

## 付 属 資 料

資料 1. ミニッツ(英文、西文、和訳)

資料 2. 向上訓練体系図

資料 3. 訓練コース開設実績及び計画、教材整備状況

資料 4. 訓練様式使用要項(案)

資料 5. 教室レイアウト



**THE MINUTES OF MEETING BETWEEN JAPANESE  
MANAGEMENT CONSULTATION TEAM AND  
AUTHORITIES CONCERNED OF THE GOVERNMENT OF  
THE REPUBLIC OF PARAGUAY  
ON JAPANESE TECHNICAL COOPERATION  
FOR THE JAPAN-PARAGUAY SKILL DEVELOPMENT  
PROMOTION CENTER PROJECT**

The Japanese Management Consultation Team (hereinafter referred to as “the Team”) organized by the Japan International Cooperation Agency (hereinafter referred to as “JICA”) and headed by Mr. Hirofumi Matsuyama, visited the Republic of Paraguay from March 4 to 12, 1999 for the smooth and successful implementation of the Japan-Paraguay Skill Development Promotion Center Project (hereinafter referred to as “the Project”).

During its stay in the Republic of Paraguay, the Team exchanged views and had series of discussions with the authorities of the Servicio Nacional de Promoción Profesional (hereinafter referred to as “SNPP”) of the Ministry of Justice and Labour concerned with respect to the desirable measures to be taken by both Governments for the successful implementation of the Project.

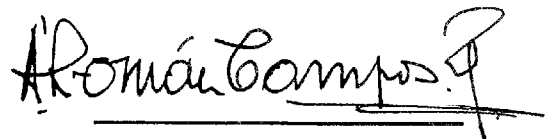
As a result of the discussions, the Team and Paraguayan authorities concerned agreed to recommend to their respective Government the matters referred to in the document attached hereto.

Done in duplicate in Spanish and English languages, each text being equally authentic. In case of any divergence of interpretation, the English text shall prevail.

Asunción, March 11, 1999



**Hirofumi Matsuyama**  
Leader, Japanese Management  
Consultation Team  
Japan International Cooperation  
Agency



**Angel R. Campos V.**  
Minister of Justice  
and Labour  
Republic of Paraguay

## THE ATTACHED DOCUMENT

### 1. ACHIEVEMENT OF THE PROJECT

#### (1) Activities and Outputs

Activities and outputs of the Project have been made accordingly as shown in Annex 1, to meet the Master Plan stipulated in the Record of Discussions dated July 10, 1997 (hereinafter referred to as "the R/D").

The implementation of the training course began in September 25, 1998 in accordance with Tentative Schedule of Implementation of the Minutes of Meeting dated July 10, 1997 (hereinafter referred to as "the M/M") and twenty two (22) courses of six (6) modules in the four (4) technical fields has been implemented by the end of February, 1999, as shown in the Annex 2.

#### (2) Inputs to the Project by Japanese Side

##### a) Dispatch of Japanese Expert

A total of eight (8) long-term experts has been dispatched. Detail of the assignment periods and fields are shown in Annex 3.

##### b) Acceptance of the Paraguayan Counterparts personnel for training in Japan

A total of six (6) Paraguayan counterparts has been accepted in Japan for technical training. Detail of the training periods and fields are shown in Annex 4.

##### c) Provision of Machinery and Equipment

Main machinery and equipment to be procured as shown in Annex 5, equivalent to approximately two hundred eighty (280) million Japanese Yen, have been provided by the end of March, 1999.

#### (3) Inputs to the Project by Paraguayan Side

##### a) Allocation of Paraguayan Counterpart and Administrative Personnel

The organization chart of the SNPP and the Project are attached as Annex 6. The Paraguayan counterpart personnel has been allocated as shown in Annex 7, in accordance with the R/D.

##### b) Allocation and Appropriation of Budget for the Project

Paraguayan side has allocated and has appropriated the budget necessary for the Project, as shown in Annex 8.

c) Reforming of Buildings

The present status of reforming of buildings is shown in Annex 9.

d) Machinery and Equipment Procured by the SNPP

Machinery and equipment procured by the SNPP are listed on Annex 10.

## 2. PLAN OF OPERATION OF THE PROJECT

### (1) Activities

a) Operation Plan

The Annual Plan of Operation and the Annual Plan of Each Fields of the Project for Japanese Fiscal Year (JFY) 1999 are shown in Annex 11.

b) Structural Chart of Courses

The Structural Chart of the Up-grading Training Courses is shown in Annex 12, as the target at the termination of the Project period. The both sides confirmed that the courses other than Annex 12, such as Basic Courses of the Servicio Promoción Profesional Paraguayo-Japonés (hereinafter referred as "SPP-PJ"), are out of the scope of the Project.

### (2) Inputs to the Project by Japanese side

a) Dispatch of Japanese Short-term Expert

The SNPP requested for dispatch of short-term experts, shown in Annex 13, in accordance with the Plan of Operations for JFY1999.

b) Acceptance of the Paraguayan Counterparts personnel for training in Japan

Three (3) seats are assigned for counterpart training in Japan, shown in Annex 14, for JFY1999 in accordance with the Plan of Operations.

c) Provision of Machinery and Equipment

The SNPP requested Japanese side to provide the Machinery and equipment listed in Annex 15 for JFY1999, so as to secure the planned activities.

(3) Inputs to the Project by Paraguayan side

a) Allocation of budget for the Project

The SNPP has allocated two thousand three hundred sixty six (2,366) million Guaranies for the Project for Paraguayan Fiscal Year (PFY) 1999, as shown in Annex 16.

b) Buildings for the Project

The SNPP explained that the SNPP would complete the reforming of the building for the Project by the end of April 1999 for the part of construction under the SNPP's independent contract and total completion would come by the end of October 1999, as shown in Annex 17.

c) Machinery and Equipment to be Procured by the SNPP

The Team confirmed that machinery and equipment to be procured by the SNPP stipulated in the Article III-8 of the R/D, as shown in Annex 18, would be provided within PFY 1999.

3. Recommendation

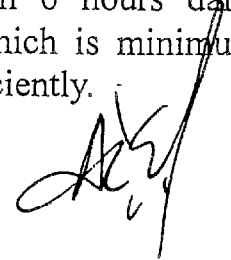
(1) Reforming of buildings for the Project

The Team pointed out that the delay of reforming of the buildings as shown in Annex 9, caused negative effect to appropriate implementation of the Project, and such situation would persist in spite of the promise by the SNPP as the schedule of reforming of building shown in Annex 17.

The SNPP explained that, however, the accelerating the completion of the reforming will enable to normalize the implementation of the Project. The both sides confirmed that further delay of the schedule must cause serious difficulty in the implementation.

(2) Working Condition of Paraguayan Counterpart Personnel

The Team explained that it was essential for successful implementation of the Project to take appropriate measures in respect of encouraging the Paraguayan counterpart personnel. The Team requested the SNPP to steadily maintain 6 hours daily working time of the Paraguayan counterpart, which is minimum time to implement technical transfer activities efficiently.



(3) Plan of the Instructors Re-training

The both sides confirmed that the implementation of the instructors re-training courses should be limited to the teaching method for the moment.

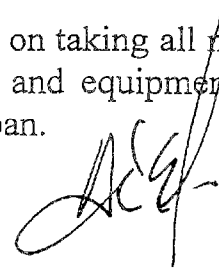
(4) Instruments, Tools, Spare parts and any other materials to be procured by the SNPP

The Team requested that the SNPP would take necessary measures to procure smoothly at its own expense instruments, tools, spare parts and any other materials necessary for the implementation of the training courses other than the machinery and equipment provided by the Japanese side.

The SNPP explained to the Team that the SNPP would accelerate the procurement of instruments, tools, spare parts and any other materials mentioned above.

(5) Customs Clearance

The Team requested the SNPP to keep on taking all measures for smooth customs clearance of machinery and equipment which would be provided by the Government of Japan.



