

1. PERIOD

August 22, 1992 to October 22, 1992 (2 months)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Eleven (11)

3. QUALIFICATIONS

- 1) University graduates or equivalent with occupational experience of more than 3 years
- 2) Presently engaged in city planning
- 3) Under 40 years of age
- 4) Good working knowledge of English

4. DESCRIPTION OF TRAINING

- 1) Lectures
 - History of Japanese Cities
 - City Planning Legislation
 - Land Use Planning and Building Regulations
 - Japanese Urban Policies; Roles of National and Local Government
 - Recent Problems in Japanese Large Cities
 - Discussion about City Planning and Urban Policy
 - Road Construction and its Problems in Japan
 - Urban Rapid Transit Railroad System
 - Urban Transportation Policies and its Problems
 - Alternative Urban Development Methods
 - City Parks and Green Spaces Development
 - Historical Urban Landscape
 - Landscape Planning and Design
 - Urban Disaster Prevention
 - Japanese Housing Policies
 - Residential Areas Improvement Problems
 - Japanese Architecture
 - Role of Consultant in Urban Development Project
- 2) Presentation of "Country Report" and Group Discussion
- 3) Case Study
- 4) Field Trip

5. FACILITIES AND INSTITUTIONS

- 1) City Bureau, Ministry of Construction
- 2) Tokyo International Centre (Hatagaya), JICA

6. REMARKS

1. PERIOD

May 12, 1992 to July 6, 1992 (2 months)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Ten (10)

3. QUALIFICATIONS

- 1) University graduates or equivalent with occupational experience of more than 3 years
- 2) Presently engaged in planning and/or implementation of urban development and redevelopment
- 3) Under forty (40) years of age
- 4) A sufficient command of spoken and written English

4. DESCRIPTION OF TRAINING

- 1) Lectures and observations
 - a) Japanese policy for urban areas
 - Present situation of Japanese cities
 - Japanese administrative system and budget for urban development
 - Urban planning
 - b) Urban Development projects
 - KUKAKU-SEIRI (Land readjustment project)
 - Urban area renewal project
 - New town development project
- 2) Presentation and Discussion of Country Report
- 3) Group Discussion
 - Deepen understanding on contents of training course
- 4) Observation tours

5. FACILITIES AND INSTITUTIONS

- 1) City Bureau, Ministry of Construction
- 2) Japan Association of Land Readjustment
- 3) Tokyo International Centre (Hatagaya), JICA

6. REMARKS

HOUSING 住宅建設

1. PERIOD

October 15, 1992 to December 6, 1992 (2 months)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Eleven (11)

3. QUALIFICATIONS

- 1) Mid-career officers in charge of housing policy
- 2) University graduates or equivalent
- 3) Between 30 and 40 years of age
- 4) Good working knowledge of English

4. DESCRIPTION OF TRAINING

- 1) Lectures
 - Housing conditions and policies in Japan
 - Public housing supply
 - Housing finance
 - Urban renewal
 - Development of residential area
 - Modernization of housing production
 - Planning and development of new town
 - Housing problem and housing policy in developing countries
- 2) Group study
- 3) Presentation of country reports
- 4) Observation tours

5. FACILITIES AND INSTITUTIONS

- 1) Housing Bureau, Ministry of Construction
- 2) The Building Center of Japan

6. REMARKS

IMPROVEMENT OF HOUSING AND LIVING ENVIRONMENT SEMINAR

住宅・住環境改善セミナー

1. PERIOD

January 28, 1993 to February 28, 1993 (1 month)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Eight (8)

3. QUALIFICATIONS

- 1) University graduates or equivalent,
- 2) Be experienced officials in charge of executing various development projects on housing and living environment at the central or local government, or at the related governmental organization,
- 3) Be between thirty (30) and forth-five (45) years of age,
- 4) Good working knowledge of English

4. DESCRIPTION OF TRAINING

- 1) Lectures
 - Housing problems and countermeasures in Japan
 - Improvement projects on housing and living environment
 - History of the housing policy and technological development in Japan
 - Housing loan
 - Housing problems and countermeasures in the third world countries
- 2) Special Discussion based on Country Report
- 3) Study Report
- 4) Study Tour

5. FACILITIES AND INSTITUTIONS

- 1) Housing Bureau, Ministry of Construction
- 2) The Building Center of Japan

6. REMARKS

1. PERIOD

April 7, 1992 to June 3, 1992 (2 months)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Thirteen (13)

3. QUALIFICATIONS

- 1) University graduates or equivalents with occupational experience of more than five years and with the general knowledge in the broad field of building engineering such as building administration, building designing and structural engineering
- 2) Officials of the government or the related governmental organizations who are expected to have leading positions in building construction field
- 3) Under 40 years of age
- 4) Good working knowledge of English

4. DESCRIPTION OF TRAINING

- 1) Lectures
 - Introduction
 - Standard Specification
 - System Concerning Building Laws and Regulations
 - Building Standard
 - Facility management
 - Highrise Building Construction Technology
 - Building Physics and Environmental Research
 - Public Housing Construction
 - Structural Design Technology
 - Fires Prevention of Building
 - Significance of Conventional Housing System
 - Construction Management
 - Quality Control
 - Prefabricated Housing System
 - Building Materials
 - Computer aided design, Robotic Technology
- 2) Observations
- 3) Country Report
- 4) Study Tour
- 5) Group Study

5. FACILITIES AND INSTITUTIONS

- 1) The Building Center of Japan (BCJ)
- 2) Housing Bureau, Ministry of Construction
- 3) Tokyo International Centre (Hatagaya), JICA

6. REMARKS

1. PERIOD

February 2, 1993 to March 14, 1993 (1.5 months)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Ten (10)

3. QUALIFICATIONS

- 1) Graduate of University majored in the Civil Engineering Course or equivalent
- 2) Occupational experience in the field of Public Construction more than seven (7) years
- 3) Not more than 40 years old

4. DESCRIPTION OF TRAINING

- 1) Lectures and practical training
 - Advanced technology of construction in general
 - Advanced work methods in civil engineering
 - Application of new material
 - Advanced inspection for construction
- 2) Observation tours
- 3) Practical training

5. FACILITIES AND INSTITUTIONS

- 1) Minister's Secretariat, Ministry of Construction
- 2) Japan Construction Training Center (JCTC)

6. REMARKS

SURVEYING AND MAPPING II 測量技術 II

1. PERIOD

June 1, 1992 to April 30, 1993 (11 months)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Seven (7)

3. QUALIFICATIONS

- 1) Surveyors presently in charge of surveying or mapping with (3) years or more of experience in this field
- 2) University graduates or equivalent
- 3) Good working knowledge of English
- 4) Over 25 and under 35 years of age

4. DESCRIPTION OF TRAINING

- 1) Introduction (Current activities for surveying and mapping in Japan and the activities for surveying of GSI).
- 2) Survey mathematics
- 3) Geodetic survey
- 4) Cadastral survey
- 5) Photogrammetry
- 6) Map compilation
- 7) Geographical survey
- 8) Printing
- 9) Geographical information system
- 10) Individual study

5. FACILITIES AND INSTITUTIONS

- 1) Geographical Survey Institute (GSI), Ministry of Construction
- 2) Tsukuba International Centre, JICA

6. REMARKS

**HYDROGRAPHIC SURVEY (INTERNATIONALLY ACCREDITED
CATEGORY B COURSE)**

水路測量 (国際認定 B 級)

1. PERIOD

April 14, 1992 to November 15, 1992 (7 months)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Ten (10)

3. QUALIFICATIONS

- 1) be technical college graduates or equivalent with at least two (2) years occupational experience in hydrographic services
- 2) have obtained credits for two (2) years' course of mathematics and physics at least on the level of technical college or equivalent educational institution,
- 3) be presently employed at the national hydrographic office or other related organization,
- 4) have a sufficient command of spoken and written English,
- 5) be not more than forty (40) years of age

4. DESCRIPTION OF TRAINING

- | | |
|---|--|
| <ol style="list-style-type: none"> 1) Lectures <ul style="list-style-type: none"> - Computing - Physics: Theory - Applied Physics - Hydrography: Control (Geodesy, Projections, Horizontal Control, Vertical Control, Astronomy, etc.) - Hydrography: Practice (Positioning at Sea, Track Control, Measurement of Tide, Determination of Depth, etc.) - Environmental (Meteorology, Oceanography, Tides, etc.) - Nautical Science (Navigation, Seamanship, etc.) - Legal Aspects - Nautical Charting Surveys (Sweeping, Tides and Tidal Streams, Photogrammetry, Data Processing, Law of the Sea, etc.) - Port and Harbour Surveys (Control Surveys, Determination of Position, Special Purpose Survey and Operations, Sedimentology, etc.) | <ol style="list-style-type: none"> 2) Practice <ul style="list-style-type: none"> - Data Processing of Harbour and Coastal Surveys - Computer Programming - Control Surveys - Astronomy - Cartography 3) Field Training <ul style="list-style-type: none"> - Field Training of Harbour and Coastal Surveys - Field Training of Navigation, Seamanship, Submarine Geology, etc. on board Survey Vessel SHOYO, 1,900 tons 4) Observation and Study Tours |
|---|--|

5. FACILITIES AND INSTITUTIONS

- 1) Hydrographic Department, Japan Maritime Safety Agency
- 2) Tokyo International Centre (Hatagaya), JICA

6. REMARKS

International Accreditation of the Training Course

This Group Training Course in Hydrographic Survey has been recognized by the FIG/IHO International Advisory Board as Category B Course pertaining to Specialization in Nautical Charting and Port and Near Shore Surveys since 1 June 1988. Participants who have successfully completed the course and passed the examinations required therein will be awarded a certificate of Category B Hydrographic Surveyor.

PHYSICAL OCEANOGRAPHIC SURVEY 海洋物理調査

1. PERIOD

November 17, 1992 to March 24, 1993

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Eight (8)

3. QUALIFICATIONS

- 1) College graduates or equivalent
- 2) Be presently employed at the national hydrographic office or other related organizations, and currently engaged in physical oceanographic surveys and research
- 3) Have basic qualification or some experiences in hydrography, oceanography, or relevant discipline with some occupational experience in oceanographic survey and research
- 4) Under 40 years of age
- 5) Good working knowledge of English

4. DESCRIPTION OF TRAINING

- 1) Lectures
 - a. General aspect of physical oceanography
 - b. Offshore physical oceanography
 - c. Calibration of thermometrical instruments
 - d. General aspect of oceanographic instruments
 - e. Chemistry of sea water
 - f. General aspect of marine pollution research
 - g. Wind waves
 - h. Tide
 - i. Tidal current
 - j. Outline of tide and tidal current observation
 - k. International oceanographic data exchange system
 - l. Special studies on specific subjects
 - m. Electronic computer programming
- 2) Practice
 - a. Handling of oceanographic instruments
 - b. Processing of oceanographic data
 - c. Processing of tide and tidal current data
 - d. Preparation of tidal current charts
- 3) Field training
 - a. Offshore oceanographic observation on board the Survey Vessel SHOYO (1900 tons)
 - b. Tide and tidal current observation using the Survey Vessel KAIYO (310 tons)
- 4) Observation and study tour

5. FACILITIES AND INSTITUTIONS

Hydrographic Department, Maritime Safety Agency

6. REMARKS

The course is conducted alternately with the Nautical Charting

**POSTAL SERVICE, TELECOMMUNICATION AND
BROADCASTING**

RADIO FREQUENCY MONITORING 電波監視

1. PERIOD

August 11, 1992 to October 3, 1992 (2 months)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Ten (10)

3. QUALIFICATIONS

- 1) Those who have practical experience in the field of radio regulatory administration (radio frequency monitoring, frequency management, etc.) or those who may engage in this field of work within a year,
- 2) College graduates or those who have the equivalent knowledge,
- 3) Have a sufficient command of spoken and written English,
- 4) Under forty (40) years of age

4. DESCRIPTION OF TRAINING

- 1) Lecture
 - Outline of Radio Regulatory Administration and Legal System for Radio Regulations
 - Frequency Management
 - Practice of Frequency Allocation
 - Radio Operators Qualification System
 - Organization and System of Monitoring Activities
 - Practice of Monitoring Activities (Surveillance, Detection of Unlicensed Radio Stations, Investigation of Interference and International Monitoring)
 - Site Selection of Monitoring Stations
 - Outline of Monitoring Facilities
 - Maintenance of Monitoring Equipment
 - Regulations of Aeronautical Radio Station
 - Regulations of Land Radio Communication Station
 - Regulations of Maritime Radio Station
 - Certification Systems
 - Monitoring Equipment
 - Problem of EMC (Electromagnetic Compatibility) in Japan
- 2) Practice
 - Operation of Monitoring Equipment (Measurement of Frequency and Frequency Bandwidth, Spectrum Recording and Measurement of Field Strength, Direction Finding and Mobile Monitoring)
 - Practical Training at the Telecommunications Dept., Kanto Regional Bureau of Telecommunications
 - Practical Training at the International Monitoring Dept., Kanto Regional Bureau of Telecommunications
 - Practical Training at the Telecommunications Dept. of a Regional Bureau of Telecommunications
 - Practical Training in Operation of Monitoring Equipment at a Manufacturer's Plant.
- 3) Observation
 - Gunma Works of ADVANTEST Co., Ltd.
 - Atugi Works of ANRITSU Co., Ltd.
 - Communications Research Laboratory
 - NHK Broadcasting Center
 - Tokyo Telecomm. Research Part, etc.

5. FACILITIES AND INSTITUTIONS

Ministry of Posts and Telecommunications

6. REMARKS

All participants are requested to submit a Country Report.

