
7th Mac. Wed.	Submerged arc welding (operation technique and application).	MITEC	Welding inspection (QC by NDT and DT methods).	MITEC
8th Mac. Thurs.	Public Holiday		Public Holiday	
9th Mac. Fri.	Resistance spot seam welding (operation technique and application)	MITEC	Welding inspection (interpretation and judgment of weld quality by multi-national standards).	JICA
10th Mac. Sat.	Welding Inspection (causes and corrective actions for welding quality control).	JICA	Free	

Date	Morning session (a.m.)	Person in charge	Afternoon session (p.m.)	Person in charge
11th Mac Sun.	Free		Free	
12th Mac Mon.	Electroslag welding (operation techniques and application)	MITEC	Welding design (selection and design of welding joints).	MITEC
13th Mac Tues.	Fuel, gas welding and brazing (welding technique and application).	MITEC	Welding design (application in engineering fabrication)	MITEC
14th Mac Wed.	Plasma cutting Arc Gouging (application in welding fabrication).	MITEC	Welding performance qualification (based on welding standards).	MITEC
15th Mac Thurs.	Welding consultancy	MITEC	Welding procedure qualification (based on welding standards).	MITEC
16th Mac Fri.	Technology development (Process and application of low cost automatic and robotic welding).	JICA	Welding production (welding design and febrication of structures and vessels by code of practice).	MITEC & Invited lecturer
17th Mac Sat.	Technology development (new applications in welding).	JICA	Free	
18th Mac Sun.	Free		Free	
19th Mac Mon.	New welding process	JICA	Continued	JICA
20th Mac Tues.	Field study tour	MITEC	Continued	MITEC
21st Mac Wed.	Field study tour.	MITEC	Continued	MITEC

Date	Morning session (a.m.)	Person in charge	Afternoon session (p.m.)	Person in charge
22nd Mac Thurs.	Preparation of final report.	MITEC	Continued.	MITEC
23rd Mac Fri.	Presentation of final report.	MITEC	Continued.	MITEC
24th Mac Sat.	Closing ceremony Farewell party.	MITEC	Free	
25th Mac Sun.	Leaving Kuala Lumpur	MITEC		

NOTE :

a.m. 8.30 - 12.45

p.m. 2.00 - 4.15

ANNEX III

TENTATIVE SCHEDULE IN ELECTROPLATING TECHNOLOGY COURSE FOR THE THIRD COUNTRY TRAINING PROGRAM

Date	Morning session (a.m.)	Person in charge	Afternoon session (p.m.)	Person in charge
19th Feb Sun.	Arrival at Kuala Lumpur.	MITEC	Arrival at Kuala Lumpur.	MITEC
20th Feb Mon.	Registration. Opening ceremony.	MITEC	Orientation. Welcome party.	MITEC
21st Feb Tues.	Briefing on MITEC and metal industry in Malaysia.	MITEC	Continued.	MITEC
22nd Feb Wed.	Surface Treatment and electroplating.	JICA	Advanced plating equipment.	JICA
23rd Feb Thurs.	Electrochemistry with respect to electro-plating.	Invited lecturer	Electrical engineering with respect to electro-plating.	Invited lecturer
24th Feb Fri.	Plating materials, impurity limitations and quality control.	JICA	Metallurgical characteristics of various base materials.	JICA
25th Feb Sat.	Plating process on different base materials, derusting.	MITEC	Free	
26th Feb Sun.	Free		Free	
27th Feb Mon.	Buffing for vehicle parts.	MITEC	Continued.	MITEC
28th Feb Tues.	Advanced pre-treatment, post-treatment and quality control.	JICA	Various standard plating solutions.	JICA
29th Feb Wed.	Quality tests of platings.	MITEC	Safety management.	MITEC