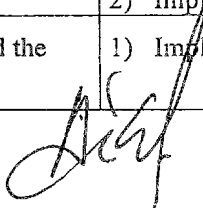
## ACTIVITIES AND RESULTS OF PROJECT

ACTIVITIES	RESULTS
1.(1) To allocate managers, instructors and administrative staff.	1) Established director of SPP-PJ. 2) Assigned the three section chiefs. 3) Designated 18 Paraguayan counterparts. 4) Designated administrative staff.
(2) To prepare and implement a budgetary.	1) Procured budget necessary for the Project of implementation. 2) Having procured the machinery and equipment mentioned in the R/D. 3) Having acquired the materials necessary for the training courses.
(3) To prepare an annual plan.	1) The Annual Operation Plan elaborated. 2) Elaborated the Plan of Operation in each fields.
2.(1) To prepare a plan for providing facilities and equipment.	1) Elaborated design of modification of buildings. 2) Elaborated list of machinery and equipment procured by JICA and SNPP. 3) Elaborated the Layout Plan of machinery and equipment.
(2) To provide facilities and equipment according to the plan.	1) Performed 60 % of reforming. 2) Installed the machinery and equipment procured by JICA and SNPP. 3) Relocated machinery and equipment according to the Layout Plan.
(3) To properly manage facilities and equipment.	1) Elaborated the table of machinery and equipment. 2) Designated the coordinators responsible for machinery and equipment. 3) Designed maintenance staff.
3.(1) To instruct equipment operation method.	1) Elaborated Instruction Manual. 2) Instructed the operation and maintenance of the machinery and the equipment procured.



2

ACTIVITIES	RESULTS
(2) To instruct methods for upgrading teaching materials.	1) Determined the system for administration of texts. 2) Determined the system for development of training materials integrated practice and theory. 3) Determined the system for making training materials by computer utilizing.
(3) To instruct teaching method.	1) Planed and introduced audio-visual materials for training. 2) Instructed how to make audio-visual materials for training.
(4) To instruct training evaluation method.	1) Determined standards of evaluation. 2) Implemented a trial run on the forms of evaluation.
(5) To instruct training course management methods.	1) Elaborated the form of Distribution of Rooms. 2) Introduced the form of Annual Training Plan. 3) Introduced the form of Charging Time.
(6) To instruct curricula development method.	1) Elaborated the Structural Chart of Courses in each fields. 2) Implemented training courses. 3) Introduced the form of Instruction Plan.
4.(1) To develop course curriculum according to industry needs.	1) Elaborated the form of questionares for needs survey. 2) Implemented trial survey for enterprises.
(2) To develop teach materials.	1) Elaborated training materials to be used for training courses. 2) Elaborated additional materials for training.
(3) To solicit and select trainees.	1) Implemented admission test of the participants in the training courses. 2) Promoted participation to training courses.
(4) To implement training courses.	1) Implemented up-grading training courses. 2) Implemented training courses for instructors.
(5)To evaluate course content based upon those who have completed the Courses and treir employees.	1) Implemented the inquiry to the participants of the courses.

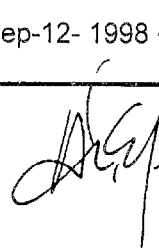


TRAINING COURSES

Field	Course	Duration		Participants		
		From	To	Capacity	Accepted	Qualified
ELECTRONIC	SIMULADOR ELECTRONICO PSPICE I	05/10/1998	09/10/1998	10	10	8
	SIMULADOR ELECTRONICO PSPICE I	05/10/1998	09/10/1998	10	9	9
	SIMULADOR ELECTRONICO PSPICE I	05/10/1998	09/10/1998	10	10	9
	SIMULADOR ELECTRONICO PSPICE I	12/10/1998	16/10/1998	10	16	15
	SIMULADOR ELECTRONICO PSPICE I	12/10/1998	16/10/1998	10	7	7
	SIMULADOR ELECTRONICO PSPICE I	03/12/1998	11/12/1998	10	7	4
	SIMULADOR ELECTRONICO PSPICE II	16/11/1998	27/11/1998	20	10	7
	SIMULADOR ELECTRONICO PSPICE II	16/11/1998	30/11/1998	20	13	12
ELECTRIC	INVERSOR	23/11/1998	09/12/1998	10	12	12
REFRIGERATION AND AIR CONDITIONING	CALC. DE CARGA TERM. DEL A.A	25/09/1998	02/10/1998	10	10	8
	CALC. DE CARGA TERM. DEL A.A	12/10/1998	16/10/1998	10	20	17
	CALC. DE CARGA TERM. DEL A.A	26/10/1998	30/10/1998	10	20	16
	CALC. DE CARGA TERM. DEL A.A	09/11/1998	13/11/1998	10	21	19
	CALC. DE CARGA TERM. DEL A.A	23/11/1998	01/12/1998	10	20	14
	SOLDADURA A GAS	25/09/1998	02/10/1998	10	10	5
	SOLDADURA A GAS	12/10/1998	16/10/1998	10	10	9
	SOLDADURA A GAS	19/10/1998	23/10/1998	10	10	6
	SOLDADURA A GAS	26/10/1998	30/10/1998	10	10	8
	SOLDADURA A GAS	02/11/1998	06/11/1998	10	10	6
	SOLDADURA A GAS	09/11/1998	13/11/1998	10	10	9
	SOLDADURA A GAS	23/11/1998	27/11/1998	10	10	9
	TEACHING METHOD	FORMULARIOS DEL INSTRUCTORES	14/12/1998	18/12/1998	18	19

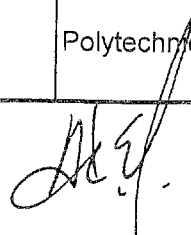
## JAPANESE EXPERTS DISPATCHED

NAME	FIELD	DURATION - DISPATCHED
LONG - TERM EXPERT		
Ing. AKIHIRO SATO	Chief Advisor	Sep-01-1997 ~ Aug-31-1999
Sr. SHIRO KIKUCHI	Coordinator	Oct-01-1997 ~ Sep-30-1999
Ing. KOHEI MIYOSHI	Training Management	Sep-20-1997 ~ Sep -19-1998
Ing. MITSUO TOMIMATSU	Refrigeration and Air Conditioning	Oct-02-1997 ~ Oct -01-1999
Ing. SHINICHI YONEMURA	Electric	Jun-03-1998 ~ Jun -02-2000
Ing. MASATO SUZUKI	Control	Mar-25-1998 ~ Mar-24-2000
Ing. TOMOHIKO IMAMURA	Electronic	Mar-25-1998 ~ Mar-24-2000
Lic. YUTAKA NADA	Training Management	Sep-12- 1998 ~ Sep-11- 2000



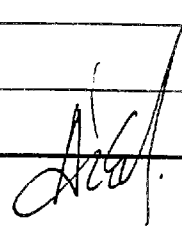

## TRAINING OF PARAGUAYAN COUNTERPARTS IN JAPAN

NAME	FIELD	DURATION	FACILITY OF TRAINING
JUAN C. GUTIERREZ G.	Training Management	Nov-10-1997 ~ Dec-23- 1997	Polytechnic Center of Chiba
RICARDO R. CUEVAS T.	Control	Jan-05-1998 ~ Mar-29-1998	Polytechnic Center of Chiba
OSCAR A. AVILA S.	Refrigeration and Air Conditioning	Jan-05-1998 ~ Apr-28-1998	Polytechnic Center of Chiba
ALBERTO J. ALLO A.	Human Resources Development Administration	May-16-1998 ~ May-24-1998	Ministry of Labour
FABIO MEYER B.	Control	Jun-01-1998 ~ Nov-21-1998	Polytechnic Center of Chiba
MARCOS A. DUARTE	Training Management	Jun-08-1998 ~ Sep-15-1998	Polytechnic University



## MAIN EQUIPMENT AND MACHINERY OF DELIVERY (1/3)

AREA	EQUIPMENTS AND MACHINERYS	QUALITY
TRAINING MANAGEMENT	COPY MACHINE	2
	MACHINE DUPLICATOR	1
	COMPUTER	7
	PRINTER	5
	VIDEO CAMERA	2
	VIDEO RECORDER	2
	TELEVISION	2
	CAMERA	1
	SYSTEM EDITION OF VIDEO	1
	ELECTRONIC BOARD	1
ELECTRIC	PERSONAL COMPUTER	14
	PRINTER	2
	SOFTWARE	18
	DIGITAL OSCILLOSCOPE	5
	ELECTRIC MEASURER	15
	MOTORS	10
	MATERIALS	1
CONTROL	COMPUTER	28
	PRINTER	12
	SOFTWARE	25
	STABILIZER	5
	DIGITAL TESTER	5
	FUNCTION GENERATOR	4
	PLC TERMINAL	11