POSTAL EXECUTIVES' SEMINAR II 郵政幹部セミナーII

1. PERIOD

February 25, 1993 to March 13, 1993 (14 days)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Twelve (12)

3. QUALIFICATIONS

- 1) Directors or high-ranking officials in charge of postal administration in governmental organizations
- 2) Good working knowledge of English

4. DESCRIPTION OF TRAINING

1. Lectures and discussion

- (1) Competition from private courier services and countermeasures (Development of new postal services, Sales promotion activities)
- (2) Automation and introduction of advanced information technology into postal services

2. Presentation and discussions

- a. Presentation of Country Report and discussion among participants and Japanese resource person

3. Field Observation (including trips to local cities)

- a. Ordinary collection-delivery post office
- b. Mechanized sorting post office
- c. Small sized post office
- d. Other postal facilities

5. FACILITIES AND INSTITUTIONS

Postal Bureau, Ministry of Posts and Telecommunications

6. REMARKS

EXECUTIVE'S SEMINAR ON POSTAL BANKING SERVICES

為替貯金国際幹部セミナー

1. PERIOD

September 3, 1992 to September 19, 1992 (14 days)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Eight (8)

3. QUALIFICATIONS

- 1) Directors or high-ranking officials of saving organizations (National- or Government-Saving Bank or Postal Savings), Postal Money Order and Postal Giro Services
- 2) Have a sufficient command of spoken and written English

4. DESCRIPTION OF TRAINING

1. Lectures

- (1) Organization, outline and role of the Postal Banking Services
- (2) Management of the Postal Banking Services
- (3) Personnel Training in the Postal Banking Services
- (4) Computerization of the Postal Banking Services
- (5) Investment of the Postal Savings funds
- (6) International Payment Services of the Postal Banking Services
- (7) Sales Promotion and Publicity Activities of the Postal Banking Services
- (8) Japanese Financial System
- (9) Trend of the Commercial Banking Activities

2. Observations

- Postal Personnel Training Institute
- Postal Savings Business Center
- Post Office

3. Study Tour to Kyoto, Nara area

4. Discussion

"The role of National Savings Institutions and their problems"

5. FACILITIES AND INSTITUTIONS

Postal Savings Bureau, Ministry of Posts and Telecommunications

6. REMARKS

1. PERIOD

May 12, 1992 to July 17, 1992 (2 months)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Eleven (11)

3. QUALIFICATIONS

- 1) University graduates or equivalent
- 2) Presently engaged in traffic and commercial work of international telegraph or telephone services
- 3) Occupational experience of more than 5 years in the field of international telecommunication services
- 4) Good working knowledge of English
- 5) Under forty five (45) years of age

4. DESCRIPTION OF TRAINING

1) Lectures

- | | |
|---|--|
| <ol style="list-style-type: none"> a) Management <ul style="list-style-type: none"> - Corporate Planning - Traffic Demand Forecast - International Settlement - International Accounting - Marketing and Sales Activities - Public Relations Activities - Network Management - International Co-operation - International Organizations Activities (ITU, APR) - Personnel Management - Human Resources Development | <ol style="list-style-type: none"> b) System & Technologies <ul style="list-style-type: none"> - Outline of KDD's Telecom Facilities - Fundamentals of Computers - Outline of Satellite Communication - Transmission Technologies (Satellite/Submarine Cable) - Outline of Submarine Cable Communication - Optical Fiber - Outline of ISDN - Programming Exercise c) Service & Operation <ul style="list-style-type: none"> - Outline of KDD Service - Telephone - Leased Circuit - VENUS (Data Service) - TV Transmission and TV Conference Service - KDD-Plans |
|---|--|

- 2) Field Practice
Field Practice will be conducted at relevant KDD field offices

- 3) Observation tours

5. FACILITIES AND INSTITUTIONS

- 1) KDD Engineering & Consulting (KEC), Kokusai Denshin Denwa Co., Ltd. (KDD)
- 2) Tokyo International Centre (Hatagaya), JICA

6. REMARKS

1. PERIOD

January 11, 1993 to March 19, 1993 (2.5 months)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Twelve (12)

3. QUALIFICATIONS

- 1) University graduates or equivalent, specializing in telecommunications and or electrical engineering
- 2) Under 45 years of age
- 3) Good working knowledge of English
- 4) Basic knowledge of telephone switching technology, and to be currently engaged in or expected to be engaged in the field of establishment and maintenance of international telephone switching network

4. DESCRIPTION OF TRAINING

- 1) Lectures
 - International Telephone Service Operation of KDD
 - Planning of Switching System
 - International Telephone Switching System Planning
 - Telephone Networking
 - Numbering Plan
 - Signalling Systems
 - Network Planning
 - Network Management
 - ISDN
 - Switching System
 - Electronic Switching
 - Digital Switching
 - Digital Transmission Systems
 - PCM Communication
 - Digital Multiplex Terminal
 - Digital Synchronous Terminal
 - Computer Technology
 - Fundamentals of Computers
 - Computer Programming
 - System Application
 - XE-20 Digital Switching System (Hardware & Software)
- 2) Field practice
 - Field practice will be conducted at relevant KDD field offices.
- 3) Observation tours

5. FACILITIES AND INSTITUTIONS

- 1) KDD Engineering & Consulting (KEC), Kokusai Denshin Denwa Co., Ltd. (KDD)
- 2) Tokyo International Centre (Hatagaya), JICA

6. REMARKS

INTERNATIONAL DATA COMMUNICATIONS ENGINEERING 国際データ通信技術

1. PERIOD

January 11, 1993 to March 12, 1993 (2 months)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Twelve (12)

3. QUALIFICATIONS

- 1) be university graduates specializing in telecommunications and/or electrical engineering or those who have fully equivalent technical knowledge and experiences in this field
- 2) have basic knowledge on computer hardware, software and be currently engaged in or expected to be engaged in the planning or the policy making of international data communications engineering,
- 3) Under 40 years of age
- 4) Have a sufficient command of spoken and written English

4. DESCRIPTION OF TRAINING

- 1) Lectures
 - Introduction to Data Communications
 - Data Transmission
 - Data Switching
 - International Data Communications Technologies
 - Data Communications Systems
 - New Communications Services
 - Current Status of Data Communications
- 2) Field practice
Field practice will be conducted at relevant KDD field offices
- 3) Observation tours

5. FACILITIES AND INSTITUTIONS

- 1) KDD Engineering & Consulting (KEC), Kokusai Denshin Denwa Co., Ltd. (KDD)
- 2) Ministry of Posts & Telecommunications
- 3) Tokyo International Centre (Hatagaya), JICA

6. REMARKS

1. PERIOD

January 13, 1993 to March 6, 1993 (2 months)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Ten (10)

3. QUALIFICATIONS

- 1) Working for data communication services, such as in digital switching, digital transmission or digital processing
- 2) University graduates or equivalent
- 3) Have a sufficient command of spoken and written English
- 4) Under 40 years of age

4. DESCRIPTION OF TRAINING

1) Lectures

— Basic and Theoretical Technology for Data Communication Systems of Domestic Services.
The basic concept of a data communication system consisting of information network, data transmission, transmission control procedures and computer technology will be explained.

— Digital Data Switching Systems
The switching process, and the hardware and software of the D-50 system will be explained. This will include an outline of the various digital data switching systems in the world. Maintenance philosophy will be briefly presented.

2) Practical studies

Participants will conduct practical exercises, using the D-50 system installed at NTT's training school, to increase knowledge acquired from lectures.

3) Observation tours

5. FACILITIES AND INSTITUTIONS

- 1) Central Training Institute (CTI), Nippon Telegraph and Telephone Corporation (NTT)
- 2) Tokyo International Centre (Hatagaya), JICA

6. REMARKS

All participants are requested to submit a Country Report.

1. PERIOD

May 26, 1992 to August 8, 1992 (2.5 months)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Thirteen (13)

3. QUALIFICATIONS

- 1) University graduates or equivalent majored in telecommunication or electrical engineering
- 2) Working for telecommunication administrations or common career organizations except broadcasting stations
- 3) Under 40 years of age
- 4) Good working knowledge of English

4. DESCRIPTION OF TRAINING

- 1) Lectures and practical training
 - a) Fundamental Knowledge of Digital Transmission
 - Basic of Digital Transmission
 - Digital Microwave Communication Technique
 - Optical Fiber Transmission
 - ISDN
 - b) Radio Communication System
 - Satellite Communication System
 - Rural Telecommunications
 - Mobile Communication System
 - Video Transmission System
 - c) Microwave Communication Power Plant
 - d) Practical Study
 - Transmission Standards
 - Microwave Relay System Design
 - e) Administration Techniques
 - Economic Studies and Comparisons
 - Planning and Plant Engineering
 - f) Practical Exercise
 - Optical Fiber Transmission System
 - Microwave Communication System
 - Mobile Communication System
 - Video Transmission System
- 2) Observation tours

5. FACILITIES AND INSTITUTIONS

- 1) Nippon Telegraph and Telephone Corporation (NTT)
- 2) Tokyo International Centre (Hatagaya), JICA

6. REMARKS

All participants are requested to submit a brief report written in English on the present situation of telecommunications, its future programs and its problems in applicants' country.

1. PERIOD

May 12, 1992 to July 24, 1992 (2 months)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Ten (10)

3. QUALIFICATIONS

- 1) Qualified in their respective fields
- 2) University graduates specializing in telecommunications or electric/electronic engineering
- 3) Fundamental knowledge of microwave engineering such as microwave propagation, microwave elements and microwave communication system
- 4) Experience in the field of INTELSAT satellite communications service
- 5) Engaged in the field of satellite communication service
- 6) Good working knowledge of English
- 7) Under 40 years of age

4. DESCRIPTION OF TRAINING

- 1) Lectures and practical training
 - Outline of Microwave Communication Technology
 - INTELSAT System
 - Satellite Communication System
 - Facilities of Satellite Earth Station
 - Operation and Maintenance of Satellite Earth Station
- 2) Observation tours
 - Earth station system configuration
 - Earth station facilities

5. FACILITIES AND INSTITUTIONS

- 1) KDD Engineering & Consulting (KEC), Kokusai Denshin Denwa Co., Ltd. (KDD)
- 2) Ministry of Posts & Telecommunications
- 3) Tokyo International Centre (Hitagaya), JICA

6. REMARKS

No. 113

**SATELLITE COMMUNICATION ENGINEERING (PLANNING AND
MANAGEMENT) II 衛星通信技術(計画管理)II**

1. PERIOD

September 1, 1992 to October 30, 1992 (2 months)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Twelve (12)

3. QUALIFICATIONS

- 1) Be university graduates who majored in telecommunications or electric/electronics engineering, or have completed the Group Training Course in the Satellite Communication Engineering (Regular or II) conducted by the Government of Japan, and have had experience of not less than three years in the field of INTELSAT satellite communication service since then,
- 2) Be in charge of planning and management in the field of Satellite Communication Service or so scheduled,
- 3) Have a sufficient command of spoken and written English,
- 4) Be under forty-five (45) years of age.

4. DESCRIPTION OF TRAINING

- 1) Lectures and practical training
 - INTELSAT System
 - Satellite Communication and Radio Wave Transmission
 - INTELSAT Communication System and Related Technology
 - Facilities of Satellite Earth Station
 - Field Practice
- 2) Observation tours
 - KDD Facilities
 - NTT Television Relay Center
 - Mitsubishi Electric Kamakura Plant

5. FACILITIES AND INSTITUTIONS

- 1) KDD Engineering and Consulting (KEC), Kokusai Denshin Denwa Co., Ltd. (KDD)
- 2) Tokyo International Centre (Hatagaya). JICA

6. REMARKS

1. PERIOD

October 22, 1992 to December 20, 1992 (3 months)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Seventeen (17)

3. QUALIFICATIONS

- 1) University graduates or equivalent majored in telecommunication or electrical engineering
- 2) Working for telecommunication administrations or common carrier organizations
- 3) Under 45 years of age
- 4) Good working knowledge of English

4. DESCRIPTION OF TRAINING

(1) Fundamental telecommunication network design

In this study, the following techniques which are required in the design of telecommunication network is dealt with. These capabilities are indispensable not only when the telecommunication network is designed, but also when Telephone network is shifted into Integrated Services Digital Network (ISDN). They include (i) network structure, (ii) numbering, (iii) charging (iv) signaling, (v) transmission standards and so on.

(2) Outline of various systems

Brief explanations are given on various systems.

(3) Telecommunication network planning

Forecasting methodology and procedures for telecommunication network planning are covered. Study items are (i) forecasting (ii) economic study (iii) expansion programme of telecommunication network.

Case studies are also included in planning procedure.

(4) Observation

5. FACILITIES AND INSTITUTIONS

- 1) Central Training Institute (CTI), Nippon Telegraph and Telephone Corporation (NTT)
- 2) Tokyo International Centre (Hatagaya), JICA

6. REMARKS

TELECOMMUNICATION OUTSIDE PLANT ENGINEERING II

1. PERIOD

August 27, 1992 to November 15, 1992 (2.5 months)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Thirteen (13)

3. QUALIFICATIONS

- 1) Qualified in their respective fields
- 2) University graduates or equivalent
- 3) Working for telecommunication administrations or common carrier organizations
- 4) Sufficient practical experience on telephone outside plant system
- 5) Under 40 years of age
- 6) Good working knowledge of English

4. DESCRIPTION OF TRAINING

- 1) Lectures and practical training
 - Digital Line Transmission System Engineering
 - Design Engineering
 - Maintenance Engineering
 - Construction Engineering
 - Method of Measurement
- 2) Observation tours

5. FACILITIES AND INSTITUTIONS

- 1) Central Training Institute (CTI), Nippon Telegraph and Telephone Corporation (NTT)
- 2) Tokyo International Centre (Hatagaya), JICA

6. REMARKS

All participants are requested to submit a Country Report.

No. 116

**TELECOMMUNICATION OUTSIDE PLANT ENGINEERING
TECHNIQUE (ON THE JOB TRAINING)** 通信線路技術指導者育成

1. PERIOD

August 17, 1992 to December 17, 1992 (4 months)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Ten (10)

3. QUALIFICATIONS

- 1) be presently working for telecommunication or common carrier organizations
- 2) be university graduates or those who have equivalent technical knowledge
- 3) have a sufficient practical experience on their own telephone outside plant systems
- 4) be under 35 years of age and have over 3 years' of practical experience
- 5) be in good health, both physically and mentally, to undergo the training. Pregnancy is regarded as a disqualifying condition for the participation in the training
- 6) have a sufficient command of spoken and written English.

4. DESCRIPTION OF TRAINING

- 1) Lectures and practical training
 - Basic knowledge on outline equipment (Basic designing of communication equipment, local line equipment, Civil engineering equipment, Network system, Transmission and wireless)
- 1) Lectures and practical training
 - Basic knowledge on outside equipment (Basic designing of communication equipment, local line equipment, Civil engineering equipment, Network system, Transmission and wireless)
 - Construction (Aerial cable, Underground cable, Optical fiber cable)
 - Maintenance engineering (Outside equipment, Gas-filled cable, Aerial cable, Plant record management, witnessing outside activities)
 - Design engineering (Local line, Civil engineering, Optical line)
 - Construction and maintenance of communication equipment and devices (Service order work, sales and rates, general trouble shooting)
 - Basic knowledge in inside plant (exchange equipment, centralized trouble attendance business)
 - Safety and quality control (Danger predicting activities, ASK activities)
- 2) Study trip

5. FACILITIES AND INSTITUTIONS

Nippon Telegraph and Telephone Corporation (NTT), Kitakyushu Branch

6. REMARKS

This curriculum mainly consists of on-the-job training.

TELECOMMUNICATIONS EXECUTIVES' SEMINAR II

電気通信幹部セミナーII

1. PERIOD

October 15, 1992 to October 31, 1992 (0.5 month)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Eleven (11)

3. QUALIFICATIONS

- 1) Directors general or equivalent high ranking officials responsible for management or administration of public telecommunications in government or operational organizations
- 2) Have a sufficient command of spoken and written English

4. DESCRIPTION OF TRAINING

- 1) Lectures and practical training
 - Present Situation and Future Tasks of Telecommunications Administration in Japan
 - Domestic Telecommunications Business Management in Japan
 - International Telecommunications Business in Japan
 - Present Situation of Japan's International Cooperation in Telecommunications
 - Role of Telecommunications Consultant
- 2) Discussion
 - Presentation and Discussion of Country Reports
 - Discussion on Human Resources Development
- 3) Observation tours
 - NTT Central Training Institute
 - KDD International Communication Centre
 - Telecommunications Manufactures
- 4) Study tours

5. FACILITIES AND INSTITUTIONS

- 1) Telecommunications Policy Bureau
- 2) Ministry of Posts and Telecommunications

6. REMARKS

1. PERIOD

June 4, 1992 to August 8, 1992 (2 months)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Fifteen (15)

3. QUALIFICATIONS

- 1) University graduates specializing in telecommunications and/or electrical engineering,
- 2) Working for telecommunication common career organizations with at least five years of practical experience on switching systems,
- 3) Under 40 years of age,
- 4) Good working knowledge of English.

4. DESCRIPTION OF TRAINING

- 1) Lectures and practical training
 - Digital Switching System (D-70)
 - Practical Exercise (D-70)
- 2) Observation tours

5. FACILITIES AND INSTITUTIONS

- 1) Central Training Institute (CTI), Nippon Telegraph and Telephone Corporation (NTT)
- 2) Tokyo International Centre (Hatagaya), JICA

6. REMARKS

All participants are requested to submit a Country Report.

No. 119

DIGITAL TRANSMISSION SYSTEMS ENGINEERING デジタル伝送技術

1. PERIOD

September 29, 1992 to December 20, 1992 (3 months)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Twelve (12)

3. QUALIFICATIONS

- 1) Qualified in their respective fields
- 2) University or college graduates or equivalent who majored in telecommunication or electrical engineering
- 3) Working for telecommunication administrations or common carrier organization with at least for five (5) years experience with telecommunications engineering
- 4) Under 40 years of age
- 5) Good working knowledge of English
- 6) Be in good health. Frequency is regarded as a disqualifying condition for participation in the course.