Date	Morning session (a.m.)	Person in charge	Afternoon session (p.m.)	Person in charge
1st Mac Thurs.	Equipment for solutions control.	MITEC	Analysis of solutions.	MITEC
2nd Mac Fri.	Analysis of solutions.	MITEC	Continued.	MITEC
3rd Mac Sat.	Hull Cell test and thickness test.	MITEC	Free	
4th Mac Sun.	Free		Free	
5th Mac Mon.	Jigging techniques.	MITEC	Application of barrel polishing.	MITEC
6th Mac Tues.	Stripping of plated layer.	JICA	Application of water honning.	MITEC
7th Mac Wed.	Modern nickel plating	MITEC	Decorative and industrial chrome plating.	JICA
8th Mac Thurs.	Public holiday		Public holiday.	
9th Mac Fri.	Copper, nickel and chrome plating.	JICA	Zinc plating as a means of cheaper protection against corrosion.	JICA
10th Mac Sat.	Barrel zinc plating.	MITEC	Free	
11th Mac Sun.	Free		Free	
12th Mac Mon.	Tin plating on electronic parts.	MITEC	Continued	MITEC
13th Mac Tues.	Industrial gold plating.	MITEC	Continued.	MITEC

Date	Morning session (a.m.)	Person in charge	Afternoon session (p.m.)	Person in charge
14th Mac Wed.	Industrial silver plating.	MITEC	Continued.	MITEC
15th Mac Thurs.	Statistical quality control methods.	JICA	Continued.	JICA
16th Mac Fri.	Newer electroplating technology.	JICA	Continued.	JICA
17th Mac Sat.	Modern waste effluent treatment.	MITEC	Free	
18th Mac Sun.	Free		Free	
19th Mac Mon.	Plating on plastics for decorative and industrial uses.	JICA	Continued.	JICA
20th Mac Tues.	Field study tour	MITEC	Continued.	MITEC
21st Mac Wed.	Field study tour	MITEC	Continued.	MITEC
22nd Mac Thurs.	Preparation of final report.	MITEC	Continued.	MITEC
23rd Mac Fri.	Presentation of final report.	MITEC	Continued.	MITEC
24th Mac Sat.	Closing ceremony Farewell party.	MITEC	Free	
25th Mac Sun.	Leaving Kuala Lumpur.	MITEC		

NOTE:

a.m. 8.30 - 12.45

p.m. 2.00 - 4.15

ANNEX IV

TENTATIVE SCHEDULE IN DIE-MAKING TECHNOLOGY COURSE FOR THE THIRD COUNTRY TRAINING PROGRAM

Date	Morning session (a.m.)	Person in charge	Afternoon session (p.m.)	Person in charge
WEEK 1 Sun.	Arrival at Kuala Lumpur	MITEC	Arrival at Kuala Lumpur	MITEC
Mon.	Registration. Opening Ceremony.	MITEC	Orientation. Welcome party.	MITEC
Tues.	Briefing on MITEC and metal industry in Malaysia.	MITEC	Outline of die-making	JICA or MITEC
Wed.	The role of diemaker on the production of pressed product including principle of presswork.	JICA or MITEC	Country paper presentation	MITEC
Thurs.	Theory of metal forming I - cutting, piercing.	MITEC	Country paper presentation	MITEC
Fri.	Theory of metal forming II - forming, drawing.	MITEC	Continued.	MITEC
Sat.	Theory of metal forming III - secondary operation: curling, coining, etc.	MITEC	Free	
WEEK 2 Sun.	Free		Free	
Mon.	Die Design (I) Blanking piercing	MITEC	Die design (II) bending forming	MITEC
Tues.	Die design (III) drawing	MITEC	Continued	MITEC
Wed.	Die-drafting	MITEC	Continued	MITEC

APPENDIX I

TRANSPORTATION COST

Transport (Domestic)

1.	Field Study Tours		
1.1	The four days of field study tours as scheduled in the cirriculum for the 2 courses will be carried but using MITEC bus @ $150.00/day.	$ 600.00	$ 600.00
2.	Commuting Expenses		
2.1	To travel from Hotel to MITEC (morning) @ $60.00/hour for 1½ hours for 30 mornings. 30 x 3/2 x 60	$2,700.00	
2.2	To travel from MITEC back to Hotel (evenings) @ $60.00/hour for 1½ hours for 30 evenings. 30 x 3/2 x 60	$2,700.00	
		$5,400.00	$6,000.00