## MAIN EQUIPMENT AND MACHINERY OF DELIVERY (2/3)

FIELD	EQUIPMENTS AND MACHINERYS	QUALITY
CONTROL	LCD PROJECTOR	11
	PLC SYSTEM	11
	CONTROL SYSTEM OF PNEUMATIC	11
ELECTRONIC	FUNCTION GENERATOR	10
	DIGITAL OSCILLOSCOPE	7
	TIME ANALYZER	1
	DIGITAL MULTIMETER	7
	UNIVERSAL COUNTER	5
	PORTABLE DIGITAL MULTIMETER	40
	PORTABLE LCD METER	10
	COMPUTER FOR PCB	5
	PERIPHERAL EQUIPMENT	1
	CAD SOFTWARE	11
	COMPUTER FOR CAD	10
	SPARE PARTS	2
REFRIGERATION AND AIR CONDITIONING	AIR CONDITIONER	22
	SOLDERING EQUIPMENT	15
	CUTTER	1
	MANUAL BENDING MACHINE	1
	COMPRESSOR	2
	ICE MACHINE	1
	VACUUM CLEANER	3
	GAS RECUPERATOR	1
	WATER COOLER	5

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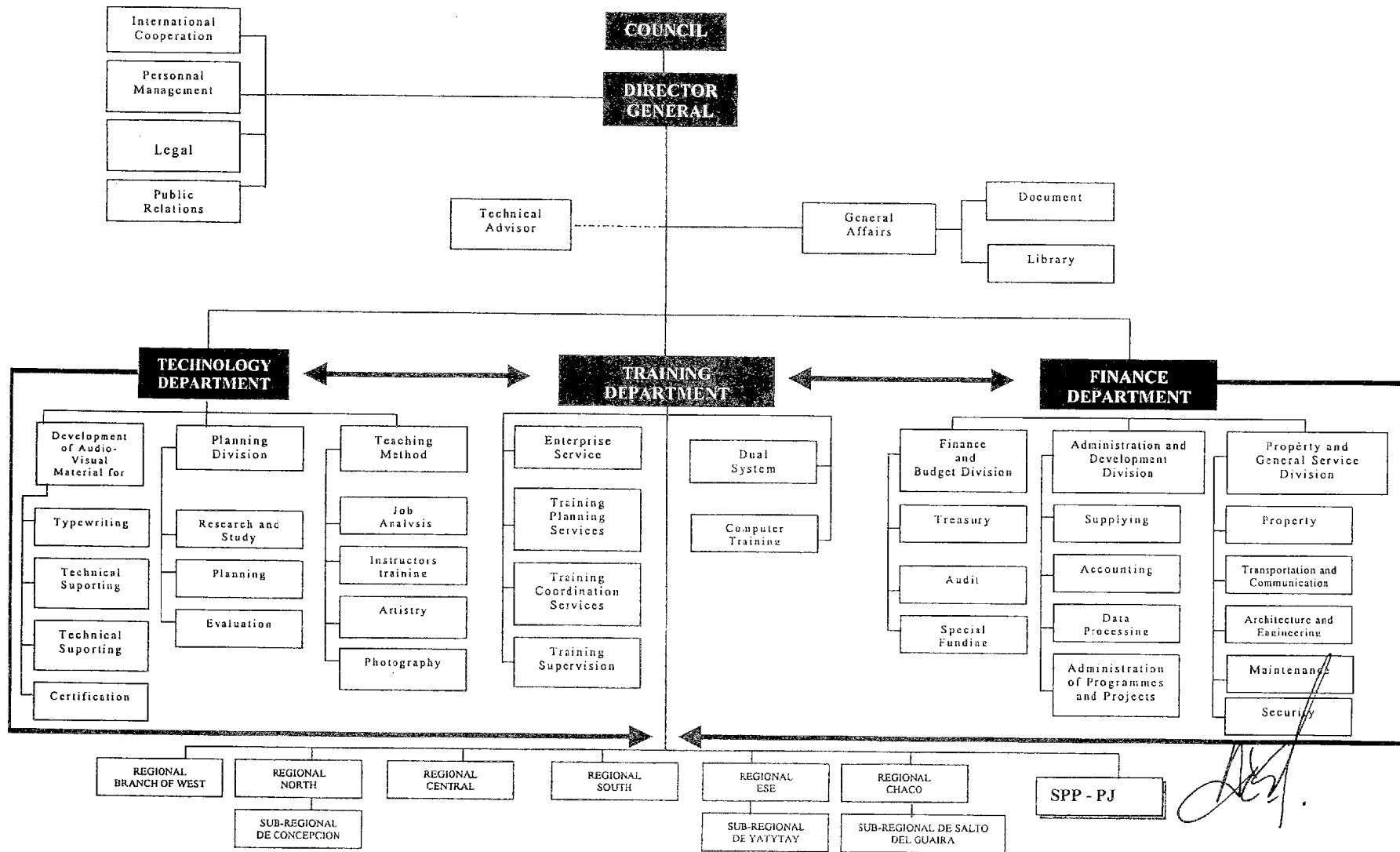
### MAIN EQUIPMENT AND MACHINERY OF DELIVERY (3/3)

FIELD	EQUIPMENTS AND MACHINERYS	QUALITY
REFRIGERATION AND AIR CONDITIONING	THREADING MACHINE	5
	SIMULATOR OF REFREGERATION AND AIR CONDITION	1
	MODELS EQUIPMENT FOR TRAINING	5
	PIPE CUTTER	2
	CONTROL PANEL KIT COOLING BY WATER	10
	CONTROL PANEL KIT COLD AND HOT	5
	FREEZER SET FOR HIGH TEMPERATURE	2
	FREEZER SET FOR MEDIUM TEMPERATURE	4
	FRIGORIFIC CHAMBER	6
	AIR CONDITONE (COOLING BY WATER)	2
	AIR CONDITONE (COOLING BY AIR)	1
	INSTRUMENTS	2
	MATERIALS	1

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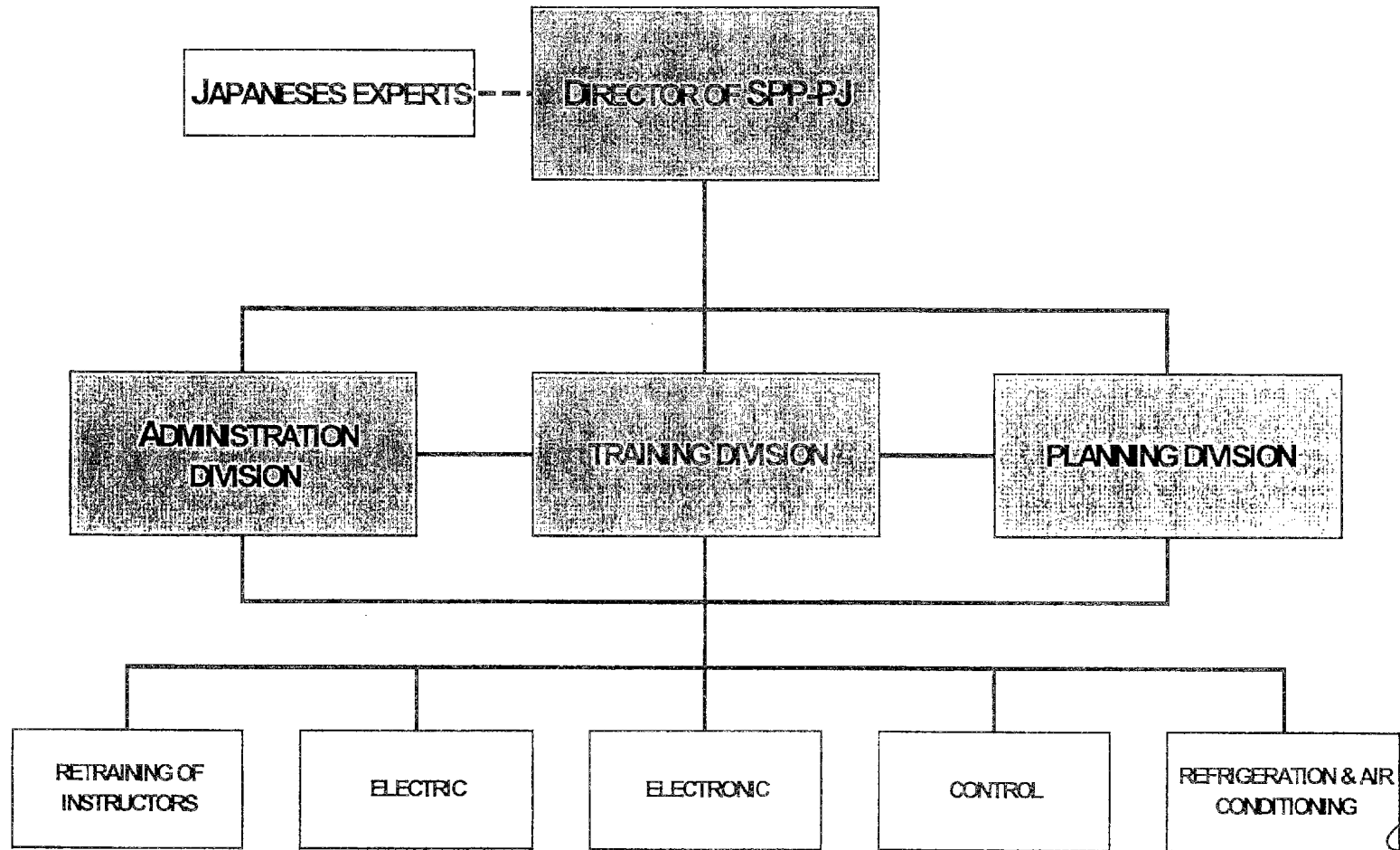
# ORGANIZATION OF SNPP