4. DESCRIPTION OF TRAINING

- 1) Lectures and practical training
 - Digital Line Transmission System
 - Microwave Communication System
 - Practical Exercise
 - Administration Techniques
 - Practical Study
- 2) Observation tours

5. FACILITIES AND INSTITUTIONS

Suzuka Training Institute, Nippon Telegraph and Telephone Corporation (NTT)

Nagoya International Training Centre, JICA

6. REMARKS

No. 120

OPTICAL FIBER CABLE TRANSMISSION TECHNOLOGY

光ファイバーケーブル伝送技術

1. PERIOD

January 19, 1993 to March 21, 1993 (2 months)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Eight (8)

3. QUALIFICATIONS

- 1) University graduates or equivalent
- 2) Sufficient practical experience on their own transmission system
- 3) Under 40 years of age

4. DESCRIPTION OF TRAINING

- 1) Lectures and practical training
 - Fundamental of transmission technology
 - Optical fiber cable
 - Optical fiber transmission system
 - Latest optical fiber transmission systems
 - Field practice
 - Measuring technic
- 2) Observation tours
 - Kansai observation tour

5. FACILITIES AND INSTITUTIONS

Nippon Telegraph and Telephone Corporation, NTT Suzuka Training Institute.

6. REMARKS

INTERNATIONAL ISDN ENGINEERING 国際ISDN技術

1. PERIOD

September 1, 1992 to October 16, 1992 (1 month)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Twelve (12)

3. QUALIFICATIONS

- 1) Be engineers who engaged in the field of International Telecommunications
- 2) Have fundamental knowledge of Digital Communications (such as Digital Transmission Principles of PCM, Multiplexing, Synchronization, etc. and Digital Switching)
- 3) Have a sufficient command of spoken English and written English
- 4) Be in good health, both physically and mentally to undergo the training

4. DESCRIPTION OF TRAINING

- 1) Overview of ISDN
- 2) Review of digital technology
- 3) ISDN Technology
 - Services
 - OSI
 - Use-Network interface
 - No. 7 Signalling System
 - Connection with other Networks
 - Network Management
- 4) ISDN System
 - Transmission System
 - Exchange System
 - Terminal Equipment
- 5) ISDN introduction plan
- 6) Field Practice, Field Trip, Observation Tour, etc.

5. FACILITIES AND INSTITUTIONS

Kokusai Denshin Denwa Co., Ltd. (KDD),
KDD Engineering and Consulting Inc. (KEC)
KDD R & D laboratories (Meguro).

6. REMARKS

All participants are requested to prepare a report on the present situation of their own field of study and interest in their own country.

No. 122

INTEGRATED SERVICES DIGITAL NETWORK ENGINEERING ISDN技術

1. PERIOD

January 5, 1993 to February 20, 1993

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Eleven (11)

3. QUALIFICATIONS

- 1) Be university graduates specializing in telecommunications and/or electrical engineering or those who have equivalent technical knowledge in this field,
- 2) Be under 40 years of age,
- 3) Be working for telecommunication administrations or common carrier organizations with at least three (3) years of practical experience on their own switching systems.

4. DESCRIPTION OF TRAINING

- 1) User-Network Interface
- 2) ISDN Structure and Facilities
- 3) Terminal Equipment
- 4) Classification of Services
- 5) ISDN Planning

5. FACILITIES AND INSTITUTIONS

- 1) Central Training Institute (CTI),
Nippon Telegraph and Telephone Corporation (NTT)
- 2) Tokyo International Centre (Hatagaya), JICA

6. REMARKS

All participants are requested to submit a Country Report

1. PERIOD

February 8, 1993 to March 19, 1993 (1.5 month)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Ten (10)

3. QUALIFICATIONS

- 1) be university graduates specialized in radiocommunications, and preferably have an introductory background in telephone traffic engineering, or those who have equivalent technical knowledge in this field;
- 2) be in charge of network planning or so scheduled;
- 3) have a sufficient command of spoken and written English;
- 4) be under 45 years of age;

4. DESCRIPTION OF TRAINING

- 1) Introduction of application technology for rural telecommunication
- 2) International trends of rural telecommunication
- 3) International regulation of radio transmission
- 4) Rural telecommunication technology (terrestrial radio system, satellite communication and others)

5. FACILITIES AND INSTITUTIONS

World Communications Development Organization (WORC-JAPAN)

6. REMARKS

No. 124

CBT COURSEWARE DEVELOPMENT TECHNOLOGY FOR
TELECOMMUNICATION

電気通信 C A I 教材作成技術

1. PERIOD

October 27, 1992 to December 6, 1992 (1.5 month)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Eight (8)

3. QUALIFICATIONS

- 1) be university graduates or the equivalent,
- 2) have sufficient practical experience in their telecommunications training center, and hopefully be familiar with the personal computer,
- 3) be under forty (40) years of age

4. DESCRIPTION OF TRAINING

- 1) Lectures and practices
 - Basic concept of the CBT theory
 - CBT Project Management
 - CBT Storyboarding
 - CBT Courseware Production
 - Latest information about CBT course development
- 2) Observation tours

5. FACILITIES AND INSTITUTIONS

- 1) Japan Telecommunications Engineering and Consulting Service (JTEC)
- 2) Tokyo International Centre (Hatagaya), JICA

6. REMARKS

All participants are requested to submit a Country Report

No. 125

TELEVISION PROGRAMME PRODUCTION ENGINEERING テレビジョン番組制作技術

1. PERIOD

January 11, 1993 to March 7, 1993 (2 months)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Ten (10)

3. QUALIFICATIONS

- 1) Be engineers serving in a broadcasting organization with at least five years of practical experience in TV engineering or those who have knowledge of TV engineering enough to undergo this training course
- 2) Be college graduates or those who have the equivalent technical knowledge in electronic engineering
- 3) Have a sufficient command of spoken and written English
- 4) Be healthy enough to undergo the course of training

4. DESCRIPTION OF TRAINING

- 1) Lectures and Practices
 - TV studio equipment
 - Color TV cameras and solid-state imaging devices
 - Application of digital technique
 - Video tape recording and video tape editing
 - Direct satellite broadcast
 - Transmission and reception
 - Latest trends of broadcast technique
- 2) Observations
 - NHK Broadcasting Center
 - NHK Technical Research Laboratories
 - Manufacturers
- 3) Observation tours
 - NHK Regional Station and others
 - Other NHK facilities

5. FACILITIES AND INSTITUTIONS

- 1) NHK Communications Training Institute
- 2) Other NHK facilities
- 3) Tokyo International Centre (Hatagaya), JICA

6. REMARKS

TELEVISION PROGRAMME PRODUCTION テレビジョン番組制作

1. PERIOD

July 14, 1992 to September 27, 1992 (2 months)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Ten (10)

3. QUALIFICATIONS

- 1) University graduates or equivalent
- 2) Qualified in their respective fields (as a programme director)
- 3) be serving in a broadcasting corporation directly and continuously as a producer or director with practical experience of more than 2 years and less than 7 years in the field of television programme production.
- 4) Under 35 years of age
- 5) Good working knowledge of English
- 6) Continue working in the above mentioned field after returning to home countries

4. DESCRIPTION OF TRAINING

- 1) Lectures, discussions and practical training
 - General concept of education television
 - Production Techniques
 - Observation of Actual Production Sites
 - Practical training in programme production
 - Introduction of New Technology
 - 2) Observation tours
 - An observation of local NHK stations, schools using school program and historical sites
- * Besides the above-mentioned, observation studies on programming at studios, discussions with producers and exchanges of opinions with specialists in broadcasting for education in Japan, are also scheduled in the training course.

5. FACILITIES AND INSTITUTIONS

- 1) NHK Communications Training Institute
- 2) Other NHK facilities
- 3) Tokyo International Centre (Hatagaya), JICA

6. REMARKS

All participants are requested to submit TV programmes which was produced by you or your own TV station to NHK Communications Training Institute upon their arrival Tokyo.

1. PERIOD

July 14, 1992 to September 27, 1992 (2.5 months)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Ten (10)

3. QUALIFICATIONS

- 1) Be engineers serving in a broadcasting organization with practical experience of more than 3 years and less than 5 years in TV engineering or those who have knowledge of TV engineering enough to undergo this training course,
- 2) Be college or university graduates or those who have the equivalent technical knowledge in electronic engineering,
- 3) Have a sufficient command of spoken and written English

4. DESCRIPTION OF TRAINING

1. Lectures and Practices
 - a. Color television and the television standard systems (NTSC, PAL, and SECAM)
 - b. Television Measurement
 - c. TV studio facility and TV camera equipment (studio camera and camera recorder)
 - d. VTR (1-inch C-format, 3/4-inch U-matic, 1/2-inch B-cam, etc.)
 - e. Digital engineering (computer graphics and digital video processing)
 - f. Antenna and propagation, and TV transmitter
 - g. TV receiving technique
 - h. Outside broadcasting
 - i. Program production technique
 - j. Satellite broadcasting and Hi-Vision
 - k. Latest technical information and others
2. Field Training (Choose one of the subjects)
 - a. VTR and VTR editing
 - b. Program production
 - c. Television transmitter
3. Study and observation tour
 - a. NHK Broadcasting Center and NHK Shiba Transmitting Station
 - b. NHK Science and Technical Research Laboratories
 - c. NHK regional stations and others
 - d. Manufacturers' factories

5. FACILITIES AND INSTITUTIONS

- 1) NHK Communications Training Institute
- 2) NHK Broadcasting Center
- 3) Tokyo International Centre (Hatagaya), JICA

6. REMARKS

1. PERIOD

January 11, 1993 to March 7, 1993 (2 months)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Nine (9)

3. QUALIFICATIONS

- 1) Be serving and producing social educational television programmes in a broadcasting corporation directly and continuously as a producer or director with practical experience of more than 5 years and less than 10 years,
- 2) Be under forty (40) years of age,
- 3) Be graduates of college or university or have an equivalent educational background,
- 4) Continue working in the above mentioned field after returning to their home countries,
- 5) Good working knowledge of English

4. DESCRIPTION OF TRAINING

- 1) Lectures, discussions and practical training
 - General idea and role of social Educational Television to get a general outlook of the current situation of ETV for adults in Japan.
 - Practice of Programme Production to acquire the know-how of producing programme.
 - Observation of Actual Production Site to get acquainted with the production system of NHK.
 - Introduction to New Technology/New Media surrounding broadcasting
- 2) Observation Tour to local station of NHK and primary school.

5. FACILITIES AND INSTITUTIONS

- 1) NHK Communications Training Institute
- 2) NHK Broadcasting Center
- 3) Tokyo International Centre (Hatagaya), JICA

6. REMARKS

All participants are requested to submit TV programmes which was produced by you or your own TV station to NHK Communications Training Institute upon their arrival Tokyo.

TELEVISION BROADCASTING MANAGEMENT II テレビジョン放送管理Ⅱ

1. PERIOD

May 11, 1992 to June 26, 1992 (1.5 month)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Ten (10)

3. QUALIFICATIONS

- 1) Staff with ranks higher than division-chief engaged in administrative or planning department of a television broadcasting organization.
- 2) College or university graduates, between 30 and 40 years of age
- 3) Good working knowledge of English.

4. DESCRIPTION OF TRAINING

- 1) Lecture and discussion
 - Television broadcasting
 - Management system of public and private broadcasting
 - The latest engineering system of broadcasting
 - The comprehensive activities of television broadcasting system
- 2) Field observation and study tour

5. FACILITIES AND INSTITUTIONS

- 1) Hachioji International Training Centre, JICA
- 2) Ministry of Posts and Telecommunications

6. REMARKS

1. PERIOD

November 12, 1992 to November 28, 1992 (14 days)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Nine (9)

3. QUALIFICATIONS

- 1) Directors general or equivalent high-ranking officials responsible for management or administration of broadcasting in government or operational organizations
- 2) Have a sufficient command of spoken and written English

4. DESCRIPTION OF TRAINING

- 1) Lectures and discussion
 - Present Situation and Future Prospects of Broadcasting in Japan
 - Management and Organization of Broadcasters in Japan
 - New Technology of Broadcasting
 - Utilization of Broadcasting Programmes in Education
- 2) Discussion
 - Presentation and Discussion of Country Reports
- 3) Observation
 - Broadcasting stations
 - Broadcasting equipments plants
- 4) Study tours
- 5) Others

5. FACILITIES AND INSTITUTIONS

Communications Policy Bureau
Ministry of Posts and Telecommunications

6. REMARKS

AUDIO BROADCASTING ENGINEERING 音声放送技術

1. PERIOD

July 14, 1992 to September 13, 1992 (2 months)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Ten (10)

3. QUALIFICATIONS

- 1) Be a man in a technical line who have practical experience in the field of audio broadcasting enough (more than three (3) years) to undergo this training course
- 2) Be between twenty-five (25) and thirty-five (35) years of age
- 3) Be college graduates or those who have the equivalent technical knowledge in audio broadcasting
- 4) Continue working in the above mentioned field after returning to their home countries
- 5) Have a sufficient command of spoken and written English and (this item will be checked strictly)
- 6) Be in good health, both physically and mentally, to undergo the course of training. Pregnancy is regarded as disqualifying condition for the participation in the course

4. DESCRIPTION OF TRAINING

- 1) Lectures and Practices
 - Outline of Broadcasting in Japan
 - Audio Programme Production Technique
 - Audio Broadcasting System
 - Outline of Audio Technique
 - Studio Facilities
 - Maintenance and Measurement
 - Practices (Sound Technique)
 - MW Transmitter
 - Outline of MW Transmitter
 - MW Transmitter
 - Antenna and Propagation (MW)
 - Measurement and Maintenance
 - FM Transmitter
 - Outline of FM Transmitter
 - FM Transmitter
 - Antenna and Propagation (FM)
 - Measurement and Maintenance
 - Latest Broadcasting Technique
- 2) Observation
 - NHK Broadcasting Center
 - NHK Science and Technical Research Laboratories
 - Factories
 - NHK Transmitting Stations
 - Observation Trip (NHK Regional Station and Historical Treasures of Japan)

5. FACILITIES AND INSTITUTIONS

- 1) NHK Communications Training Institute
- 2) Other NHK Facilities
- 3) Tokyo International Center (Hatagaya), JICA

6. REMARKS

AGRICULTURE

1. PERIOD

May 18, 1992 to July 19, 1992 (2 months)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Fifteen (15)

3. QUALIFICATIONS

- 1) University or professional school graduates, engaged in the offices of co-operative service
- 2) Be requested to work in the co-operative movement after participation in the course
- 3) Under 45 years of age
- 4) Good working knowledge of English

4. DESCRIPTION OF TRAINING

- 1) Lecture & Discussion
 - Management of Agri. Coops
 - Economic Business & Credit Business of Agri. Coops
 - Mutual Insurance Business of Agri. Coops
 - Farm Guidance Activities of Agri. Coops
 - Establishment of Farming Complex
 - Educational, Better Living Activities of Agri. Coops
 - Establishment of the Regional Agriculture Promotion Plan
- 2) Field observation and study tour

5. FACILITIES AND INSTITUTIONS

- 1) Hachioji International Training Centre, JICA
- 2) The Institute for the Development of Agricultural Cooperation in Asia (IDACA)

6. REMARKS

AGRICULTURAL EXTENSION SERVICE FOR LEADER II

農業普及指導者 II

1. PERIOD
April 14, 1992 to July 19, 1992 (3.5 months)
2. NUMBER OF PARTICIPANTS TO BE RECEIVED
Fifteen (15)
3. QUALIFICATIONS
 - 1) University graduates or equivalents
 - 2) be administrators for agricultural extension service or subject-matter specialist (S. M. S.) who are in charge of training for extension workers, and have more than five (5) years of experience
 - 3) Under 50 years of age
 - 4) Have a sufficient command of spoken and written English, and preferably working knowledge of English
4. DESCRIPTION OF TRAINING
 - 1) Lectures and practical training
 - Agriculture and its extension services in Japan
 - Basic theory of extension method
 - Extension activities in the countries of participants
 - 2) Observation tours
 - Extension offices
 - Experimental research facilities
 - 3) Field study
 - Administration and management of extension service and education by the local government
 - Visit to extension stations, experimental research institutions and private companies, etc.
5. FACILITIES AND INSTITUTIONS
 - 1) Japan Agricultural Development and Extension Association
 - 2) Extension and Education Division, Agricultural Production Bureau, Ministry of Agriculture, Forestry and Fisheries
6. REMARKS

1. PERIOD

August 11, 1992 to October 30, 1992 (2.5 months)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Ten (10)

3. QUALIFICATIONS

- 1) be engaged in the improvement of rural living standards by developing women's abilities through planning and execution of instruction and training for rural women, agricultural extension officials and/or home living improvement extension officials,
- 2) be female under forty-five (45) years of age in principle, and have experience of more than five (5) years in this field,
- 3) have a sufficient command of spoken and written English,
- 4) be in good health, both physically and mentally, to undergo the training. Pregnancy is regarded as a disqualifying condition for participation in the training.