TOTAL EXPENDITURE: $6,000.00

Common Expenses

1. Lectures Notes and other Course Preparatory Materials

1.1 Photostating of notes etc.

1.1.1 Similin Bond paper for photostating

30 reams of A4 size @ $10/ream	$300
10 reams of B4 size @ $12/ream	$120

1.1.2 Tones and Developers

2 sets @ $200/sets	$400

1.2 Cyclostyling of notes etc.

1.2.1 Stencils

100 pieces @ $1.00/piece	$100

1.2.2 Duplicating papers for cyclostyling

50 reams of A4 size @ $10/ream	$500

1.3 Lecture Presentation

1.3.1 Transparancies for overhead projector

2 boxes @ $200/box	$400

2. Printed Materials

2.1 Announcement brochures (coloured booklet) (material cost, layout, composing, printing) 100 copies @ $15/copy.	$1500
2.2 Embossed cards certificates (materials cost, layout, composing, printing)	$100
2.3 Writing materials with printed letter heads (material, composing & printing) 20 reams of bond paper @$15/ream	$300

3. Stationary

3.1 Files, pens, pencils, rulers, erasers, name tags etc estimated $15/person for 24 participants	$360

4. Souvenirs

4.1 Bags with printed wordings 24 bags @ $35/bag	$840
Total	$4920

WELDING COURSE

1. MATERIALS

(a)	Cost of Materials for Orientation demonstration	$ 100.00	$ 100.00
(b)	Welding inspection		
	- x-ray film (30+15+15) x (10P)	$ 600.00	
	- bending 4 No/P x 10P x $25/-	$ 1,000.00	
	- dye penetrant	$ 100.00	
	- magnetic particle	$ 100.00	
		$ 1,800.00	$ 1,900.00
(c)	Welding metallurgy		
	- macrostructure specimens 3 No x 10P x $ /No.	$ 50.00	$ 1,950.00
(d)	Welding practice		
	i) Mild steel plate		
	- gas welding) - spot welding) - seam welding)	1mm^t @ $85 x 2 No	$ 64.00
	- CO_2 welding) - TIG W)	3mmt @ $85 x 2 No	$ 180.00
	- CO_2 welding) - SMAW Welding) - gravity W)	9mm^t @ $250 x 4 No	$ 1,000.00
	- SMAW) - Electroslag)	25mm^t @ $750 x 1 No	$ 750.00
	ii) Aluminium plate		
	- TIG W	2mm^t @ $200/pc x ½ No	$ 100.00
	- TIG W) - MIG W)	6mm^t @ $400/pc x 1 No	$ 800.00

iii) SUS plate

- TIG W	2mm^t @ $400/pc x 1 No	$ 400.00	
		$ 3,294.00	$ 5,244.00

(e) Consumable Materials

SMAW : Electrodes	100kg x $4.00/kg	$ 400.00	
CO_2 W: Electrode wire	2 spools x 25kg x $35/kg $4.50/kg	$ 225.00	
MIG W: Electrode wire (al)	2 spool x 8kg/s x $35/kg	$ 350.00	
TIG W: Filler rods:			
Mild steel	5 kg x $6.00/kg	$ 30.00	
SUS	3kg x $30.00/kg	$ 90.00	
Aluminium	2kg x $35.00/kg	$ 70.00	
SAW Electrode Wire	1 spool x 25 kg/s x $5.00/kg	$ 125.00	
SAW Flux	20kg x $4.00/kg	$ 80.00	
Spot			
Seam			
Electroslag electrode	5pc x $15.00/pc	$ 75.00	
Wire	1 spool x $130	$ 130.00	
Flux	5kg x $4.00/kg	$ 20.00	
Gravity electrode	20pc x $4.00/pc	$ 80.00	
		$ 1,675.00	$ 6,919.00

(f) Welding accessories:

CO_2 W tips	10pc x $20.00/pc.	$ 200.00	
MIG W tips	5pc x $30.00/pc.	$ 150.00	
TIG W cups	5pc x $12.00/pc	$ 60.00	