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# ORGANIZATION CHART OF SPP-PJ



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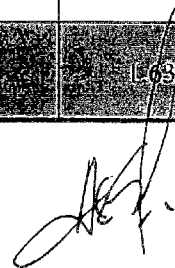
LIST OF PARAGUAYAN COUNTERPARTS

FIELD	NAME	JAPANESE FISCAL YEAR						AGE
		97	98	99	00	01	02	
		4 7 10 1	4 7 10 1	4 7 10 1	4 7 10 1	4 7 10 1	4 7 10 1	
Training Management	Sr. MARCOS DUARTE	MAR - 98	██████████					40
	Srta. SILVIA GARCETE	MAR - 98	██████████					25
Refrigeration and Air Conditioning	Sr. BACIANO FALCON	MAR - 98	██████████					62
	Ing. OSCAR AVILA	MAR - 98	██████████					33
	Sr. JOSE RESQUIN	MAR - 98	██████████					42
	Sr. EDGAR FERNANDEZ	MAR - 98	██████████					30
Control	Ing. HECTOR RAMIREZ	APR - 98	██████████					39
	Ing. FAVIO MEYER	APR - 98	██████████					39
	Sr. ELENO BRON	APR - 98	██████████					37
	Sr. JORGE GOMES	APR - 98	██████████					38
Electronic	Ing. MARTIN GOMES LOPES	APR - 98	██████ SEP - 98					28
	Sr. LUIS ABADIE	APR - 98	██████████					33
	Sr. CESAR ROMERO		OCT - 98 █████					29
	Sra. ALBA SANTACRUZ	APR - 98	██████████					27
	Srta. EMILIA CABRAL	APR - 98	██████████					29
Electric	Ing. RUBEN CACERES	JUN - 98	██████████					31
	Sr. OSCAR MOLAS	JUN - 98	██████████					37
	Sr. RICARDO CUEVAS	JUN - 98	██████████					43
	Sr. RAMON BAEZ IRALA	JUN - 98	██████████ DEC 98					40
	Sr. ALFREDO F. AGUAYO		FEB - 99					31

BUDGET OF THE SPP-PJ FOR 1998

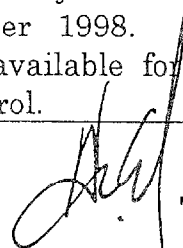
GROUP	DESCRIPTION	AMOUNT
100	PERSONAL SERVICES	150,000,000
200	NON - PERSONAL SERVICES	200,000,000
300	ITEMS PROPERTIES TO CONSUME	71,000,000
500	FACILITY INVESTMENT	555,000,000
AUTHORIZED TOTAL BUDGET FOR SPP-PJ		976,000,000

	BUDGET OF ALLOCATED FOR PAYMENT OF WAGES	656,376,500
	<b>TOTAL BUDGET FOR SPP-PJ</b>	<b>1,632,376,500</b>




## REFORMING OF BUILDINGS

Name of Building	Reforming Schedule confirmed in M/M	Situation in the end of February, 1999
Main Pavilion	To be rehabilitated by the date of 20 September 1997, to utilize for the office of Japanese experts.	Completed on schedule, and started the utilization normally.
Pavilion 1	Almost completed when the Team visited (July 1997), to utilize for the units of Electronics and Control.	Perfectly completed in September 1998, but started to utilize as the units of Electronics and Electric.
Pavilion 2	Some part of the Pavilion (the 2 <sup>nd</sup> floor) will be left as present to be utilized for lecture rooms. The reforming of 1 <sup>st</sup> floor will not be started for the moment.	The 2 <sup>nd</sup> floor has been utilized as lecture rooms and the office of C/P of Training Management. The reforming of the 1 <sup>st</sup> floor has not yet started.
Pavilion 3	To be completed by the end of August 1997. To be utilized for the unit of Refrigeration and Air conditioning.	Completed in August 1998. Some part of reforming was completed by the C/P.
Pavilion 4	To be planned to completed by the mid March 1998	It has been incomplete. The construction was continued by the SNPP by hand from 15 November 1998. Two rooms are available for the unit of Control.




**MACHINERY AND EQUIPMENT PROCURED BY THE SNPP**

**Machinery and Equipment**

Nº	QNT	CONTENT	LOCATION INSTALLED
1	13	Air Conditioning Machine (Window Type)	Pavilion 2 and offices
2	8	Air Conditioning Machine (Split Type)	Pavilion 1 and the Director's office
3	11	Air Conditioning Machine	Pavilion 1 and 3
4	1	Air Conditioning Machine	Meeting Room
5	1	Air Conditioning Machine	Pavilion 4
6	2	Air Conditioning Machine	Not yet Installed
7	12	Air Conditioning Machine	Not yet Installed
8	1	Pick-up Truck (ISUZU)	
9	1	Personal Computer Set (AOC)	Section of Administration
10	2	Personal Computer Set (Samsung)	Section of Vocational Training and Section of Administration
11	2	Printer for PC (EPSON)	Section of Vocational Training and Section of Administration
12	2	Typewriter (CANON)	Section of Vocational Training and Section of Administration
13	1	Typewriter (Olympia)	Section of Vocational Training

**Furniture**

Nº	QNT	CONTENT	LOCATION INSTALLED
1	2	Dining Set	The Director's Office and the Office of Chief Advisor
2	3	Meeting Desk	Meeting Room
3	22	Leathered Chair for Meeting made by wood	Meeting Room
4	21	White Board	Lecture Room
5	78	Chair for Lecture made by wood	Lecture Room
6	6	Chair for Office desk	The Office of Japanese Experts and the Director's Office
7	18	Office Desk made by wood	The Office of Japanese Experts and Section of Administration



PLAN OF OPERATION OF THE JAPANESE - PARAGUAYAN PROFESSIONAL PROMOTION SERVICE PROJECT  
(ANNUAL PLAN OF OPERATION)

(1/3)

ACTIVITIES	GOAL EXECUTIVE PERIOD A TERM	SCHEDULE												RESPONSIBLE PERSON IN PROJECT TEAM	INPUT	REMARKS	
		JFY 1999															
		4	5	6	7	8	9	10	11	12	1	2	3				
1. Project Management																	
1.1 The center's management system is established 1.1.1 To allocate staff	Director (of center) and each chief (of a section) assume on Oct 1997.														SNPP Director		
1.2 The Joint Committee opening 1.2.1 To confer and decide the schedule of implementation with both parties. (sides) 1.2.2 The joint committee will meet	Once a year						○	—	○						Joint Committee Director	Director general of SNPP, Director of Center, Chief Adviser, Experts, C/P	
1.3 To hold management committee of the project 1.3.1 Meeting of Administration 1.3.2 Meeting (general) between Experts and C/P 1.3.3 To hold experts end C/P meeting	Once a month Quarterly a field distinction is at any time Once a week					○	—	—	—	—	—	—	—	○	Section of Administration Section of Training Chief Adviser	Training Manager of SNPP Chief Adviser and Expert	
1.4 To establish the method of administration and management 1.4.1 To Prepare the recruitment system of trainees 1.4.2 To decide the qualifications to recruit for trainees 1.4.3 To decide criteria for selection of trainees. 1.4.4 To select trainees.	Before the training course.								○	—	○				Planning Section Planning Section Planning Section	SPP-PJ Director, Chief Adviser, Expert, C/P, Staff of Planning Section. (ditto) (ditto)	The next year The next year
2. C/P Training, training Courses 2.1 Instruction by Experts 2.1.1 To make or reexamine the syllabus curriculum of training courses 2.1.2 To make or reexamine the plan for lessons 2.1.3 To decide new - made textbooks. 2.1.4 To plan trainings courses 2.1.5 To make textbooks and manuals										○	—	—	—	○	Formative Section of SPP-PJ Formative Section of SPP-PJ Formative Section of SPP-PJ	Experts, C/P, office equipment Experts, C/P, office equipment Experts, C/P, office equipment	The next year The next year The next year