4. DESCRIPTION OF TRAINING

- 1) Lectures, discussions, workshops, practices and field trip.
 - Technologies for the utilization of regional produce, etc.
 - Utilization technology for produce etc., which exists in the region
 - Improvement technologies for agricultural work and home living environments.
 - Methods for promoting practical use of regional resources by rural women and utilization activities.
 - Human resource training and case study.
 - Conditions of rural household life styles and utilized resources in participating nations.
 - Training and guidance plan for rural women leaders.
 - Creating and training in regional promotion and human resource development programs by women.
 - Main points in the improvement of rural standard of farmer's living in Japan.
- 2) Observation tours

5. FACILITIES AND INSTITUTIONS

- 1) The Rural Home and Family Living Improvement Study Association.
- 2) Agricultural Production Bureau, Ministry of Agriculture, Forestry and Fisheries

6. REMARKS

RICE PRODUCTION

米生産

1. PERIOD

March 1, 1993 to October 22, 1993 (8 months)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Seven (7)

3. QUALIFICATIONS

- 1) University graduates or equivalent
- 2) Presently engaged in agricultural training or extension service in the field of rice cultivation
- 3) Between 25 and 35 years of age
- 4) A sufficient command of spoken & written English.

4. DESCRIPTION OF TRAINING

- 1) Lecture
 - Agriculture in general
 - Rice agronomy
 - Soil and fertilizer
 - Varietal improvement
 - Rice physiology
 - Plant protection
 - Agricultural extension
 - Economy of rice farming
- 2) Experiment and field practice
 - Seedling and land preparation
 - Transplanting
 - Crop management
 - Harvesting and post harvest
 - Chemical analysis of soil
 - Field experiment on specific subjects
 - Laboratory experiments
- 3) Study Tour
 - Progressive farmers
 - Agricultural research stations
 - Rice marketing and agricultural cooperatives
 - Agro-machinery manufacturers

5. FACILITIES AND INSTITUTIONS

Tsukuba International Agricultural Training Centre, JICA

6. REMARKS

PRODUCTION DU RIZ 米生産 (仏語)

1. DUREE

du 1 mars 1993 au 22 octobre 1993 (8 mois)

2. NOMBRE DE PARTICIPANTS QUI SONT ACCEPTEE

cinq (5)

3. QUALIFICATION DES CANDIDATS

Les candidats doivent être:

- 1) Titulaire d'un diplôme universitaire ou équivalent,
- 2) Chargée des services de formation agricole ou de mise en valeur dans le domaine rizicole,
- 3) En bonne connaissance du français,
- 4) De moins de 35 ans

4. PROGRAMME DE FORMATION

- 1) Cours
 - Culture et Physiologie du riz
 - Sols et engrais
 - Protection des plantes
 - Machinisme
 - Vulgarisation
 - Infrastructure de la rizière
- 2) Pratique et Expérimentation
 - Préparation des pépinières et semances
 - Semis direct et repiquage
 - Manoeuvre des machines agricoles
 - Observation des plants
 - Analyse de sol
 - Récolte, séchage et Décorticage
 - Essais en groupe
- 3) Voyage d'étude
 - Paysan pilote
 - Station d'expérimentation agricole
 - Bureau de vulgarisation

5. ORGANISME RESPONSABLE DU STAGE

Agence Japonaise de Coopération Internationale (JICA)

6. AUTRE

En règle générale, la langue française sera utilisée au cours du stage, lorsque le cours sera donné en japonais, l'interprète francophone se présentera.

Le cours intensif de langue japonaise est organisé avant le stage de formation, pour 5 semaines pendant la matinée.

1. PERIOD

February 1, 1993 to November 19, 1993 (9 months)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Eight (8)

3. QUALIFICATIONS

- 1) University graduates with an occupational experience of more than five years in the field of rice
- 2) Presently engaged in research work or education in the field of rice
- 3) Between 27 and 40 years of age
- 4) A sufficient command of spoken & written English

4. DESCRIPTION OF TRAINING

- 1) Lecture
 - Agriculture in general
 - Rice agronomy
 - Soil and fertilizer
 - Varietal improvement
 - Rice physiology
 - Plant protection
 - Statistical procedure for agriculture research
- 2) Experiment and field practice
 - Individual experiment on specific subject matter
 - Fundamental experiment on soil analysis, photosynthesis, pest collecting, artificial pollination, tissue culture, etc.
 - Field practice from sowing to post harvest
- 3) Study tour
 - Progressive farmers
 - Agricultural research stations
 - Agricultural cooperatives
 - Agro-machinery manufacturers etc.

5. FACILITIES AND INSTITUTIONS

Tsukuba International Agricultural Training Centre, JICA

6. REMARKS

VEGETABLE CROPS PRODUCTION II 野菜生産Ⅱ

1. PERIOD

March 1, 1993 to September 24, 1993 (7 months)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Nine (9)

3. QUALIFICATIONS

- 1) University graduates with occupational experience for more than three years in their specialities
- 2) Presently engaged in extension service, research work or training activity in the field of vegetable horticulture, or be agronomists who are to work in the said field having a good knowledge of vegetable cultivation
- 3) Between 27 and 37 years of age
- 4) A sufficient command of spoken & written English

4. DESCRIPTION OF TRAINING

The course deals with the following subjects through lectures, experiments, practices and observations in study tours, on major vegetable crops in Japan

- 1) Applicable method of intensive growing of major vegetable crops
- 2) Fundamental knowledge on plant physiology, plant protection and soil in relation to high yielding in vegetable crops
- 3) Principal matters pertaining to rationalization of vegetable marketing and circulation

The following subjects are covered in the course.

- 1) Lecture
 - Agriculture in general
 - Vegetable growing in general
 - Vegetable growing in particular
 - Plant physiology and soil science
 - Plant protection
 - Post harvest technology and marketing
 - Breeding and seed technology
- 2) Experiment and practice
- 3) Study tour

5. FACILITIES AND INSTITUTIONS

Tsukuba International Agricultural Training Centre, JICA

6. REMARKS

All participants are requested to prepare some statistical data and references on vegetable and its seed production in their country for the presentation of country report.

VEGETABLE SEED PRODUCTION 野菜採種

1. PERIOD

February 8, 1993 to November 26, 1993 (10 months)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Nine (9)

3. QUALIFICATIONS

- 1) University graduates with occupational experience for more than three years in their specialties
- 2) Presently engaged in vegetable seed production, seed technology or varietal improvement
- 3) Between 27 and 37 years of age
- 4) A sufficient command of spoken & written English

4. DESCRIPTION OF TRAINING

The course deals with the following subjects through lectures, experiments, practices and observations in study tours, on major vegetable crops in Japan

- 1) Seed production method of major vegetable crops
- 2) Seed technology on sorting, drying, storage, and germination of vegetable seeds
- 3) Applicable methods of varietal improvement of major vegetable crops

The following subjects are covered in the course.

- 1) Lecture
 - Agriculture in general
 - Vegetable growing in general
 - Vegetable seed growing method
 - Seed technology
 - Varietal improvement
- 2) Experiment and practice
- 3) Study tour

5. FACILITIES AND INSTITUTIONS

Tsukuba International Agricultural Training Centre, JICA

6. REMARKS

All participants are requested to prepare some statistical data and references on vegetable and its seed production in their country for the presentation of country report.

SUGAR CANE CULTIVATION サトウキビ栽培

1. PERIOD

June 18, 1992 to February 21, 1993 (8 months)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Five (5)

3. QUALIFICATIONS

- 1) University graduates or equivalent
- 2) Presently engaged in research work or extension service in the field of sugar cane cultivation
- 3) Under thirty-five (35) years of age
- 4) Proficient in spoken and written English

4. DESCRIPTION OF TRAINING

The course will be divided into three groups (sub-courses)

- | | |
|--|--|
| <ol style="list-style-type: none">1) Common Subjects<ul style="list-style-type: none">- Agriculture in Japan and Okinawa- Sugar Cane Cultivation- Characteristics of Soil in Okinawa- Sugar Cane Industries in Japan and Okinawa- Observation Tour2) Sugar Cane Breeding<ul style="list-style-type: none">- Outline of sugat cane breeding- Role of wild sugar cane germ plasm- Crossing and seedling raising- Selection tests- Fundamental researches on sugar cane breeding | <ol style="list-style-type: none">3) Soil Management and Conservation<ul style="list-style-type: none">- General information on soils- Soil survey- Soil conservation- Laboratory researches field work on soil- Statistical analysis by computer4) Sugar Cane Insect Pests and Their Control<ul style="list-style-type: none">- Basic knowledge about sugar cane insect pests- Practice on ecology and control of sugar cane insect pests |
|--|--|

5. FACILITIES AND INSTITUTIONS

- 1) Okinawa Prefectural Agricultural Experiment Station
- 2) Okinawa International Centre (OIC), JICA

6. REMARKS

PESTICIDE UTILIZATION FOR PLANT PROTECTION 農薬利用

1. PERIOD

January 7, 1993 to June 18, 1993 (5.5 months)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Six (6)

3. QUALIFICATIONS

- 1) University graduates or equivalent
- 2) Qualified in their respective fields
- 3) Occupational experience of more than 3 years
- 4) Between 26 and 40 years of age
- 5) Good working knowledge of English

4. DESCRIPTION OF TRAINING

- 1) Orientation on Specific Subject
- 2) Training on Specific Subject
 - Lecture and Practice
 - Administration and laws pertaining to the use of pesticides
 - Bioassay of pesticides
 - Exposition of pesticides
 - Pesticides in crops, foods and environment
 - Application and application equipments
 - Observation Tours and Visits

5. FACILITIES AND INSTITUTIONS

- 1) Hyogo International Centre, JICA
- 2) Hyogo Prefectural Agricultural Institute
- 3) Department of Plant Protection, Faculty of Agriculture, Kobe university
- 4) National Institute of Hygienic Sciences, Osaka Branch

6. REMARKS

CONTROL OF RICE DISEASES AND INSECT PESTS 稲病虫害防除

1. PERIOD

May 28, 1992 to December 3, 1992 (6 months)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Eleven (11)

3. QUALIFICATIONS

- 1) Presently engaged either in planning, gunding and practicing plant protection or research of plant protection and have more than three years or more of experience in this field
- 2) University graduates or equivalent
- 3) Qualified in their respective fields
- 4) Occupational experience of more than 3 years
- 5) Proficient in spoken and written Egnlish
- 6) Between 26 and 40 years of age

4. DESCRIPTION OF TRAINING

- 1) Lectures and practical training
 - ① General view on rice cultivation and plant protection in Japan
 - ② General principles of rice, pest management
 - ③ Rice diseases
 - ④ Rice insect pests
 - ⑤ Pesticides and bio control agents
 - ⑥ Otheir
- 2) Observation tours

5. FACILITIES AND INSTITUTIONS

- 1) Hyogo International Centre, JICA
- 2) Agricultural Experiment Station, Hyogo Prefectural Agricultural Institute
- 3) Faculty of Agriculture, Kobe University Department of Plant Protection

6. REMARKS

PLANT GENETIC RESOURCES 植物遺伝資源

1. PERIOD

March 8, 1993 to September 3, 1993 (6 months)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Six (6)

3. QUALIFICATIONS

- 1) University graduates or equivalent
- 2) Presently engaged in conservation or management of plant genetic resources
- 3) Under 45 years of age
- 4) Good working knowledge of English

4. DESCRIPTION OF TRAINING

- 1) Lectures
 - Basis for management of plant genetic resources
 - Preservation, evaluation and utilization of plant genetic resources
 - Elimination of diseases and pests from genetic stocks
 - Information management
- 2) Individual Studies
- 3) Observation tours

5. FACILITIES AND INSTITUTIONS

- 1) National Institute of Agrobiological Resources (NIAR), Ministry of Agriculture, Forestry and Fisheries
- 2) Tsukuba International Centre, JICA

6. REMARKS

PLANT QUARANTINE (DISINFESTATION OF FRUIT FLIES)

植物検疫（ミバエ類殺虫技術）

1. PERIOD

May 14, 1992 to October 19, 1992 (5 months)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Five (5)

3. QUALIFICATIONS

- 1) University graduates or having the equivalent academic background
- 2) Having experience in the plant quarantine works and having sufficient knowledge about the pest such as fruit flies
- 3) being presently engaged in the disinfection programme of fruit flies or will be engaged in it as a technical expert
- 4) being not exceeding forty (40) years of age:
- 5) Having a sufficient command of both spoken and written English

4. DESCRIPTION OF TRAINING

- | | |
|---|--|
| <ol style="list-style-type: none"> 1) Plant Quarantine in Japan 2) Morphology and Taxonomy of fruit flies 3) Physiology and Ecology of fruit flies 4) Artificial rearing of fruit flies <ul style="list-style-type: none"> - Outline of artificial rearing - Rearing of larva - Control of pupa - Rearing of adult and egg collection - Data analysis 5) Disinfestation method of fruit flies (Outline) <ul style="list-style-type: none"> - Fumigation treatment - Cold treatment and vapor heat treatment 6) Disinfestation test by vapor heat treatment and cold treatment <ul style="list-style-type: none"> - Outline of disinfestation test - Operation of treatment equipment - Inoculation of larva into the fruit - Method to find out standard of vapor heat treatment - Data analysis | <ol style="list-style-type: none"> 7) Injury test of fruits by vapor heat treatment and cold treatment <ul style="list-style-type: none"> - Outline of injury test - Injury experiment - Data analysis 8) Eradication of fruit flies <ul style="list-style-type: none"> - Principle of eradication method - Male annihilation method - Release method of sterile insects <ul style="list-style-type: none"> - Suppression of the density of fruit flies - Mass production - Sterilization and release of sterile flies - Discrimination between sterile flies and wild ones - Eradication project of fruit flies in Japan 9) Make the report - Exercise |
|---|--|

5. FACILITIES AND INSTITUTIONS

- 1) Naha Plant Protection Station, Ministry of Agriculture, Forestry and Fisheries
- 2) Fruit-fly Eradication Project Office, Okinawa Prefectural Government

6. REMARKS

1. PERIOD
June 4, 1992 to August 20, 1992 (2.5 months)
2. NUMBER OF PARTICIPANTS TO BE RECEIVED
Six (6)
3. QUALIFICATIONS
 - 1) Be university graduates or equivalent
 - 2) Be engaged in investigation and practical works related to Soil Analysis and Improvement
 - 3) Have a sufficient command of spoken and written English
 - 4) Be under forty-five (45) years of age
4. DESCRIPTION OF TRAINING
 - 1) Lectures
 - Method/classification of soil analysis
 - Theory of soil reforming
 - 2) Practices and Experiments
 - Soil analysis and its classification
 - Technics of soil reforming on farm land
 - Soil analysis technics by computer system
 - 3) Observation
 - Ten days study tour for related research centers and tropical research institute of Japan
5. FACILITIES AND INSTITUTIONS
 - 1) Obihiro River Sewerage Treatment Plan
 - 2) Hokkaido National Agricultural Experiment Station, the Department of Upland Farming
 - 3) Hokkaido Prefectural Agricultural Experiment Station
 - 4) Obihiro University of Agriculture and Veterinary Medicine
 - 5) Tokachi Federation of Agricultural Cooperatives
 - 6) Others
6. REMARKS

1. PERIOD

July 16, 1992 to March 22, 1993 (8 months)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Five (5)

3. QUALIFICATIONS

- 1) be university graduates with more than three (3) years of laboratory research experience and be presently engaged in research works
- 2) be under forty (40) years of age
- 3) Have a sufficient command of both spoken and written English
- 4) be in good health, both physically and mentally, to undergo the course of training. Pregnancy is regarded as a disqualifying condition for the participation in the course.