Tungsten	4pc x $15.00/pc	$ 100.00	
		$ 570.00	$ 7,489.00
Gas and others :			
Oxygen	8 cy x $15.00/cy	$ 120.00	
Acetylene	4 cy x $30.00/cy	$ 120.00	
Argon	3 cy x $160.00/cy	$ 480.00	
CO_2	5 cy x $50.00/cy	$ 250.00	
		$ 970.00	$ 8,459.00
(g) Safety Attires			
- Safety shoes	12 pairs x $50.00/pair	$ 60.00	
- Uniform	12 sets x $60.00/set	$ 720.00	
- Helmet	12 set x $30.00/set	$ 360.00	
		$ 1,680.00	$10,138.00
(h) Additional Tools			
Dark glass	10pc x $2.00/pc	$ 20.00	
Tool box	5 sets x $25.00/set	$ 75.00	
Hammer	5 sets x $8.00/pc	$ 40.00	
Chipping hammer	5 sets x $6.00/pc	$ 30.00	
Wire Brush	5 sets x $3.00/pc	$ 15.00	
		$ 200.00	$10,338.00

TOTAL EXPENDITURE = $10,338.00

APPENDIX IV

ELECTROPLATING COURSE

1. MATERIALS

Materials/chemicals	Quantity	Cost per unit M$		Total Cost
HNO_3 (industrial)	4 containers (20l)	3.50/lit.	$	280.00
$NAHSO_3$	200kg	10.00/kg	$	2,000.00
Soldering bar (Pb:Sn = 1:1)	10 kg	20.00/kg	$	200.00
Soldering iron heater	8 set	22.50/set	$	180.00
Soldering iron	8 pieces	30.00/pc	$	240.00
PVC Tape (no glue) 19mm x 3mm	12 rolls	2.00/roll	$	24.00
Aluminium tape (2.5cm x 3m)	6 rolls	8.00/roll	$	48.00
1 litre beakers (glass)	3 dozens	36.00/doz	$	108.00
Safety attires				
Safety shoes	12 pairs	38.00/pair	$	456.00
Cotton Apron (for polishing)	12 pairs	10.00/pair	$	120.00
Cotton gloves	12 pairs	2.50/pair	$	30.00
Rubber shoes	12 pairs	13.50/pair	$	162.00
Rubber gloves	12 pairs	13.50/pair	$	162.00
PVC aprons	12 pairs	15.00/pair	$	180.00
Uniform - trainee	12 pairs	60.00/pair	$	720.00
Eye protector	12 pieces	16.00/pc	$	192.00
Nose cover	12 pieces	16.00/pc	$	192.00

Materials/chemicals	Quantity	Cost per unit		Total Cost
Tools and Materials				
Pliers (pointed nose for wire bending)	12 sets	9.00/set	$	108.00
ABS materials	400 pieces	.10/pc	$	40.00
Bolts (for barrel plating)	50 kg	2.50/kg	$	125.00
Nuts (for barrel plating)	50 kg	2.50/kg	$	125.00
PVC sheets (3mm x 4' x 8')	2 sheets	250.00/set	$	500.00
Diamond Paste (#0.5)	6 sets	29.00/set	$	174.00
Analisis Chemicals (for Cu, Ni, Cr and Sn)	1 set of each	400.00/set	$	1,600.00
			$	7,964.00

TOTAL: $ 7,964.00

シンガポールポリテクニックにおける建設プロジェクト管理第三国研修５８年度実施協議議事録

THE RECORD OF DISCUSSIONS BETWEEN THE JAPANESE CONSULTATION TEAM AND THE AUTHORITIES CONCERNED OF THE GOVERNMENT OF SINGAPORE ON THE THIRD COUNTRY TRAINING PROGRAMME IN THE FIELD OF CONSTRUCTION PROJECT MANAGEMENT IN BUILDING

The Japanese Consultation Team (hereinafter referred to as "the Team") dispatched by the Japan International Cooperation Agency (hereinafter referred to as JICA) and headed by Mr Tsuneo Tsukada, Head of Office for International Training Centres, Training Affairs Department, JICA, visited Singapore from September 28, 1983 to October 4, 1983 for the purpose of working out the Third-Country Training Programme in the field of Construction Project Management in Building at Singapore Polytechnic (hereinafter referred to as the Polytechnic) supported by the Government of Japan under its technical cooperation scheme.

During its stay in Singapore the Team had a series of discussions with the authorities concerned of the Government of Singapore with respect to the measures to be taken by both governments for the successful implementation of the Third-Country Training Programme.