**PLAN OF OPERATION OF THE JAPANESE - PARAGUAYAN PROFESSIONAL PROMOTION SERVICE PROJECT  
(ANNUAL PLAN OF OPERATION)**

(2/3)

Activities	Goal executive period a term	Schedule												Responsible Person in Project Team	Input	Remarks	
		JFY 1999															
		4	5	6	7	8	9	10	11	12	1	2	3				
2.1.6 To make or reexamine assistant Sub-Teaching materials. (ex. OHP)		○											○	Formative SPP-PJ	Section of	Experts, C/P office equipment	The next year
2.1.7 To inform about training course and research of needs.		○	○											Formative SPP-PJ	Section of	Experts, C/P office equipment	
2.1.8 General subjects and practices of training courses.		○								○			○	Formative SPP-PJ	Section of	Experts, C/P office equipment	The next year
2.1.9 Technical Transfer by the short-term expert						○	○			○	○			Formative SPP-PJ	Section of	Experts, C/P office equipment material for practice	
2.2 To hold various kinds of local seminars													○	Formative SPP-PJ	Section of	Experts, C/P, Sec. Formative official	
2.2.1 To prepare seminars.						○	○							Formative SPP-PJ	Section of	Experts, C/P, Sec. Formative official	For 1 <sup>o</sup> term next year
2.2.2 To hold seminars.				○			○	○					○	Formative SPP-PJ	Section of	Experts, C/P, Administrative section official	
2.3 Counterpart training in Japan	(Tree a year)			○	○									Formative SPP-PJ	Section of	Experts, C/P, Administrative section official	
2.3.1 To make a training plan.				○	○									Formative SPP-PJ	Section of	Experts, C/P, Administrative section official	
2.3.2 To request to Japan (prepare and submit the A2, A3).													○	Formative SPP-PJ	Section of	Experts, C/P, Administrative section official	
2.3.3 To participate a training in Japan.	(three)		○	○	○				○	○				Formative SPP-PJ	Section of	Experts, C/P, Administrative section official	
2.4 To instruct individually in each fields.														Each field charge of expert		Experts, C/P, Necessary equipment	
2.4.1 To instruct in operation, maintenance and management of equipment.		○											○	Each field instruction of leader			
2.4.2 To instruct in making out the plan for training courses.									○	○							
2.4.3 To instruct in technique and skill.	(at any time)																
2.4.4 To instruct in making out the plan for instruction.	(at any time)																
2.4.5 To instruct in a method of (actual) technical instruction.		○											○				
2.4.6 To instruct teaching methods for subject.																	
3 To provide and manage equipment																	
3.1 To ship and provide equipment																	
3.1.1 To make provision plan of necessary equipment and specifications etc.							○	○						Planning SPP-PJ	Section of	Experts, C/P, planning Sec. Official	Next year
3.1.2 Apply for purchase and adjust	At the meeting of leaders													Planning SPP-PJ	Section of	Chief Adviser	
3.1.3 Make an application for	At any time.													Formative Sec. of SPP-PJ		Experts, C/P	



**PLAN OF OPERATION OF THE JAPANESE - PARAGUAYAN PROFESSIONAL PROMOTION SERVICE PROJECT  
(ANNUAL PLAN OF OPERATION)**

(3/3)

Activities	Goal executive period a term	Schedule												Responsible Person in Project Team	Input	Remarks		
		JFY 1999																
		4	5	6	7	8	9	10	11	12	1	2	3					
3.2 Management system of machinery and tool	In meeting of chef Adveiser Permanent														Administrative Section of SPP-PJ	Experts, C/P, Administrative section official		
3.2.1 To provide management of machinery and tool.	At any time														Administrative Section of SPP-PJ	Experts, C/P		
3.2.2 To make or supplement wiring list management of machinery and tool.														Planning Section of SPP-PJ			Experts, C/P	
3.2.3 To inspect machinery and tool regularly.		quarterly																
3.3 (Safety system)																		
3.3.1 To provid safety committee.															Administrative Section of SPP-PJ	Experts, C/P, Administrative section official		
3.3.2 To provid and consider about an accident, a fire, safety control of theft prevention															Administrative Section of SPP-PJ	Experts, C/P, Administrative section official		





ANNUAL PLAN OF OPERATION (TRAINING MANAGEMENT)

Servicio de Promoción Profesional Paraguay - Japonés

ACTIVITIES	SUBJECTS	SCHEDULE (JFY/1999)											OBSERVATION		
		4	5	6	7	8	9	10	11	12	1	2		3	
1. Training Course Development	Training needs survey														
	Analysing of result of the survey														
	Reorganizing and newly planning of courses based on the result of the survey														
	Survey for participants of the courses														
2. Teaching Method	Implementation of the courses for instructors														
	Needs survey for instructors training														
	Organizing of retraining courses														
	Revision of retraining courses existing														
3. Public Relations	Publishing of the booklet for introduction of SPP-PJ														
	Publishing of the guidebooks for the courses of SPP-PJ														
	Information service for enterprises and workers (up- grading trainings)														
4. Training Management	Seminar for personnel related such as SNPP or staff of enterprises for Human Resources development														
	Introduction and utilization of document forms for instructors.														

ANNUAL PLAN OF OPERATION (ELECTRIC)

Servicio de Promoción Profesional Paraguayo – Japonés

ACTIVITIES	SUBJECTS	SCHEDULE (JFY 1999)												OBSERVATION	
		4	5	6	7	8	9	10	11	12	1	2	3		
1. To instruct the operations for Equipment															
2. To instruct the methods of maintenance and management for equipment															
3. To instruct the methods of developing the instruction plans															
4. To instruct the methods of developing the instruction plans															
5. To instruct the methods of developing the job analysis sheet															
6. To instruct the teaching methods of practical subjects	Installation of home security and industrial electricity														
6.1 Design of wiring for house and industrial field	System of protective relay														
6.2 High tension incoming installation	Usage of power electronics														
6.3 Power electronics	Design of control circuit and test														
6.4 Design of control circuit															
7 To instruct the teaching methods of theoretical subjects	Power converter circuit														
7.1 Power electronics	Calculation for pumping plant														
7.2 Motor application															

ANNUAL PLAN OF OPERATION (ELECTRONICS)

Servicio de Promoción Profesional Paraguayo – Japonés

ACTIVITIES	SUBJECTS	SCHEDULE (JFY 1999)												OBSERVATION	
		4	5	6	7	8	9	10	11	12	1	2	3		
1. To instruct the operations for equipments															
2. To instruct the method of maintenance															
3. To instruct the method of developing training plans															
4. To instruct the method of developing instruction plan															
5. To instruct the method of developing job analysis sheets															
6. To instruct the teaching method of practical subjects															
6.1 Experiments on operational amplifier circuits	Measurement on the I/O characteristics and the frequency characteristics														
6.2 Experiments on pulse circuits	Measurement on the I/O characteristics and transient responses														
6.3 AD – DA converters	Board simulations														
6.4 Circuit fabrication for power supply	Tracking regulators and switching regulators														
6.5 Experiments on digital circuits	Logic circuits and characteristics of logic IC														
6.6 Analog simulation	Circuit simulation, assembly of experimental electronic circuits and its rating														
6.7 Digital simulation	Operation and circuit simulation														
7. To instruct the method of theoretical subjects															
7.1 Operational amplifier circuits	Circuits for amplification, operation and filtering														
7.2 Pulse circuits	Theorem of pulse circuits														
7.3 AD – DA convertors	Methods of conversion and principals														
7.4 Circuits for power supply	Circuits designs														
7.5 Digital circuits	Logic circuits and simplifications														
7.6 Digital simulation	HDL language														

ANNUAL PLAN OF OPERATION (CONTROL)

Servicio de Promoción Profesional Paraguayo – Japonés

ACTIVITIES	SUBJECTS	SCHEDULE (JFY 1999)												OBSERVATION	
		4	5	6	7	8	9	10	11	12	1	2	3		
1. To instruct the operations for equipments															
2. To instruct the method of developing teaching materials and instruction plan															
3. To instruct the teaching method of the practical subjects															
3.1 PLC programing	Programing of Ladder Supporting software														
	Monitoring														
3.2 Application of microcomputer	Development tool														
3.3 Pneumatic equipment assembly	Assembling of teaching materials for pneumatic control														
3.4 Programing	Input/output control														
	Basic Language														
	C Language														
4. To instruct the method of theoretical subjects															
4.1 PLC programming technique	Function of Ladder Supporting software														
4.2 Microcomputer system development technique	Function of development tool														
4.3 Function of pneumatic equipment	Function of pneumatic equipment														
4.4 Programming technique	Input/Output														
	Specification of the computer hardware and environmetal LSI (8251, 8255, 8253, 8259)														
	Basic Language														
	C Language														