4. DESCRIPTION OF TRAINING

- 1) Joint programme
 - Lecture
 - Observation
 - Computer application (for agriculture)
- 2) Specialized programme
 - a) Technical applications to the study of crop production
 - Studies on photosynthesis and biotechnology
 - Studies on Green-house techniques and hydroponics culture
 - b) Fundamental techniques for forest management and utilization of wood
 - Studies on stand structure and mensuration
 - Studies on silvicultural operation system
 - Studies on forest policy and economy
 - Studies on physical properties of wood
 - Studies on chemical properties of wood
- 3) Field trip

5. FACILITIES AND INSTITUTIONS

- 1) College of Agriculture, University of the Ryukyus
- 2) Okinawa International Centre (OIC), JICA

6. REMARKS

1. PERIOD

August 27, 1992 to December 27, 1992 (2.5 months)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Twenty one (21)

3. QUALIFICATIONS

- 1) be university graduates or have the equivalent academic background
- 2) be presently engaged in the works of irrigation and drainage or rural area improvement, and have about 10 years of occupational experience in this field
- 3) have a sufficient command of spoken and written English
- 4) be in good health, both physically and mentally, to undergo the course of training. Pregnancy is regarded as disqualifying condition for participation in the course.

4. DESCRIPTION OF TRAINING

Productivity increase in agriculture and elimination of poverty in rural area contribute to prevent the expansion of agriculture to the marginal lands and environmentally sensitive areas, which will have positive impact on the prevention of desertification or deforestation of tropical forest and on the preservation of earth environment.

The course is to provide the knowledge and know-how on the appropriate irrigation and drainage technology, the conservation and rehabilitation of agricultural lands, the effective use of local energy, etc. for environmental planning and management.

5. FACILITIES AND INSTITUTIONS

- 1) Japanese Institute of Irrigation and Drainage (JIID)
- 2) Agricultural Structure Improvement Bureau, Ministry of Agriculture, Forestry and Fisheries (MAFF)

6. REMARKS

1. PERIOD

September 3, 1992 to November 26, 1992 (3 months)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Seven (7)

3. QUALIFICATIONS

- 1) Middle management class government officers who are in charge of administration of market operation in urban areas and control of distribution of fresh fruits and vegetables,
- 2) Occupational experience of at least 2 years,
- 3) University graduates or the equivalent,
- 4) Good health both physically and mentally,
- 5) Under 35 years of age,
- 6) Good working knowledge of English.

4. DESCRIPTION OF TRAINING

Lectures, observations, practical training

- Administration of wholesale markets,
- Distribution system of wholesale markets
- Legal system related to wholesale markets
- Facilities in wholesale markets
- Plan and design of wholesale markets
- Production and shipping of fresh fruits and vegetables
- Promotive policies and measures for agriculture and distribution of fresh fruits and vegetables
- Measures for rationalization of distribution system
- Roles played by retail markets and their present situation
- Modernization and rationalization of retail markets
- Consumer oriented administration
- Theory and reality of pricing of fresh fruits and vegetables
- International distribution of fresh fruits and vegetables
- Case studies and discussions

5. FACILITIES AND INSTITUTIONS

- 1) Osaka International House Foundation
- 2) Central Wholesale Market of Osaka City
- 3) Economic Bureau of Osaka City Government

6. REMARKS

1. PERIOD

February 8, 1993 to November 19, 1993 (10 months)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Eleven (11)

3. QUALIFICATIONS

- 1) University graduates or equivalents
- 2) Qualified in their respective fields
- 3) Occupational experience of more than 3 years
- 4) Between 25 to 35 years of age
- 5) A sufficient command of spoken & written English

4. DESCRIPTION OF TRAINING

This course imparts the comprehensive technology of irrigation and drainage in order to improve the water management in terminals.

- 1) Lectures and practice
 - Irrigation and drainage (irrigation planning, drainage planning, water resources development, etc.)
 - Structure and construction (dams, headworks, pipelines, etc.)
 - Practice (surveying, water requirement in depth, etc.)
 - Experiments (soil, concrete, hydraulics, etc.)
- 2) Observation tours
 - Irrigation and drainage projects
 - Reclamation and consolidation projects
 - Dam construction projects
 - National research institutes

5. FACILITIES AND INSTITUTIONS

Tsukuba International Agricultural Training Centre, JICA

6. REMARKS

1. PERIOD

May 12, 1992 to August 2, 1992 (3 months)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Sixteen (16)

3. QUALIFICATIONS

- 1) Be presently engaged in the said field
- 2) University graduates or the equivalent academic background with occupational experience of more than 7 years
- 3) Under 45 years of age
- 4) Good working knowledge of English
- 5) Be in good health

4. DESCRIPTION OF TRAINING

- 1) Lectures and practical training
 - Outline of Japan's agriculture and land improvement project
 - Land reclamation and consolidation
 - Irrigation and Drainage System
 - Design criteria
 - Operation and maintenance facilities and water management
- 2) Observation tours
 - Present situation of agricultural land utilization and water resources development in Japan
- 3) Country Report session

5. FACILITIES AND INSTITUTIONS

- 1) The Japanese Institute of Irrigation & Drainage
- 2) Agricultural Structure Improvement Bureau, Ministry of Agriculture, Forestry and Fisheries

6. REMARKS

IRRIGATION WATER MANAGEMENT 水管理

1. PERIOD

May 5, 1992 to October 30, 1992 (6 months)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Nine (9)

3. QUALIFICATIONS

- 1) University graduates or equivalents
- 2) Qualified in their respective fields
- 3) Occupational experience of more than 5 years
- 4) Between 25 and 35 years of age
- 5) A sufficient command of spoken & written English

4. DESCRIPTION OF TRAINING

This course transfers the intensive technology of irrigation water management by the use of mathematical model simulation.

- 1) Lectures and practice
 - Design (canal, dams, headworks, pipeline, etc.)
 - Related subjects (hydraulic simulation, case study using unsteady flow, economic evaluation, etc.)
 - Practice (computer programming, water requirement in depth, etc.)
 - Experiment (hydraulic model)
- 2) Observation tours
 - National research institutes
 - Canal works
 - Water management system

5. FACILITIES AND INSTITUTIONS

Tsukuba International Agricultural Training Centre, JICA

6. REMARKS

1. PERIOD

August 11, 1992 to November 22, 1992 (3 months)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Eight (8)

3. QUALIFICATIONS

- 1) presently engaged in either research or educational activity and have more than 2 years of occupational experience in this field,
- 2) university graduates or have the equivalent academic background,
- 3) proficient in spoken and written English. Experience has shown that many participants find themselves unable to make progress in their training because of inadequate knowledge of English,
- 4) not more than forty (40) years of age.
- 5) in good health, both physically and mentally, to undergo the training. Pregnancy is regarded as a disqualifying condition for participation in the course.

4. DESCRIPTION OF TRAINING

- 1) Lectures, Experiment and Practical training
 - Natural environments of arid areas
 - Runoff analysis
 - River and groundwater engineering
 - Facilities of water storage and water supply
 - Agricultural practice of arid areas
 - Irrigation and drainage
 - Water management
 - Water resources planning
- 2) Study Visit
 - North Okinawa water resources development project, Minafuku underground dam (Okinawa prefecture)
 - Matano dam (Tottori prefecture)
 - Kiso river basin irrigation and drainage project (Aichi prefecture)
 - The Hojo sand dune area farm (Tottori prefecture)

5. FACILITIES AND INSTITUTIONS

Tottori University

6. REMARKS

FARM MECHANIZATION II 農業機械化Ⅱ

1. PERIOD

March 1, 1993 to November 19, 1993 (9 months)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Nine (9)

3. QUALIFICATIONS

- 1) University graduates or equivalents
- 2) Qualified in their respective fields
- 3) Occupational experience of more than 3 years
- 4) Between 27 and 40 years of age
- 5) A sufficient command of spoken & written English

4. DESCRIPTION OF TRAINING

- 1) To carry out field performance tests of farm machinery and analyze the result before its introduction to their countries.
- 2) To study the mechanization planning and its evaluation. And the applicable knowledge on technical matters concerned with the system of farm mechanization.
- 3) The accurate and safety utilization method of measuring instruments and tools.
- 4) Experiment method such as field performance test of farm machinery under the existing conditions at the necessary level.
- 5) Technical know-how on trouble shooting and minor repair of farm use small engine.
- 6) Safety operation and maintenance technique in the field of farm machinery utilization.
- 7) The study on micro-computer for experiments and farm mechanization system analysis.

5. FACILITIES AND INSTITUTIONS

TSUKUBA INTERNATIONAL AGRICULTURAL TRAINING CENTRE (TIATC), JICA

6. REMARKS

During the training course participants are to join the annual meeting of Japanese Society of Agricultural Machinery.

FARM MACHINERY DESIGN 農業機械設計

1. PERIOD

February 8, 1993 to October 22, 1993 (9 months)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Nine (9)

3. QUALIFICATIONS

- 1) University graduates from faculty of agricultural engineering or mechanical engineering
- 2) Qualified in their respective fields
- 3) Occupational experience of more than 3 years
- 4) Between 27 and 42 years of age
- 5) A sufficient command of spoken & written English

4. DESCRIPTION OF TRAINING

- 1) To enhance knowledge of farm energy for such as wind-mill and solar dryer, and of mechanism and performance of farm machinery which were developed in Japan especially.
- 2) Designing, trial-making and performance test of trial-made farm machinery.
- 3) The accurate and safety utilization method of measuring instruments, tools and micro-computer.
- 4) The applicable knowledge on metallic materials, its strength and soil dynamics, concerned to designing works.
- 5) Outline of mass production method in farm machinery, manufacturing companies in Japan.
- 6) Performance test method of trial-made farm machinery under the existing conditions at the necessary level.
- 7) Study tour to university, research institute and farm machinery manufacturing companies.

5. FACILITIES AND INSTITUTIONS

TSUKUBA INTERNATIONAL AGRICULTURAL TRAINING CENTRE (TIATC), JICA

6. REMARKS

During the training course participants are to join the annual meeting of Japanese Society of Agricultural Machinery.

1. PERIOD
May 14, 1992 to November 27, 1992 (7 months)
2. NUMBER OF PARTICIPANTS TO BE RECEIVED
Ten (10)
3. QUALIFICATIONS
 - 1) University graduates or equivalent
 - 2) Agricultural engineers in supervising posts
 - 3) At least three (3) years of experience in the field of agricultural machinery management and/or instruction
 - 4) be under forty (40) years of age
 - 5) good working knowledge of English
4. DESCRIPTION OF TRAINING
 - 1) Lectures
 - Principles and structures of agricultural machinery and components
 - Agricultural machinery management
 - Fundamentals of mechanical engineering
 - Reference subjects
 - 2) Practice
 - Measurement
 - Disassembly, reassembly and maintenance
 - Field operation
 - Welding
 - 3) Agricultural machinery management
 - Microcomputers
 - LP, DP and simulation techniques
 - Cost analysis methods
 - Management schemes of agricultural machinery
 - 4) Observations
 - 5) Report presentation and discussion
 - 6) Examination and evaluation
5. FACILITIES AND INSTITUTIONS
 - 1) International Cooperation Service Center (ICSC)
 - 2) Kyoto University
 - 3) Member plants of Japan Farm Machinery Manufacturers Association and other plants
6. REMARKS

AGRICULTURAL MACHINERY TESTING AND EVALUATION

農業機械評価試験

1. PERIOD

March 1, 1993 to May 28, 1993 (3 months)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Ten (10)

3. QUALIFICATIONS

- 1) University graduates from faculty of agricultural or mechanical engineering
- 2) Qualified in their respective fields
- 3) Occupational experience of more than 3 years
- 4) Between 27 and 50 years of age
- 5) A sufficient command of spoken & written English

4. DESCRIPTION OF TRAINING

- 1) Lecture and practice
 - Testing and Evaluation of agricultural machines to determine performance characteristics, rate of work, durability, safety, ease of operation and so on
 - Testing and measuring facilities and instruments
 - Data acquisition, processing and analyzing by computer
 - Agricultural Mechanization and others
- 2) Observation
 - Manufacturers of Agricultural Machines and Measuring Instruments
 - Farmers
 - Other related organs

5. FACILITIES AND INSTITUTIONS

- 1) Institute of Agricultural Machinery (IAM)
Bio-oriented Technology Research Advancement Institution (BRAIN)
- 2) Tsukuba International Agricultural Training Centre, JICA

6. REMARKS

POST HARVEST RICE PROCESSING 米のポストハーベスト研修

1. PERIOD

August 25, 1992 to November 24, 1992 (3 months)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Fourteen (14)

3. QUALIFICATIONS

- 1) University graduates or equivalents
- 2) Senior technical administrators in the government or the public organizations engaging in planning and promoting improvements of all post-harvesting process of rice such as paddy drying, storage, rice milling, etc.
- 3) Under 45 years of age
- 4) Good working knowledge of English
- 5) Not be instructor or professor of college and university or researcher

4. DESCRIPTION OF TRAINING

- 1) Lectures and practical training
 - Rice and food situation in Japan and in the world
 - Government policies and control system on rice and food in Japan
 - Pre-harvest methods and machinery
 - Drying and storage of rice and the role of agricultural co-operatives
 - Milling machines and rice mill planning and management
 - Quality of rice and its control
 - Rice and by-product utilizations
- 2) Observation tours of machine making factory

5. FACILITIES AND INSTITUTIONS

- 1) Japan Grain Inspection Association
- 2) Ministry of Agriculture, Forestry and Fisheries

6. REMARKS

ANIMAL HUSBANDRY

POULTRY PRODUCTION AND BREEDING TECHNOLOGY

鶏育種・生産技術

1. PERIOD

May 19, 1992 to September 22, 1992 (4.5 months)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Eight (8)

3. QUALIFICATIONS

- 1) nominated by their government in accordance with the procedures mentioned in IV-2. below,
- 2) presently in charge of poultry raising activities, with two (2) years or more of experience in this field,
- 3) university graduates or equivalent with occupational experience,
- 4) proficient in spoken and written English. Experience has shown that many participants find themselves unable to make progress in their training because of inadequate knowledge of English,
- 5) over twenty-six (26) and under forty (40) years of age,
- 6) in good health to undergo the course of training. Pregnancy is regarded as a disqualifying condition.