As the result of discussions the Team and the authorities concerned of the Government of Singapore agreed to recommend to their respective governments the matters referred to in the attached document.

Singapore, October 1, 1983

T. Tsukada

Mr Tsuneo Tsukada
Head of Office for International Training Centres
Training Affairs Department, JICA

Head of the Japanese Consultation Team

Mr Khoo Kay Chai
Principal
Singapore Polytechnic

THE ATTACHED DOCUMENT

The Government of Japan and the Government of Singapore will cooperate with each other in implementing the Third-Country Training Programme (hereinafter referred to as "the Programme") in the field of Construction Project Management in Building at the Polytechnic.

The Programme will be conducted by the Government of Singapore with the support of the Government of Japan under its technical co-operation scheme. The Programme will be conducted once a year from the Japanese fiscal year of 1983 (April 1, 1983 - March 31, 1984) onward, subject to annual agreement between the authorities concerned of both governments.

The Programme in the Japanese fiscal year of 1983 will be implemented in accordance with the following items:

1 TITLE

The Training Course under the Programme will be entitled "Regional Training Course in Construction Project Management in Building" (hereinafter referred to as "the Course")

2 PURPOSE

The Course is designed to provide an opportunity for person who are engaged in construction project management in building in the ASEAN Region to refresh and update relevant techniques and knowledge.

3 DURATION

The Course will conducted from March 18, 1984 to April 1, 1984.

4 CURRICULUM

A tentative curriculum is attached as ANNEX I.

5 PARTICIPATING COUNTRIES

The following countries are invited to nominate applicants: Indonesia, Malaysia, Philippines, Thailand.

6 NUMBER OF PARTICIPANTS

The total number of participants from the countries specified in 5 above will be sixteen (16) and the number of participants from Singapore will be four (4).

7 QUALIFICATIONS OF APPLICANTS

Applicants to the Course are to:

(1) have a degree in Architecture, Building or Civil Engineering or equivalent;

(2) be engaged in construction project management in building in the governmental, public or private general construction organisations;

(3) have at least five (5) years of occupational experience;

(4) have a good command of spoken and written English;

(5) be more than twenty-five (25) years of age; and

(6) be in good health to participate and complete the Course.

8 APPLICATION PROCEDURE

(1) The Governments desiring to nominate applicant(s) for the Course should complete five (5) copies of the designated application form for each applicant and forward them to the Government of Singapore through their respective diplomatic channels not later than January 18, 1984.

(2) The Government of Singapore will inform the applying governments whether or not the nominee is accepted to the Course not later than February 18, 1984.

9 UNDERTAKING OF BOTH GOVERNMENTS

In preparing for and implementing the Course both governments will undertake the following responsibilities.

9-1 The Government of Singapore

9-1-1 Ministry of Foreign Affairs

(1) To forward General Information brochures (hereinafter referred as "G.I.") on the Course to the governments of participating countries through its diplomatic channels.

(2) To receive application forms and forward them to the Polytechnic.

(3) To notify the results of selection of participants to their respective governments through its diplomatic channels and to the Embassy of Japan in Singapore.

(4) To submit Form A-1 and Form A-2-3 to the Embassy of Japan in Singapore.

9-1-2 Singapore Polytechnic

(1) To formulate the curriculum.

(2) To draft and print G.I.

(3) To assign its own teaching staff as lecturer/instructors for the Course to the maximum possible extent.

(4) To arrange training and accommodation facilities for the participants.

(5) To screen applicants.

(6) To arrange for meeting and sending services at the airport.

(7) To arrange for international travel for participants and domestic study tours.

(8) To take budgetary measures for the expenses necessary for implementing the Course except those financed by the Government of Japan.

(9) To submit a course report to the Embassy of Japan in Singapore.

(10) To submit Form A-1 and A-2-3 to the Ministry of Foreign Affairs of Singapore.

(11) To co-ordinate all matters related to the Course.

9-2 The Government of Japan

(1) To dispatch two (2) short term experts under its Expert-Assignment Programme for the purpose of giving advice and guidance to the Polytechnic and of giving lectures on such subjects as mentioned in ANNEX I.