**ANNUAL PLAN OF OPERATION (REFRIGERATION AND AIRE CONDITIONING)**

Servicio de Promoción Profesional Paraguayo – Japonés

ACTIVITIES	SUBJECTS	SCHEDULE (JFY 1999)												OBSERVATION	
		4	5	6	7	8	9	10	11	12	1	2	3		
1. To instruct the operations for equipment															
2. To instruct the method of maintenance and managements for equipment															
3. To instruct the method of developing training plans															
4. To instruct the method of developing instruction plans															
5. To instruct the method of developing job analysis sheets															
6. To instruct the teaching method of practical subjects															
6.1 Connecting the pipe	Connection of different pipe and tight														
6.2 Installation and test run of split unit	System of refrigeration and equipment														
6.3 Basic relay circuit A.A.	Electric parts and self-hold circuit														
6.4 Control circuit of cool unit	Trial run and circuit of diagnosing														
6.5 Control circuit of cool and heat (system-heat pump) unit	Trail run and circuit of diagnosing														
6.6 Control circuit of refrigerating unit	Trial run and circuit of diagnosing														
6.7 Air cooled packaged air conditioner operation	Installation, trial run and control equipment														
6.8 Water cooled packaged air conditioner operation	Installation, trial run and control equipment														
6.9 Air cooled packaged water chiller-HEAT PUMP type operation	Installation, trial run and control equipment														
6.10 Refrigeration system operation	Installation, trial run and control equipment														
6.11 Refrigeration system maintenance	Structure and movement														
6.12 Refrigeration system installation and design	Planning refrigerating refrigerating storage system														
7. To instruct the method of theoretical subjects															
7.1 Fundamentals of refrigeration	Principles of refrigeration and air contioning														
7.2 Mollier chart	Mollier chart and refrigeration cycle														
7.3 Simple cooling load calculation	Coefficient of cooling load														
7.4 Psychrometric chart	Psychrometric chart and air conditioning planning														

## PLAN OF "UP-GRADING TRAINING COURSE"

### 1. Definition of UP-GRADING TRAINING:

The courses that are mainly for employed persons in the field of electric and electronic, to equip them with knowledge and skill in higher level required in the vocation in such field in Paraguay, with shorter training duration.

### 2. Objective of UP-GRADING TRAINING:

To foster technician engineer who has higher technology of machinery and equipment used in the factory sites of Paraguay, and who are depended in foreigners currently, by implementation of the TRAINING whose participants can obtain the knowledge and the skill necessary for promotion or diversification of their own expertise.

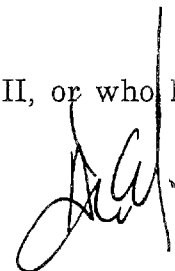
### 3. Participants of UP-GRADING TRAINING:

- (1) Employed persons (employees or self-employed) in the field of electric, electronic, control or refrigeration and air conditioning.
- (2) Persons who want technical working in the field (limited to experienced persons in the field).
- (3) Student of university. (the persons who do not have experience of technical working or practice but are learning the theory of the field as Bachelor of engineer (Ingeniero) or Technician superior (Técnico Superior).
- (4) The persons who have completed the Electricidad I or Electrónica Digital (EB4) which is implemented by SPP-PJ. However, the participants of the category (1), (2) and (3) mentioned above should be prior to the persons of this category.

### 4. Minimum Level of Skill Requested to Participants:

#### (1) Electric

The persons who have completed the Electricidad II, or who have knowledge and skill equivalent.



(2) Electronics

- ▶ The persons who can read circuit diagram, and can construct the circuit.
- ▶ The persons who have completed the Electrónica Digital (EB4).

(3) Control

- ▶ The persons who can read circuit diagram, and can construct the circuit.
- ▶ The persons who have completed the Electricidad II or Electrónica Digital (EB4).

(4) Refrigeration and Air Conditioning

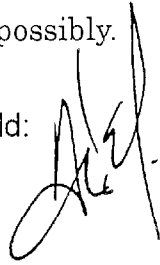
- ▶ The basic Course is acceptable the persons who do not have any experience or skills.
- ▶ The persons who have completed the basic courses of this field, or who have the skill equivalent.

5. Duration of Courses:

20 – 40 hours, maximum is 60 hours possibly.

6. Structural Chart of the Courses in each Field:

See attached.





### Structural Chart of Courses in Control

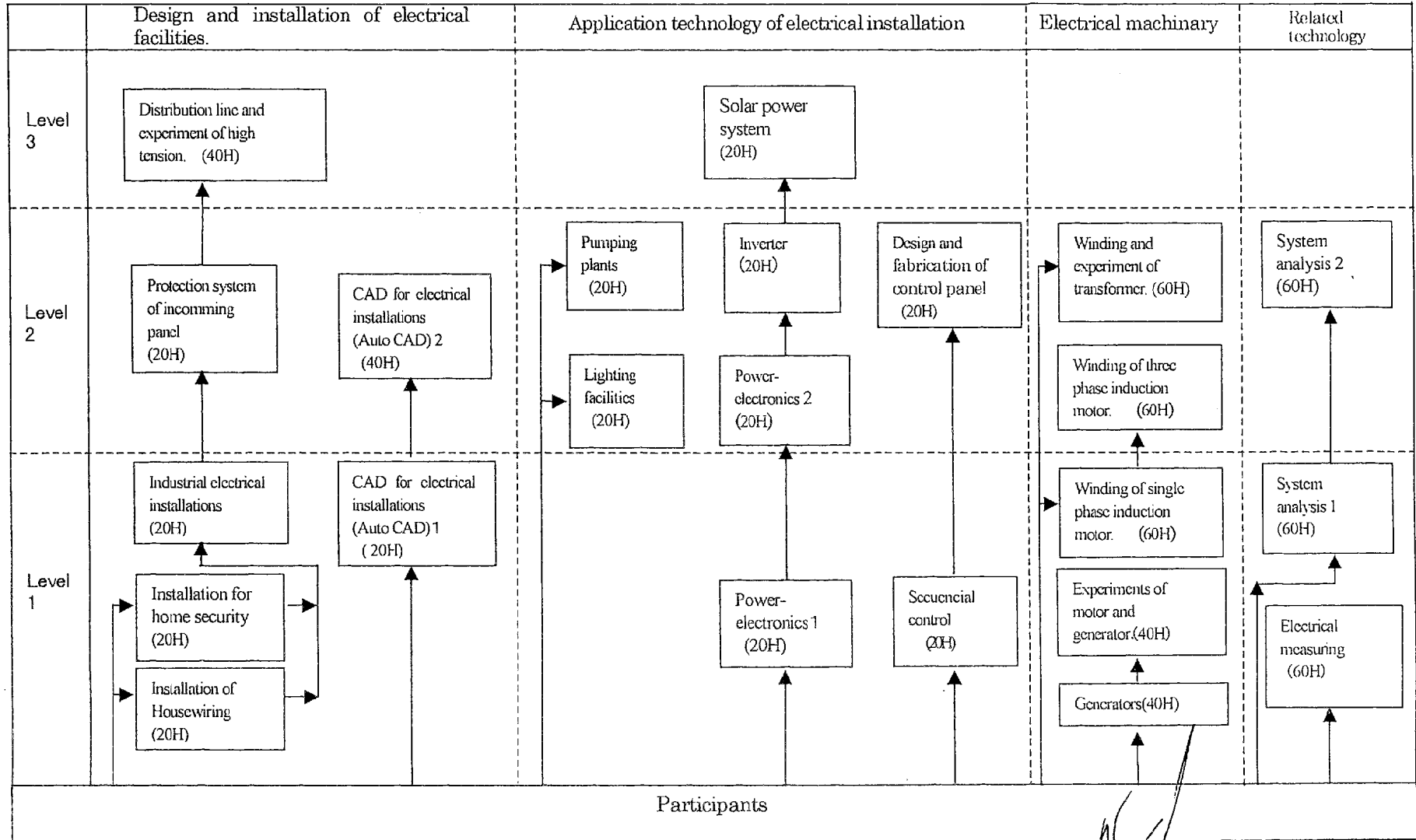
	Relation of Automatic Control	Related Technology		Relation of PLC
Level III (Advanced Application)	Fuzzy Control (20H)	DSP (Digital signal processor) (20H)	Digital Image Processing (20H)	Technology of Automation (40H)
	Modern Control II (24H)			
	Modern Control I (20H)	Digital Signal Processing (20H)	System of Measurement (20H)	
Level II (Application)	Digital Control (20H)	C language Programing II (20H)	Visual Sensor (20H)	Industrial Robot (32H)
	Automatic Control III (Advanced) (20H)	C language programing I (20H)		Pneumatic Control of PLC (40H)
Level I (Basic)	Automatic Control II (Feedback Control) (20H)	BASIC language programing II (20H)	Interface Technology (24H)	PLC III (24H)
	Automatic Control I (Transfer function and response) (20H)	BASIC language Programing I (24H)	Sensor Technology (20H)	PLC II (60H)
				PLC I (60H)