4. DESCRIPTION OF TRAINING

- 1) Lectures and practical training
 - Feeding and management of layer
 - Breeding
 - Hatching
 - Feed
 - Artificial Insemination
 - Farm management
 - Housing
 - Hygiene
 - Inspection of egg quality
 - Private Poultry Industry in Japan
 - Statistics
 - Presentation of Country Report
 - Guidance of Japan's Poultry Industry
 - Advanced Technology of Management for Layer
 - Feeding and Management under heat condition
 - Technical Consultation
 - Others

5. FACILITIES AND INSTITUTIONS

National Livestock Breeding Centre, Ministry of Agriculture, Forestry and Fisheries (MAFF)

6. REMARKS

No. 159

BREEDING AND ARTIFICIAL INSEMINATION IN CATTLE

牛育種・人工授精

1. PERIOD

March 23, 1993 to July 11, 1993 (2.0 months)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Eight (8)

3. QUALIFICATIONS

- 1) be university graduates or have the equivalent academic background and practical experiences
- 2) be presently engaged in livestock administration, holding veterinary licenses or artificial inseminator's licenses;
- 3) be proficient in spoken and written English;
- 4) be under forty (40) years of age in principle
- 5) be in good health, to undergo the course of training (pregnancy is regarded as a disqualifying condition)
- 6) can be engaged in systematic development and promotion after absorbed from this training.

4. DESCRIPTION OF TRAINING

- 1) Lectures and practical training
 - General Aspects of Livestock Industries
 - Cattle Breeding
 - Artificial Insemination
 - Extension of Artificial Insemination
 - Deep Frozen Semen
 - Reproductive Disorder
 - Cattle Management
- 2) Observation tours

5. FACILITIES AND INSTITUTIONS

The National Livestock Breeding Center
Ministry of Agriculture, Forestry and Fisheries

6. REMARKS

1. PERIOD

June 30, 1992 to October 4, 1992 (3.5 months)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Six (6)

3. QUALIFICATIONS

- 1) be nominated by their government in accordance with the conditions below;
- 2) *hold veterinarian's license, or artificial inseminator's licence, and have sufficient experience and knowledge about artificial insemination technique;
- 3) be university graduates or have the equivalent academic background;
- 4) be staff members of institutes or universities that participate in the improvement of animal reproduction.
- 5) be proficient in spoken and written English. Experience has shown that many participants find themselves unable to make progress in their training because of inadequate knowledge of English;
- 6) be over twenty-five (25) and under forty (40) years of age, in principle.
- 7) be in good health to undergo the course of training. Pregnancy is regarded as a disqualifying condition.

4. DESCRIPTION OF TRAINING

The purpose of the course is to provide the latest ET techniques in Japan for livestock breeding personnel in countries faced with the necessity of it, and ultimately to contribute to the progress of animal industry by the application and improvement of the techniques under their respective countries' condition. The course provides basic theory and practical use of ET as well as its administration.

5. FACILITIES AND INSTITUTIONS

National Livestock Breeding Center, Ministry of Agriculture, Forestry and Fisheries.

6. REMARKS

*In this course, a non-surgical method is applied for practice drills in recovery and transplantation of embryo. This method requires proficiency in artificial insemination (AI) by the Rect-vaginal method. Therefore, applicants must have enough knowledge and at least three years practical experience in AI

1. PERIOD

September 21, 1992 to December 20, 1992 (3.5 months)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Six (6)

3. QUALIFICATIONS**1. Qualification of Applicant**

Applicants should:

- (1) be nominated by their government in accordance with the procedures mentioned in IV-2 below;
- (2)* hold veterinarian's license, or artificial inseminator's license, and have sufficient knowledge and practical experience in the field of Animal Reproduction.
- (3) be university graduates or have the equivalent academic background;
- (4) be proficient in spoken and written English. Experience has shown that many participants find themselves unable to make progress in their training because of inadequate knowledge of English;
- (5) be in good health to undergo the course of training. Pregnancy is regarded as a disqualifying condition.

Notice: Applicants are requested to submit the Medical History Questionnaire (format attached-see ANNEX) together the Nomination Form

4. DESCRIPTION OF TRAINING

The purpose of this course is to provide the latest techniques of twinning and IVF (for cattle) in Japan to technical specialists in animal reproduction from the countries that need such technology and to contribute to the progress of livestock industries. The participants are expected to apply and improve upon the techniques introduced in the course so as to adapt them to the situation in their respective countries.

5. FACILITIES AND INSTITUTIONS

The National Livestock Breeding Center,

Ministry of Agriculture, Forestry and Fisheries.

6. REMARKS

*Twinning and IVF techniques are based on ET techniques. In this course, a non-surgical method is applied for practice drills in recovery and transplantation of embryo. This method requires proficiency in artificial insemination (AI) by the Rect-vaginal method. Therefore, applicants must have enough knowledge and at least three-years practical experience in AI or ET.

**The purpose of this course is to educate technical experts who can improve and modify the new techniques to conform to the situation in their respective countries. It does not mean a simple promotion of the techniques. Therefore, applicants must meet the qualifications stated above.

1. PERIOD

August 25, 1992 to November 16, 1992 (3 months)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Five (5)

3. QUALIFICATIONS

- 1) Be university graduates or equivalent
- 2) Be engaged in the fields related to animal husbandry
- 3) Have a sufficient command of spoken and written English
- 4) Be under 40 years of age

4. DESCRIPTION OF TRAINING

The purposes of the course are to train dairy specialists and technicians to be leaders in their fields by providing basic, practical knowledge about the techniques essential to strengthening dairy farming such as livestock health inspection techniques, sanitary methods and inspection techniques for maintaining meat and milk quality, etc..

5. FACILITIES AND INSTITUTIONS

Obihiro University of Agriculture and Veterinary Medicine

6. REMARKS

Participants are asked to select "subcourse 1 or 2."

1. Quality tests and Sanitary inspection techniques in Dairy and Meat Products
2. Animal Husbandry Techniques

FORESTRY

1. PERIOD

July 7, 1992 to October 15, 1992 (3.5 months)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Fifteen (15)

3. QUALIFICATIONS

Applicants should:

- 1) be forestry university and/or college graduates, equivalents with occupational experience of more than five years in the field of forestry administration,
- 2) be presently engaged in planning work in the governmental forestry organizations,
- 3) not be researchers of public organizations or instructors or professors of colleges and/or universities,
- 4) have a sufficient command of spoken and written English,
- 5) be under forty years of age,
- 6) be in good health, both physically and mentally, to undergo the course of training. Pregnancy is regarded as a disqualifying condition for participation in the course.

4. DESCRIPTION OF TRAINING

- 1) Outline of forestry and wood industry in Japan
- 2) Forestry and forest products administration in Japan
- 3) Forestry technique
- 4) Silvicultural technique in the Tropics
- 5) Observation tours (Tokyo, Kyushu, Okinawa and Tsukuba)

5. FACILITIES AND INSTITUTIONS

- 1) Japan Overseas Forestry Consultants Association (JOFCA)
- 2) Forestry Agency, Ministry of Agriculture, Forestry and Fisheries

6. REMARKS

This course is not suitable for person presently being engaged in either research or educational activity.

FOREST SOILS 森林土壤

1. PERIOD

August 20, 1992 to December 6, 1992 (3.5 months)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Six (6)

3. QUALIFICATIONS

- 1) University graduates
- 2) Having more than five (5) years of experience in the field of forest soil research
- 3) Presently serving at forestry research organizations or universities
- 4) Under forty (40) years of age
- 5) Proficient in spoken and written English

4. DESCRIPTION OF TRAINING

- 1) Forest Soil Science
 - General Description of Forest Soils
 - Formulation, Classification and Distribution of Forest Soils
 - Vegetation, Productivity and Water Conservation with Forest Soils
 - Soils and Fertilizers for Forest Nursery
 - Forest Soils in Okinawa
- 2) Investigation into Forest Soils
 - Methods of Forest Soil Investigations (sampling and analysis)
 - Soil Mapping and Utilization on Forest Maps
 - Field Research and Investigations
- 3) Observation Tours

5. FACILITIES AND INSTITUTIONS

- 1) Japan Forest Technical Association
- 2) Forestry Agency, Ministry of Agriculture, Forestry and Fisheries
- 3) College of Agriculture, University of the Ryukyus
- 4) Okinawa International Centre (OIC), JICA

6. REMARKS

1. PERIOD

August 17, 1992 to November 15, 1992 (3 months)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Fifteen (15)

3. QUALIFICATIONS

- 1) be senior technical staff in charge of forest management in the governmental organization and have more than 5 years of experience.
- 2) be university graduate or have the equivalent academic background.
- 3) have a sufficient command of spoken and written English
- 4) be not more than forty-five (45) years of age

4. DESCRIPTION OF TRAINING

- 1) Lectures' discussion and practice
 - Outline of Japanese forest and forestry
 - Forest management and planning in Japan
 - Inventory survey method of forest
 - Forest policy in rural development
 - Management of tropical natural forest resources
- 2) Field observation and study tour
- 3) Forum

5. FACILITIES AND INSTITUTIONS

- 1) Hachioji International Training Centre, JICA
- 2) National Forestry Training Institute, Forestry Agency.

6. REMARKS

There will be an intensive Japanese language course, conducted prior to the technical training (50 hours).

1. PERIOD

August 17, 1992 to November 29, 1992 (3.5 months)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Five (5)

3. QUALIFICATIONS

- 1) University or college graduates or equivalent
- 2) Occupational experience of more than 5 years
- 3) Qualified in their respective fields
- 4) Under 40 years of age
- 5) Good working knowledge of English or Japanese

4. DESCRIPTION OF TRAINING

- 1) Lectures
Forest, forestry and forest products in Japan, etc.
- 2) Individual studies
The course is divided into three sub-courses, "Forest", "Forestry", and "Forest Products". Each sub-course is conducted every three years. The training subjects of each sub-course is as follows.
Forest – Forest environment
Forest microbiology
Forest insect ecology and management
Wildlife ecology and management
Forestry – Forest tree genetics/biotechnology
Forest regeneration and tending technology
Forest mechanization
Forest management
Forest Products – Microorganism/Enzyme
Chemical utilization
Chemical processing
Processing technology
Wood properties
Timber engineering
In 1992, sub-course on "Forest" is conducted.
- 3) Observation tours

5. FACILITIES AND INSTITUTIONS

- 1) Forestry and Forest Products Research Institute, Ministry of Agriculture, Forestry and Fisheries
- 2) Tsukuba International Centre, JICA

6. REMARKS

Training courses on Forest, on Forestry and on Forestry Products are provided every three years. In 1992, training course on Forest will be given.

FISHERIES

1. PERIOD

June 30, 1992 to December 14, 1992 (5.5 months)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Eight (8)

3. QUALIFICATIONS

- 1) University graduate or equivalent
- 2) Fishery cooperative experience of more than 3 years
- 3) Under 40 years of age
- 4) To have a sufficient command of English language

4. DESCRIPTION OF TRAINING

- 1) Lectures
 - Outline of fishery cooperatives, fish marketing, fisheries finance, fishery cooperative management, accounting of fishery cooperatives
 - Fisheries legislation, Fisheries Cooperatives Law
 - Fisheries administration, Fisheries economics
 - Resources management
 - Other essential subjects related to fishing industry
- 2) Observation tours
 - Fisheries cooperatives association
 - Fishing ports
 - Fishing markets
 - Fish processor plant of fishing companies
 - Fishermen's houses
 - Aquaculture farms, and some research institutes

5. FACILITIES AND INSTITUTIONS

Kanagawa International Fisheries Training Centre, JICA

6. REMARKS

It is desirable to hold TOEFL (Test of English as foreign language) score more than 500 points.

1. PERIOD

January 5, 1993 to March 19, 1993 (2.5 months)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Seven (7)

3. QUALIFICATIONS

- 1) Be presently engaged in study of fishing gear and methods by research work, education, fishing gear design or actual fisheries operation,
- 2) University graduate or equivalent,
- 3) Under 35 years of age,
- 4) To have a sufficient command of English language

4. DESCRIPTION OF TRAINING

- 1) Lecture, Experiment and Practice
 - Fishing Gear Design (Trawl and Gillnet)
 - Fishing Gear Construction (Trawl and Gillnet)
 - Fishing Operation (Gillnet)
 - Fishing Gear Materials
 - Fish Behaviour to Fishing Gear
 - Dynamics of Fishing Gear
 - General Knowledge on coastal fishing gear and methods improvement (Fishing boat, Infrastructure, Fishery management, Fishery resources)
- 2) Observation tours
 - Manufacturing plant for Fishing Gear, Vessel, Outboard motor, and Diesel engine
 - Fishing port
 - Fish market

5. FACILITIES AND INSTITUTIONS

- 1) Kanagawa International Fisheries Training Centre, JICA
- 2) Tokyo University of Fisheries
Yamaha Motor Co., Ltd.
Nichimo Co., Ltd.

6. REMARKS

1. PERIOD

April 7, 1992 to December 14, 1992 (8 months)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Twelve (12)

3. QUALIFICATIONS

- 1) Senior high school graduates or equivalent
- 2) Fishery experience of more than 3 years
- 3) Under 35 years of age
- 4) Sufficient command of spoken and written English

4. DESCRIPTION OF TRAINING

- 1) Lectures and practice
 - Fishing gear and methods of coastal fisheries in Japan
 - On board fishing training
 - Fishing practice by commercial fishing boats
 - Net handling practice
 - Model net construction
 - Engine handling practice
- 2) Observation tours
 - Fishing ports
 - Fish markets
 - Fishing operations by commercial fishing boats
 - Fish processing plants
 - Fishing Net & Rope Mfg., Plants
 - Fishing Machinery Mfg., Plants
 - Fishery Cooperatives

5. FACILITIES AND INSTITUTIONS

Kanagawa International Fisheries Training Centre, JICA

6. REMARKS

GENERAL AQUACULTURE 養殖一般

1. PERIOD

January 5, 1993 to June 22, 1993 (5.5 months)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Nine (9)

3. QUALIFICATIONS

- 1) University graduate or its equivalent
- 2) Experience in aquaculture activities more than three (3) years
- 3) Not more than thirty five (35) years of age
- 4) Sufficient command of English
- 5) Some assurance of being employed in aquaculture activities after the completion of training

4. DESCRIPTION OF TRAINING

- 1) Lecture
 - Aquaculture in general
 - Fish Physiology
 - Fish Nutrition
 - Fish Pathology
 - Bio Statistics
 - Aquacultural engineering
- 2) Practice
 - Artificial insemination and seed production (Larval rearing)
 - Pituitary extraction and hormone injection
 - Living food organisms culture
 - Fish anatomy and histology
 - Feed analysis and determination of digestibility
 - Water quality analysis
- 3) Observation Tours
 - National and regional fisheries research laboratories
 - Prefectural fisheries experimental stations
 - Sea farming center
 - University of fisheries
 - Various types of private fish farms and other relevant organization

tice of aquaculture

5. FACILITIES AND INSTITUTIONS

Kanagawa International Fisheries Training Centre, JICA

6. REMARKS

The purpose of the training course is to impart general information or outline of aquaculture, and general principles of aquaculture techniques to those who are employed in aquaculture activities. Seed production of aquatic animals, such as flounder (*Limanda yokohamae*), abalone (*Haliotis sieboldii*), kuruma prawn (*Penaeus japonicus*) and red sea bream (*Pagrus major*), will be dealt with according to the requests of participants. However, species for seed production will be restricted due to seasons and environment.

PRAWN PROPAGATION TECHNIQUE エビ増養殖技術

1. PERIOD

February 16, 1993 to July 31, 1993 (5.5 months)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Eight (8)

3. QUALIFICATIONS

- 1) Presently engaged either in practical production or research and have more than one year of occupational experience in this field,
- 2) Above junior college graduates or have an equivalent academic background,
- 3) Proficient in spoken and written English. Experience has shown that many participants find themselves unable to make progress in their training because of inadequate knowledge of English,
- 4) Not more than thirty-five years of age,
- 5) In good health, both physically and mentally, to undergo the training. Pregnancy is regarded as a disqualifying condition for participation in the course.