(2) To receive one (1) of the counter-part personnel from the Polytechnic as a participant to the individual training course organised by JICA under its Technical Training Programme for the purpose of consulting with JICA regarding implementation of the Course and of introducing relevant knowledge and techniques in this field.

(3) To bear the following expenses for the Course;

(a) international economy-class flight fare, accommodation, per-diem and medical insurance premium for participants from outside of Singapore

(b) honoraria for external lecturers, meeting, teaching aid, material procurement, duplication, study tours and secretarial services.

10 FINANCIAL ARRANGEMENTS

Finanical arrangements by the Government of Japan for the training expenses will be made in accordance with the following procedures.

(1) The Polytechnic will submit to the JICA Singapore Office a bill of estimate for expenses to be borne by the Government of Japan not later than sixty (60) days before the opening of the Course.

(2) JICA Singapore Office will assess the amount stated on the bill of estimate, administer the expenses mentioned in 9-2-3-(a) above and pay to the Polytechnic the appropriate amount of expenses mentioned in 9-2-3-(b) above not later than thirty (30) days before the opening of the Course.

(3) Upon confirmation that the payment has been made, the Polytechnic will submit to the JICA Singapore Office a receipt for the amount.

(4) The Polytechnic will submit to the JICA Singapre Office a statement of expenditures within thirty (30) days after the closing of the Course.

(5) In case any amount left unused is stated in the above-mentioned statement of expenditures, the Polytechnic will reimburse the same amount to JICA Singapore Office in accordance with the instructions given by the latter.

(6) The Polytechnic will make available for JICA's reference all the receipts and other documentary evidence to certify the expenditures stated in 10-(4) above if requested by the latter.

11 SCHEDULE OF IMPLEMENTATION

A recommended schedule of implementation of the Course is attached as ANNEX II.

ANNEX I

TENTATIVE CURRICULUM OF THE COURSE

Day	Date	Subject	Assigned to
1	March 18 (Sun)	Arrival/Opening & Orientation	-
2	19 (Mon)	1. Inventory Model 2. Assignment Problem	Polytechnic
3	20 (Tue)	1. Financial Planning & Analysis 2. Linear Programming Method 3. Line of Balance Method 4. Trend Analysis	Polytechnic
4	21 (Wed)	Pre-tender Planning	Polytechnic
5	22 (Thu)	Contract Planning (1) PERT and CPM	Polytechnic
6	23 (Fri)	Contract Planning (2) Transportation Network Planning (3) Resources Planning and Allocation	Polytechnic
7	24 (Sat)	Contract Planning (4) Site Layout (5) Site Safety	Polytechnic
8	25 (Sun)	--- Free ---	-
9	26 (Mon)	Workshop and Presentation	Polytechnic
10	27 (Tue)	1. Site Visit 2. New Building Techniques in Japan (1) Aseismatic High Rise Building (2) Prefabricated Dwelling Houses & Open Building Components (3) Energy Conservation in House & Building (4) Others	Polytechnic JICA
11	28 (Wed)	Computer Application to Building Techniques in Japan	JICA
12	29 (Thu)	Business Organisation (1) Financial Reporting (2) Financial Statement Analysis	Polytechnic
13	30 (Fri)	Business Organisation (3) Organisation Division & Performance Appraisal (4) Q.C. Circle (Work Improvement)	Polytechnic
14	31 (Sat)	Evaluation of the Course by participants	Polytechnic
15	April 1 (Sun)	Departure	-

ANNEX II

A SCHEDULE OF IMPLEMENTATION OF THE COURSE

Month	Singaporean Side	Japanese Side
Late in September 1983	Signing of Record of Discussion	Signing of Record of Discussion
Early in October 1983	Submission of Form A-1 and A-2-3	Recruitment of experts
Late in October 1983	Distribution of G.I.	Acceptance of participant
Middle of January 1984	(1) Submission of the Bill of Estimate of Expenses (2) Receipt of applications	
Middle of February 1984	Notification of acceptance	Payment of expenses
Middle of March 1984	Conduct of the Course	
Late in March 1984		Dispatch of experts
Late in April 1984	(1) Submission of Statement of Expenditures (2) Submission of Course Report