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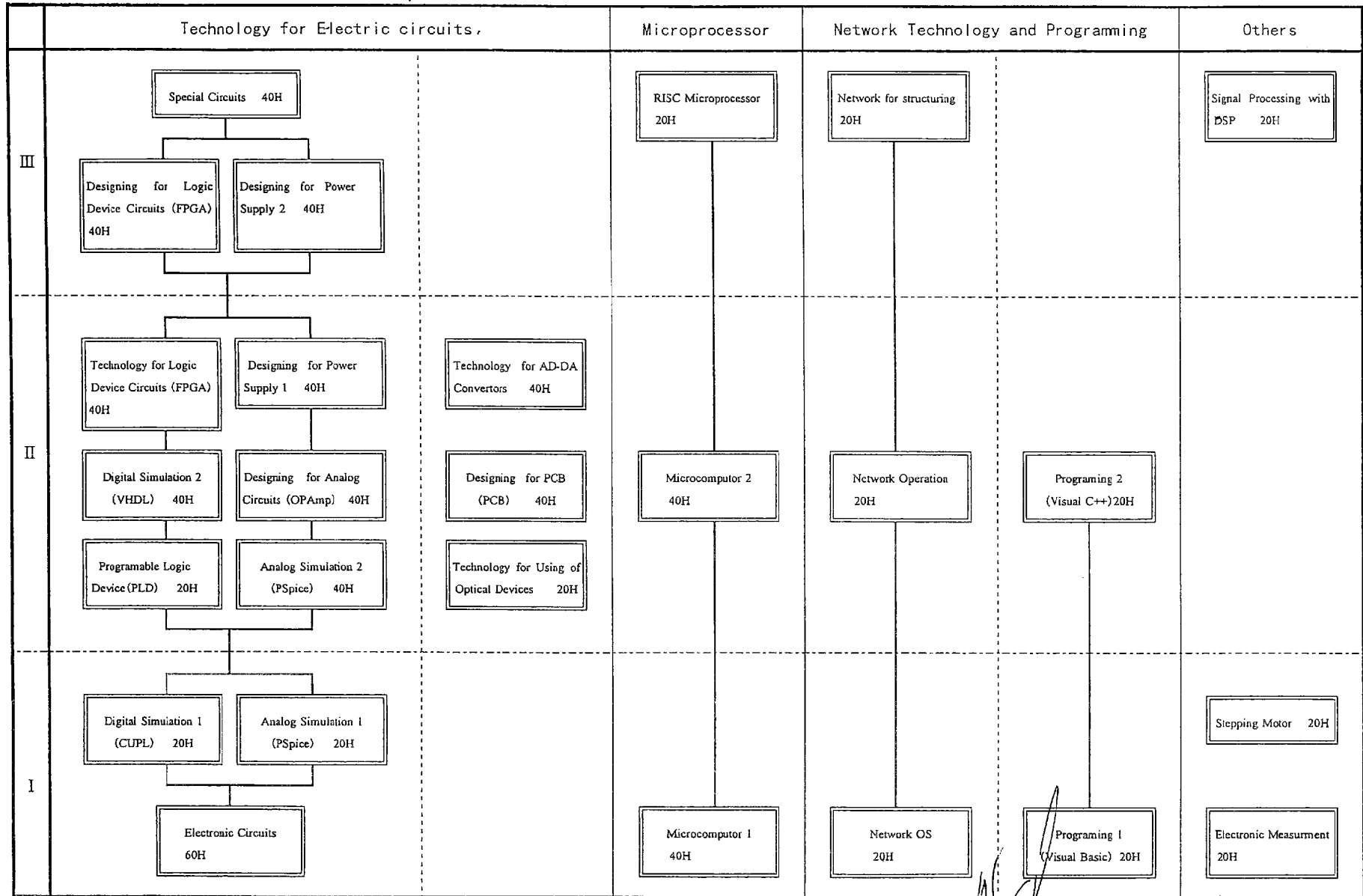