4. DESCRIPTION OF TRAINING

- 1) Biology of *Penaeus japonicus*
- 2) Seedling production of *Penaeus japonicus*
- 3) Technique of *Penaeus japonicus* culture
- 4) Disease control and feeds of *Penaeus japonicus*
- 5) Freshness preservation and marketing system of prawns
- 6) Marine environment and management of water quality in ponds
- 7) Seedling production of fishes and shellfishes
- 8) Aqua propagation in general

5. FACILITIES AND INSTITUTIONS

Yamaguchi Prefectural Naikai Sea Farming Center

6. REMARKS

1. PERIOD

July 21, 1992 to December 14, 1992 (5 months)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Seven (7)

3. QUALIFICATIONS

- 1) Be university graduates or have the equivalent academic background, and be experienced in business over 5 years,
- 2) Be presently engaged in either research or educational activity in fisheries,
- 3) Be not more than forty years old,
- 4) Have a sufficient command of spoken and written English,
- 5) Be in good health, both physically and mentally, to undergo the training. Pregnancy is regarded as a disqualifying condition for participation in the course.

4. DESCRIPTION OF TRAINING

- 1) Lectures
 - Management of Water Quality
 - Fisheries Hydrography
 - Marine Botany, Planktology and Benthos
 - Techniques in Preparing Seaweed Beds
 - Ichthyology
 - Seed Production for Shellfish, Shrimp and Marine Fish
 - Fisheries Engineering and Ecology on Artificial Reefs
 - Planning of Marine Ranch System
- 2) Study tours
 - Marine Ranching Field (Kyushu; Nagasaki, Fukuoka)
 - Seed Production Institute (Chugoku and Kansai; Kyoto, Hiroshima)
 - Seaweeds and Shrimp Culture Farm (Shikoku; Kagawa, Tokushima)

5. FACILITIES AND INSTITUTIONS

Usa Marine Biological Institute, Kochi University

6. REMARKS

MARINE FISH CULTURE 海面養殖

1. PERIOD

March 22, 1993 to August 14, 1993 (5 months)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Five (5)

3. QUALIFICATIONS

- 1) be those who have three years' experience or more on teaching, research and education in the field of marine fish culture, and be expected to be working on their return in this line.
- 2) have a sufficient command of spoken and written English.
- 3) be university graduates or have the equivalent academic background
- 4) be not more than forty years old in principle
- 5) be in good health, both physically and mentally, to undergo the training. Pregnancy is regarded as a disqualifying condition for participation in the training.

4. DESCRIPTION OF TRAINING

- 1) Lectures
 - Outline of Marine Fish Culture
 - Fish Physiology
 - Fish Nutrition and Feed
 - Seed Production
 - Management of Culture Ground
 - Fish Farming
 - Fish Pathology
 - Facilities for Culture
 - Business Administration and Marketing
 - Transportation of Live Fish
 - Legal Systems for Marine Culture
- 2) Practice
 - Culture of Living Foods
 - Seed Production of Sea Bream
 - Culture of Sea Bream and Yellow Tail
 - Preparation of Foods
 - Inspection of Water Quality
 - Examination of Fish Disease
- 3) Study Trip
 - Fish Culture Farm
 - Seed Production Center
 - Fish Market

5. FACILITIES AND INSTITUTIONS

- 1) Propulsion Conference of Nagasaki International Fisheries Training Affairs, Nagasaki City, Nagasaki Prefecture
- 2) Fishery Laboratory of Nagasaki Prefectural Fishery Centre
- 3) Nagasaki Municipal Fishery Centre

6. REMARKS

1. PERIOD

March 8, 1993 to June 20, 1993 (3.5 months)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Five (5)

3. QUALIFICATIONS

- 1) Be university graduates or have the equivalent academic background
- 2) Be presently engaged in either research or educational activity and have more than 3 years of occupational experience in this field.
- 3) Be not more than 40 years old
- 4) Have a sufficient command of spoken and written English
- 5) Be in good health, both physically and mentally, to undergo the training. Pregnancy is regarded as a disqualifying condition for participation in the course.

4. DESCRIPTION OF TRAINING

- 1) Lectures (L), Experiment and Practical Training (P)
 - Principles of Aquaculture (L)
 - Fish Nutrition (L)
 - Water Quality Management (L)
 - Fish Physiology (L,P)
 - Pathogenic Microbiology in Fish (P)
 - Marine Fish (L)
 - Bacteriology (L)
 - Fish Pathology (L)
 - Prevention of Epizootics in Fish (L,P)
 - Breeding Control of Freshwater Fish (P)
 - Breeding Control of Marine Fish (P)
 - Others
- 2) Study trip
 - Marine Fish Culture Farm
 - Freshwater Fish Culture Farm
 - Seeding Production Center
 - Fish Epizootic Prevention Institution

5. FACILITIES AND INSTITUTIONS

Simonoseki University of Fisheries

6. REMARKS

No. 175

HULL AND ENGINE MAINTENANCE OF SMALL FISHING BOAT

小型漁船の船体・機関保守

1. PERIOD

January 5, 1993 to June 22, 1993 (5.5 months)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Seven (7)

3. QUALIFICATIONS

- 1) Senior high school graduates or equivalent
- 2) Fishery boat or engine experience of more than 3 years
- 3) Under 40 years of age
- 4) Good working knowledge of English

4. DESCRIPTION OF TRAINING

- 1) Lectures and practice
 - Basic information about fisheries in Japan
 - Hull maintenance
 - Diesel engine and outboard engine
 - Marine auxiliaries
 - Knowledge and handling of FRP
- 2) Observation tours
 - Shipyards
 - Fishing ports
 - Marine engine factories
 - Marine engine operation by commercial fishing boats

5. FACILITIES AND INSTITUTIONS

Kanagawa International Fisheries Training Centre, JICA

6. REMARKS

1. PERIOD

August 10, 1992 to December 18, 1992 (4 months)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Ten (10)

3. QUALIFICATIONS

Applicants should:

- 1) be university graduates or have the equivalent academic background,
- 2) be those who have three years' occupational experience in the field of Fish Processing as a leader or personnel in charge of research or education and are going to be in charge of the above-mentioned field after going back to their countries.
- 3) be not more than 40 years old
- 4) have a sufficient command of spoken and written English,
- 5) be in good health, both physically and mentally, to undergo the training. Pregnancy is regarded as a disqualifying condition for participation in the training.

4. DESCRIPTION OF TRAINING

- 1) Lectures
 - Introduction to Fishery Economics
 - Theory of Fishery Products Distribution
 - Theory of Fishery Products Consumption
 - Theory of Fishery Industry Cooperative Association
 - Theory of Fishery Processing
 - Fishery Chemistry
 - Food Sanitary
 - Refrigeration
 - Theory of Fishery Processing Economy
 - Theory of Packing Materials
 - Theory of Fishery Processing Machines and Tools
 - Introduction to Food Inspection
 - Study for Manufacturing Canned Products
 - Theory of Fishery Processing Facilities
- 2) Practical Trainings
 - Refrigeration
 - Fish Processing
 - Fishery Chemistry
 - Food Sanitary
 - Manufacturing Canned Products
 - Know-how for Cooking Fish and Shellfishes
- 3) Observation Tours

5. FACILITIES AND INSTITUTIONS

- 1) Propulsion Conference of Nagasaki International Fisheries Training Center
- 2) Nagasaki Prefecture

6. REMARKS

This course is set up for the personnel in charge of teaching above-mentioned items to fishermen. It's not suitable for the managers of private fishery companies.

MARINE FOOD PROCESSING TECHNOLOGY 水産食品加工

1. PERIOD

June 30, 1992 to December 14, 1992 (5.5 months)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Seven (7)

3. QUALIFICATIONS

- 1) University graduates or equivalent
- 2) Qualified in their respective fields
- 3) Occupational experience of more than 3 years
- 4) Under 40 years of age
- 5) Sufficient command of English

4. DESCRIPTION OF TRAINING

- 1) Lectures and practical training
 - Present situation of marine resources, Fishery industry and marine processing in Japan, Fish culture, Environmental engineering
 - Japanese eating habits, Food supply in Japan, Food self-supply through technical advancement, Food packaging and storage Food distribution and its problems, Law concerned with food, Agricultural products, Livestock products, Marine products, etc.
 - In-plant training (Meat products, Frozen food, Marine products operation and application of analytical instruments, Analysis of food)
- 2) Observation tours
 - Fish market and port.
 - Coastal marine products processing plants
 - Bonito sticks processor and waste water disposal plant
 - Various types of marine food research laboratories.

5. FACILITIES AND INSTITUTIONS

- 1) Kanagawa International Fisheries Training Centre, JICA
- 2) Public Research Institutions
- 3) Food processing Factories (Food Manufacturing Plants)

6. REMARKS

MINING AND MINERALS

COAL MINE SAFETY 石炭鉱山保安

1. PERIOD

January 25, 1993 to April 24, 1993 (3 months)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Nine (9)

3. QUALIFICATIONS

- 1) University graduates or equivalent who have basic knowledge of mine safety with occupational experience of more than 3 years
- 2) Under 35 years of age in principle
- 3) Good working knowledge of English

4. DESCRIPTION OF TRAINING

- 1) Lectures and practical training
 - Outline of mining in Japan
 - Administration and Mine Safety Law
 - Approval test methods of mine appliances
 - Rock mechanics
 - Ventilation
 - Gas, coal and dust explosion
 - Mine fire
 - Explosion proof
 - Dust measurement
 - Explosives and blasting etc.
- 2) Individual training
- 3) Observation tours

5. FACILITIES AND INSTITUTIONS

- 1) National Institute for Resources and Environment, Ministry of International Trade and Industry
- 2) Tsukuba International Centre, JICA

6. REMARKS

MINERAL PROCESSING AND METALLURGY 選鉱製鉄

1. PERIOD

August 11, 1992 to August 09, 1993 (12 months)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Six (6)

3. QUALIFICATIONS

- (1) nominated by their government in accordance with the conditions IV-2 below.
- (2) engineers or researchers who have graduated from universities, majoring in mining and metallurgy programmes or similar subjects or those who have an equivalent academic background, with more than three years of occupational experience in the related field.
- (3) presently engaged in the research works at universities, vocational institutes, research and development divisions in industries.
- (4) proficient in spoken and written English. Experience has shown that many participants find themselves unable to make progress in their training because of inadequate knowledge of English.
- (5) over twenty-five (25) and under thirty-five (35) years of age.
- (6) in good health to undergo the course of training. Pregnancy is regarded as a disqualifying condition.

4. DESCRIPTION OF TRAINING

I) Subjects

- 1) Applied Mineralogy
Physical Chemistry of Minerals, Mineral Engineering, Resource and Environment Management
- 2) Mineral Processing
Crushing and Grinding of Ore, Particulate Technology, Physical Chemistry of Flotation
- 3) Ferrous Extractive Metallurgy
Pretreatment of Ore, Ironmaking, Steelmaking, Solidification
- 4) Non-ferrous Extractive Metallurgy
Pyrometallurgy, Hydrometallurgy, Electrometallurgy, Environmental Chemistry
- 5) Process Analysis and Simulation of Metallurgical Process
Transport Phenomena, Process Simulation, Optimum Design of Processes
- 6) Materials Science for Metallurgist
Introduction to Materials Science, Ceramics and Metal Processing.
- 7) Selected Topics in Mineral Processing and Metallurgy
Energy Resources, Data Bank System, System Engineering, Seminar.

II) Methodology

- 1) Group Study with Lectures
 - a) Physical Chemistry of Minerals and Mineral Processing*
 - b) Fundamentals in Metallurgical Thermodynamics*

- c) Fundamentals in Metallurgical Kinetics*
- d) Applied Mineralogy and Mineral Processing
- e) Ferrous Extractive Metallurgy
- f) Non-Ferrous Extractive Metallurgy
- g) Transport Phenomena and Process Analysis
- h) Japanese Language and Culture*
- i) Advanced course in Mineral Processing and Metallurgy (optional programme)

- 2) Group Study with Lectures and Practice
Instrumental Analysis (Principle and Experiments)
 - X-ray Diffraction*
 - X-ray Fluorescent Analysis*
 - Atomic Absorption Spectroscopy*
 - Electron Probe Microanalysis*
 - Calorimetry (DSC, DTA) (on demand)
 - Materials Testing (on demand)
 - Computer Training (on demand)
 - Chemical Analysis (on demand)
 - Laboratory Automation (on demand)

- 3) Independent Study
Participants are expected to have more professional experiences in respective research programmes under supervision of the professors of SENKEN.

*: All participants may be suggested to have the credit of this subject.

- 4) Observation tours

5. FACILITIES AND INSTITUTIONS

Research Institute of Mineral Dressing and Metallurgy (SENKEN), Tohoku University

6. REMARKS

Japanese language lesson is also offered in this course.

1. PERIOD

July 30, 1992 to November 26, 1992 (4 months)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Twenty (20)

3. QUALIFICATIONS

- 1) University or College graduates or equivalent with basic knowledge of mineral mining or smelting
- 2) Qualified in their respective fields with more than five (5) years of practical experience
- 3) Under 40 years of age
- 4) Good working knowledge of English

4. DESCRIPTION OF TRAINING

- 1) Lectures
 - Technology, policy and administration of mining industry and smelting in Japan
- 2) Observation tours
 - Visits to:
 - Mines and Smelters
 - Manufactures of Related Equipments
 - National Research Institute for Pollution and Resources
 - Geological Survey of Japan
 - Akita University
 - Government Industrial Research Institute, Tohoku

5. FACILITIES AND INSTITUTIONS

International Institute for Mining Technology (Minetec)

6. REMARKS

- 1) Coal mining industry will not be covered in this course
- 2) The training program has following three groups,
 - mining geologist,
 - mining engineer
 - milling & smelting engineer

1. PERIOD

August 25, 1992 to April 21, 1993 (8 months)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Five (5)

3. QUALIFICATIONS

- 1) be nominated by their government in accordance with the conditions below.
- 2) be university graduates in the field of chemical, mining, mechanical or other related technology with occupational experience of more than three years. Master's or doctoral degree is preferable. Administrative officers are not qualified.
- 3) be between twenty-five (25) and thirty-five (35) years of age.
- 4) have a sufficient command of spoken and written English or Japanese and
- 5) be in good health, to undergo the course of training. Pregnancy is regarded as a disqualifying condition.

4. DESCRIPTION OF TRAINING

After technical orientation, participants pursue individual research work under a designated research subject about 8 months.

The following five groups in GIRIT would offer programs for the technical training.