### Structural chart of courses in electrics



Structural Chart of Electronics

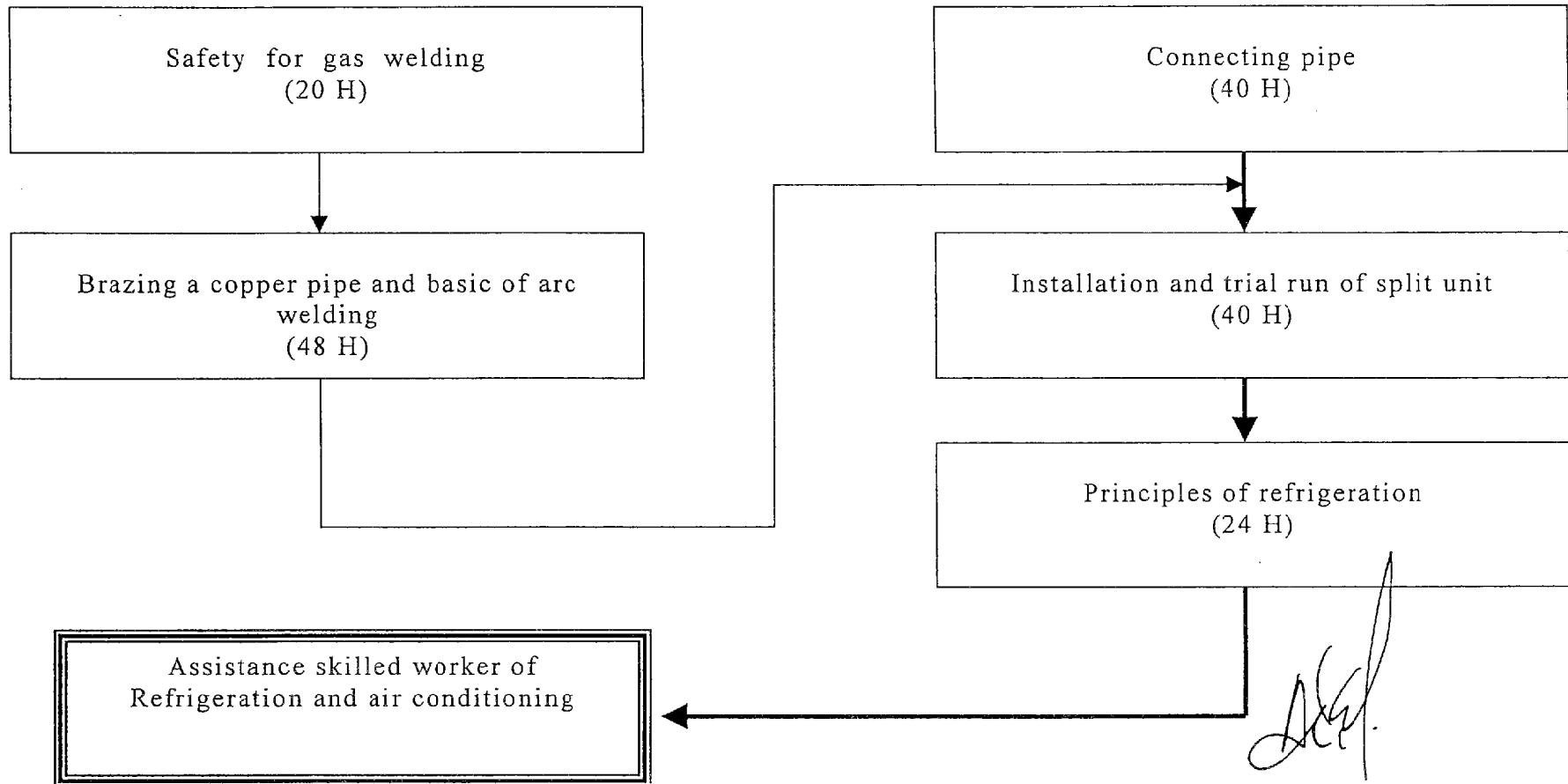
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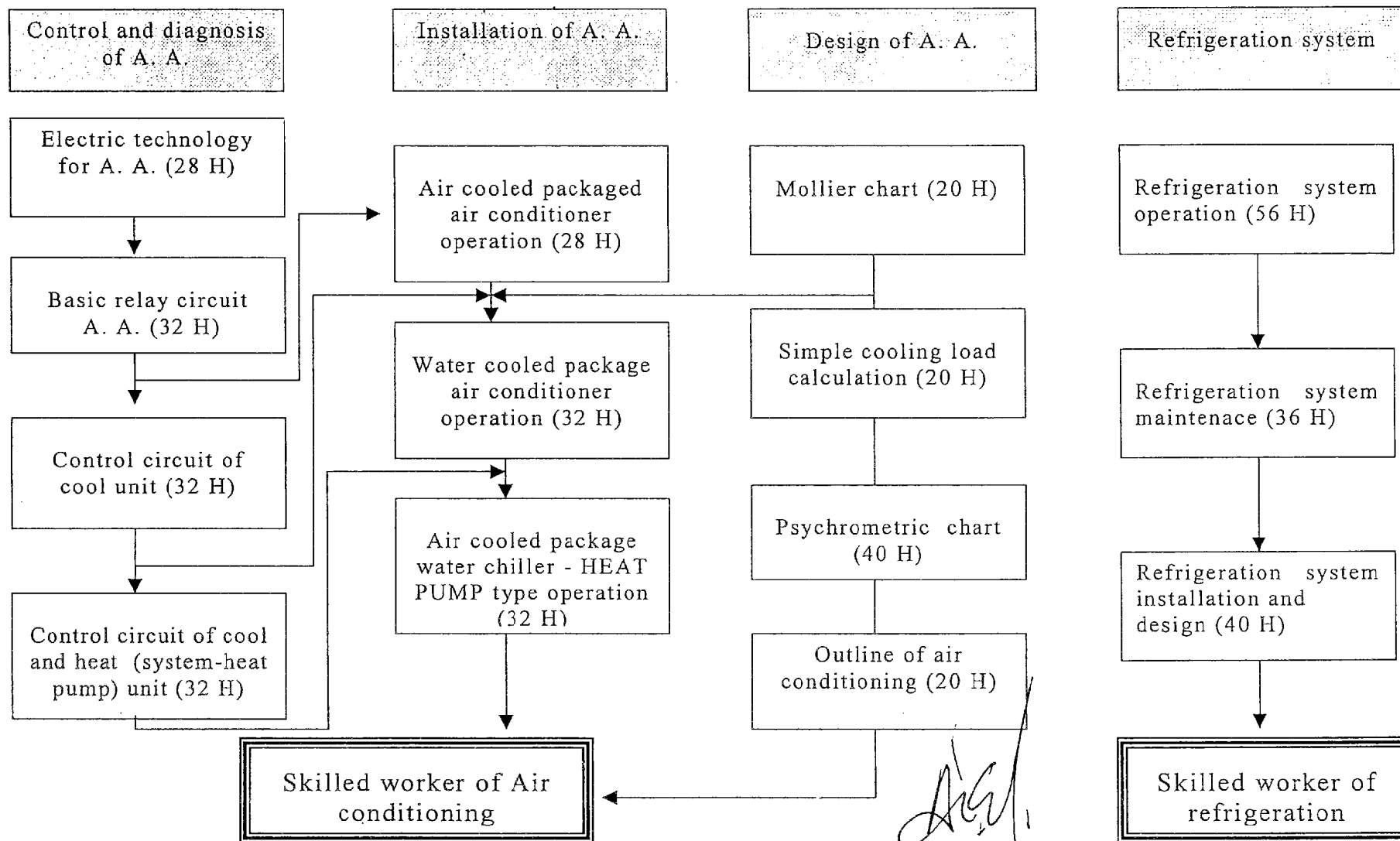
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### Structural chart of courses in Refrigeration and air conditioning (Basic Course)



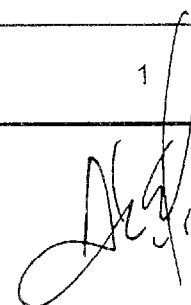


### Structural chart of courses in refrigeration and air conditioning (Advanced Course)



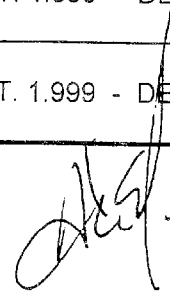
## DISPATCHING OF SHORT-TERM JAPANESE EXPERTS

TYPE OF EXPERT	FIELD	NUMBER OF EXPERT
SHORT - TERM	CAD FOR ELECTRIC DESIGN	1
SHORT - TERM	CONTROL TECHNOLOGY	1
SHORT - TERM	DEVELOPMENT OF VISUAL MATERIALS FOR TRAINING	1
SHORT - TERM	INSTALATION AND DESIGNING OF REFRIGERATOR	1



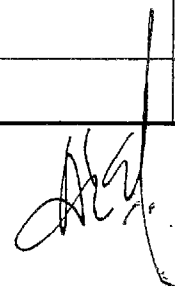
## TRAINING OF PARAGUAYAN COUNTERPARTS IN JAPAN

NAME	FIELD	DURATION
SR. RUBEN CACERES VEGA	ELECTRONICS TECHNOLOGY	MAY. 1.999 - JUL. 1.999
SR. CESAR R. ROMERO	ELECTRONIC MEASUREMENT	OCT. 1.999 - DEC. 1.999
SR. JORGE GOMEZ	AUTOMATIC CONTROL	OCT. 1.999 - DEC. 1.999



MAIN EQUIPMENT AND MACHINERY OF DELIVERY

FIELD	EQUIPMENTS AND MACHINERY	QUALITY
ELECTRICITY	SINGLE AND THREE PHASE VARIABLE TRANSFORMER	1
	VARIABLE LOAD INSTRUMENT	1
	GENERAL INVERTER	2
	MOTOR CONTROL EQUIPMENT	1
	POWER ELECTRONICS EQUIPMENT	6
	THREE PHASE MOTOR EQUIPMENT	4
	SOLAR BATTERY AC GENERATOR EQUIPMENT	1
	TOOLS KITS	31
ELECTRONIC	ACCESSORIES AND KITS FOR MEASURING DEVICE	35
	ELECTRONIC CAD SYSTEM	10
	DIGITAL CAMERA	1
CONTROL	CONVERTER BOARD FOR D/A AND A/D	13
	PLC CONVERTER FOR D/A AND A/D UNITS	14
	I/O MONITOR	5
	CONTROL PRACTICE EQUIPMENTS	17




BUDGET OF THE SPP-PJ FOR 1999

GROUP	DESCRIPTION	AMOUNT
100	PERSONAL SERVICES	101,600,000
200	NON - PERSONAL SERVICES	227,800,000
300	ITEMS PROPERTIES TO CONSUME	470,000,000
500	FACILITY INVESTMENT	910,000,000
AUTHORIZED TOTAL BUDGET FOR SPP - PJ		1,709,400,000

	BUDGET OF ALLOCATED FOR PAYMENT OF WAGES	656,376,500
	<b>TOTAL BUDGET FOR SPP - PJ</b>	<b>2,365,776,500</b>






**SCHEDULE OF REFORMING OF BUILDINGS**

BUILDINGS		1997	1998	1999	2000	2001	2002	OBSERVATION
MAIN	PLAN							
	SCHEDULE							
PAVILION 1	PLAN							
	SCHEDULE				SNPP's independent contract; the end of April.			
PAVILION 2	PLAN							
	SCHEDULE				SNPP's independent contract; the end of April.			Others: End of October
PAVILION 3	PLAN							
	SCHEDULE							
PAVILION 4	PLAN							
	SCHEDULE				SNPP's independent contract; the end of April.			Others: End of October

## MACHINERY, EQUIPMENT AND FURNITURE BY THE SNPP

No.	QTY	DESCRIPTION
1	7	PORTABLE SCREEN 1.5 X 2 M
2	10	WHITE BOARD 3 X 1.2 M
3	100	CHAIR WITH TABLE FOR LECTURE ROOM
4	25	METAL - BACKED CHAIR
5	10	DESK FOR OFFICE 1.30 X 0.75 M
6	10	CHAIR FOR OFFICE
7	5	AIR CONDITIONER 60,000 BTU