- I) Metal separation and chemical analysis group
 1. Solvent extraction of rare earth elements
 2. Ion-exchange separation of gallium or indium using metal-selective polymer resin
 3. Ion-exchange separation of rare earth metals
 4. Separation of platinum group metals by ion-pair formation
- II) Electrochemical corrosion-testing group
 1. Corrosion test aqueous solutions at high temperature and high pressure
 2. Electrochemical measurement for corrosion resistance
- III) Material group
 1. Development of functionally gradient ADI
- IV) Thermal science - Design and Analysis group
 1. Heat and mass transfer in geothermal reservoirs and aquifers
 2. Heat extraction from the ground water and development of ground water velocimetry
 3. Thermophysical property measurement
 4. Fundamental studies on buoyancy driven flows with and without a porous matrix
- V) Computer aided instrumentation group
 1. Non-contact optical method by laser spot and X-Y stages
 2. Non-contact imaging method by TV camera and microscope
 3. Measurement by three dimensional measurement apparatus

5. FACILITIES AND INSTITUTIONS

Government Industrial Research Institute, Tohoku

6. REMARKS

INDUSTRY

No. 182

**SENIOR CLASS SEMINAR ON SMALL INDUSTRY
DEVELOPMENT II** 中小工業開発セミナーII

1. PERIOD

July 2, 1992 to August 1, 1992 (1 month)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Twelve (12)

3. QUALIFICATIONS

- 1) University graduates or equivalent
- 2) Senior administrative officials in charge of implementation and/or planning of small industry development
- 3) Occupation experience of more than 5 years
- 4) More than 30 years of age
- 5) Good working knowledge of English

4. DESCRIPTION OF TRAINING

- 1) Lecture and discussions
 - a) General Environment for Small Industry
 - Economic Situation
 - Political Situation
 - Social & Cultural Conditions
 - Development Policies
 - b) Japanese Case Study
 - Financing
 - Tax and Credit
 - Management
 - Technology
 - Human Resources
 - c) International Comparative Study
 - Ancillarization
 - Rural Industrialization
 - Export-Oriented Industrialization
 - Institutional Set-ups
(Industrial Estate, Cooperative)
 - d) Policy Making Workshop
- 2) Observation Tours

5. FACILITIES AND INSTITUTIONS

- 1) Aichi Industrial Research Association
- 2) Special Steering Committee for Small Industry Development Seminar

6. REMARKS

Senior class seminar

IMPLEMENTATION OF TOTAL QUALITY CONTROL AND
STANDARDIZATION ACTIVITIES II T Q C · 標準化活動実践 II

1. PERIOD

June 25, 1992 to September 6, 1992 (2.5 months)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Thirteen (13)

3. QUALIFICATIONS

- 1) be working for promotion of standardization and/or quality control with experience of more than three (3) years in government office, public corporation, public or private institute, or private company.
- 2) be under forty (40) years of age,
- 3) be graduates of college or university, or have an equivalent educational background,
- 4) continue working in the above mentioned field after returning to their home countries,

4. DESCRIPTION OF TRAINING

- | | |
|---|---|
| <ol style="list-style-type: none"> 1) Lectures <ol style="list-style-type: none"> a) Industrial Standardization <ul style="list-style-type: none"> - Industrial Standardization Activities in Japan - Japanese Industrial Standards (JIS) - JIS Marking System - Company Standardization - International Movements on Standardization b) TQC (including actual practice) <ul style="list-style-type: none"> - Philosophy of TQC - Problem Solution by Statistical Methods - Sophisticated Techniques of TQC (Experimental Design Method etc.) - How to Promote TQC - Small Group Activities (QC Circle) - Quality Assurance - Metrology - Others | <ol style="list-style-type: none"> c) Other Relative Subjects <ul style="list-style-type: none"> - Ergonomics and Standardization - 7 Management Tools - Approach to ISO 9000 Series - Sampling Inspection 2) Technical Visits <ul style="list-style-type: none"> - JIS Licenced Factories - Small and Medium Scale Industries - Metrology Institute - Inspection Institutes 3) Team Study (Exercises, Report Making, Report Presentation) 4) Country Reports Presentation 5) Observation Tour |
|---|---|

5. FACILITIES AND INSTITUTIONS

- 1) Standards Department, Agency of Industrial Science and Technology, Ministry of International Trade and Industry
- 2) Japanese Standards Association (JSA)
- 3) Tokyo International Centre (Hatagaya), JICA

6. REMARKS

SEMINAR ON INDUSTRIAL STANDARDIZATION AND QUALITY CONTROL

工業標準化・品質管理シニアセミナー

1. PERIOD

October 27, 1992 to November 20, 1992 (1 month)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Seven (7)

3. QUALIFICATIONS

- 1) be working for promotion of industrial standardization and/or quality control in government office, public corporation, public or private institute, or private company,
- 2) be ranked as senior-class staff (director of department or its equivalent) presently engaged in policy-making of industrial standardization and/or quality control,
- 3) be university graduates or equivalents,
- 4) be between thirty five (35) and fifty (50) years of age,
- 5) have a sufficient command of spoken and written English

4. DESCRIPTION OF TRAINING

- 1) Lectures
 - a) Total Quality Control
 - b) Small Group Activity
 - c) Measurement Traceability in relation to Quality Assurance
 - d) Case Study for JIS Authorized Factory
 - e) Harmonization with ISO 9000 Series in Japan
 - f) Unified Market in Europe and International Standardization
- 2) Observation
 - a) Tsukuba Science City
 - b) Machine Tools Co., Ltd.
 - c) Motor Co., Ltd.
 - d) JIS permitted factory
- 3) Discussion
 - a) Comparative Study (country report)
 - b) Summary Discussion
- 4) Sightsceing (Hiroshima, Kyoto)

5. FACILITIES AND INSTITUTIONS

- 1) Standards Department, Agency of Industrial Science and Technology, Ministry of International Trade and Industry (MITI)
- 2) Japanese Standards Association (JSA)

6. REMARKS

INDUSTRIAL PROPERTY SYSTEM 工業所有権制度

1. PERIOD

September 3, 1992 to November 4, 1992 (2 months)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Nine (9)

3. QUALIFICATIONS

- 1) University graduates or equivalent
- 2) Officials who have experience as:
Group A – a general administration officer in the industrial property offices or related organizations,
Group B – an examiner for examination of patent, design of trademark applications in a country which does not have the industrial property, system.
- 3) Under 40 years of age
- 4) Good working knowledge of English

4. DESCRIPTION OF TRAINING

Group A and B

- 1) Brief introduction to the Japanese Patent Office
- 2) Observation of the Japanese Patent Office (JPO) and Japan Institute of Invention and Innovation (JIII)
- 3) Lectures and discussions on:
 - a) Outline of the Japanese Patent Law and Utility Model Law
 - b) Outline of the Japanese Trademark Law
 - c) Outline of the Japanese Design Law
 - d) Management of Patent Information
 - e) Management of Patent Classification
 - f) Consultation and Agent Activities
 - g) Industrial Property Information Services
 - h) Others
- 4) Case Studies
- 5) Group Discussion based on Country Report prepared by the participants (See Appendix III on page 15)
- 6) Visit to Enterprises

Group A

- 1) Lectures and discussions:
 - a) Present Conditions of Patent Administration
 - b) Use and Economic Value of Patents
 - c) Industrial Property Management
 - d) Technology Transfer and Licensing
 - e) Protection of Trademark and Prevention of Unfair Trade

Group B

- 1) Individual Training on Examination Practice on:
 - a) Classification
 - b) Search
 - c) Decision and Making Report
- 2) Group Training on Examination Practice on:
 - a) Investigation of Evidences
 - b) Practice

5. FACILITIES AND INSTITUTIONS

- 1) Japanese Patent Office (JPO), Ministry of International Trade and Industry
- 2) Japan Institute of Invention and Innovation (JIII)
- 3) Tokyo International Centre (Hatagaya), JICA

6. REMARKS

SEMINAR ON INDUSTRIAL PROPERTY 工業所有権セミナー

1. PERIOD

June 2, 1992 to June 27, 1992 (1 month)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Six (6)

3. QUALIFICATIONS

- 1) be senior officials (Directors of the Department or the equivalents) of a competent government ministry or agency (industrial property office or its supervisory ministry) whose duties concern industrial property policy-making
- 2) have a sufficient command of spoken and written English,
- 3) be university graduates or the equivalent,
- 4) be between thirty (30) and fifty (50) years of age,

4. DESCRIPTION OF TRAINING

- 1) General Orientation to Japan and the Japanese
- 2) Orientation/Brief introduction to the Japan's industrial property system with VTR
- 3) Lectures followed by discussions on:
 - 1) The role of the industrial property system
 - 2) The Japan's industrial property system
 - 3) Organizations surrounding the Japanese Patent Office
 - 4) The role of industrial property information
 - 5) Automation at the Japanese Patent Office
 - 6) Transfer technology and licensing
 - 7) Utilization of the system by industrial property users
 - 8) Outline of the Japanese Patent Office's Cooperation
- 4) Visit to:
 - 1) Japanese Patent Office (JPO)
 - 2) Japan Institute of Invention and Innovation (JII)
 - 3) Japan Patent Information Organization (JPIO)
 - 4) Patent attorney's office
 - 5) Private companies
 - 6) National Commendation for Invention
- 5) Group Discussion based on the participants' country report

5. FACILITIES AND INSTITUTIONS

- 1) Japanese Patent Office (JPO), Ministry of International Trade and Industry
- 2) Japan Institute of Invention and Innovation (JII)

6. REMARKS

1. PERIOD

June 1, 1992 to December 19, 1992 (6.5 months)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Ten (10)

3. QUALIFICATIONS

- 1) University graduates or equivalent
- 2) Presently engaged in measurement or inspection of measuring instruments at governmental, semi-governmental or local metrology services
- 3) Over 25 and under 40 years of age
- 4) Good working knowledge of English

4. DESCRIPTION OF TRAINING

- 1) Lectures and individual studies
 - Essentials of metrology and measurement standards
 - International system of units
 - Regulations related to metrology
 - Standardization related to metrology
 - Export inspection system
 - Fundamental theory of measurement
 - Maintenance of measurement standards
 - Specialized practical training
- 2) Observation tours
Related institutions

5. FACILITIES AND INSTITUTIONS

- 1) National Research Laboratory of Metrology (NRLM)
- 2) Tsukuba International Centre, JICA
- 3) Japan Measuring Instruments Federation

6. REMARKS

1. PERIOD

January 11, 1993 to March 12, 1993 (2 months)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Ten (10)

3. QUALIFICATIONS

- 1) be presently engaged in the work relating to certification, inspection and/or testing,
- 2) be under thirty (30) years of age,
- 3) be graduates of college or university, or have an equivalent educational background,
- 4) continue working in the above mentioned field after returning to their home countries,
- 5) have a sufficient command of spoken and written English

4. DESCRIPTION OF TRAINING

1) Lectures

- | | |
|---------------|---|
| Certification | <ul style="list-style-type: none"> - Outline of Certification System - Compulsory Standards & Voluntary Standards - Consumer Product Safety Law - Measurement Control System based on the Measurement Law - Certification system based on Electrical Appliance and Material Control Law - Industrial Standardization Law - JIS & JIS Marking System - Procedure for JIS Marking System - Measures Required by Plants Desiring JIS Authorization - Inspection for Export Goods |
| Inspection | <ul style="list-style-type: none"> - Outline of Inspection - Sampling Inspection |

2) Technical visits

3) Observation tours

5. FACILITIES AND INSTITUTIONS

- 1) Japanese Standards Association (JSA)
- 2) Standards Department, Agency of Industrial Science and Technology, Ministry of International Trade and Industry (MITI)
- 3) Tokyo International Centre (Hatagaya), JICA

6. REMARKS

1. PERIOD

September 1, 1992 to November 13, 1992 (2.5 months)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Five (5)

3. QUALIFICATIONS

- 1) Practical experience in industrial design work for more than 5 years
- 2) Under 35 years of age
- 3) Good working knowledge of English

4. DESCRIPTION OF TRAINING

- 1) Guidance
 - Orientation
 - Presentation of Country Report
- 2) Lecture
 - Design Promotion Policy in Japan
 - Outline and Advanced Knowledge on Industrial Product Design
 - Technology
 - Advertising
 - Design Process
 - Marketing
 - Case Study
 - Design Management
- 3) Study Visits
- 4) Practical Training
 - Idea Development
 - Design Work
 - Presentation Technique
 - Finish Work
- 5) Presentation and Evaluation

5. FACILITIES AND INSTITUTIONS

- 1) Japan Industrial Design Promotion Organization (JIDPO)

6. REMARKS

There are three subjects in this course as mentioned below, and one of these three subjects in order will be implemented respective fiscal year, alternatively

- (i) Industrial design (Industrial Products)
- (ii) Package design (Package of Foods and General Goods)
- (iii) Interior design (Furniture, Space)

No. 190

**MANUFACTURING AND APPLICATION TECHNOLOGY FOR
HIGH TEMPERATURE REFRACTORIES** 高温構築材応用技術

1. PERIOD

September 17, 1991 to March 6, 1992 (6 months)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Eight (8)

3. QUALIFICATIONS

- 1) University graduates or equivalent academic achievements with the technical experience of at least 3 years in production
 - Preferably B. Sc. in chemistry or physics and most preferably B. Sc. in ceramic engineering
- 2) Be presently engaged in refractory production or research work
- 3) Between 26 and 40 years of age
- 4) Proficient in spoken and written English

4. DESCRIPTION OF TRAINING

- 1) Lectures and practical training
 - Basics on High Temperature Refractories
 - Evaluation of individual raw materials and compound materials
 - Application of high temperature refractories for industrial furnaces and kilns
 - Application Technology of high temperature refractories
- 2) Observation
 - Raw material manufacturing process
 - Various kinds of industrial kilns and furnaces
 - Ceramic plants and research institute

5. FACILITIES AND INSTITUTIONS

Technical Research Laboratory of Mino Yogyo Co., Ltd.

6. REMARKS

1. PERIOD

August 27, 1992 to March 6, 1993 (6 months)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Eight (8)

3. QUALIFICATIONS

- 1) University graduates or equivalent
- 2) Presently engaged in this field at industries, research institutes or vocational institutes
- 3) Occupational experience of more than 3 years
- 4) Between 26 and 40 years of age
- 5) Good working knowledge of English

4. DESCRIPTION OF TRAINING

1) Lectures and practical training

Quality control: To study concept of quality control through the ideas of mean value, dispersion, etc. and how to summarize data for the quality control

Body preparation: To study tiles of earthenware, stoneware and porcelain and how to evaluate body preparation through lectures and experimentation

Forming: To study influence of green body on formed ware and structure of forming machine in dry and wet method

Analysis and evaluation of raw materials for the better-suited tile manufacturing:
To study the theory to evaluate and to apply raw materials for tile with analyzed data of raw materials

Glaze preparation: To study following items:
properties of materials, design and its printing methods, affinity of glaze to body, coloration of glaze in firing

Kiln and firing: To study construction of a tunnel kiln, kiln control technology and heat balance

Other products: Sanitary ware, Common brick, Roof tile, Clay pipe

- 2) Report presentation and Discussion
- 3) Observation tours

5. FACILITIES AND INSTITUTIONS

INAX Corporation

6. REMARKS

The large part of this training course is allocated to the production process and technique of ceramic wall tile from raw materials to finished products. In addition, as for the other ceramic building materials (common brick, roof tile, sanitary ware, and so on), their production technique and problems are introduced during lectures and visits.

1. PERIOD

May 7, 1992 to August 3, 1992 (3 months)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Seven (7)

3. QUALIFICATIONS

- 1) University graduates or equivalent
- 2) Occupational experience of more than 3 years
- 3) Between 30 and 40 years of age
- 4) Good working knowledge of English

4. DESCRIPTION OF TRAINING

- 1) Lectures and practical training
 - Resisting materials for wear, corrosion, chemicals etc.
 - Functional materials for photochemical, electromagnetic etc.
 - Superconductive materials
 - Application technology for other high technology materials
 - Application technology for future materials

5. FACILITIES AND INSTITUTIONS

- 1) Japan Fine Ceramics Center
- 2) Government Industrial Research Institute, Nagoya
- 3) Universities and public institutes
- 4) Related industries

6. REMARKS

1. PERIOD

January 19, 1993 to March 2, 1993 (1.5 months)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Eleven (11)

3. QUALIFICATIONS

- 1) Presently holding senior positions involving high responsibility in the field of petrochemical industry or its development programme
- 2) Not more than 40 years of age
- 3) Have a sufficient command of spoken and written English

4. DESCRIPTION OF TRAINING

1) Lectures

(1) General Orientation to Japan

- a. The society and natural features of Japan (Lecture),
- b. The culture and history of Japan (Lecture),
- c. The economy of Japan (Lecture),
- d. The education system of Japan (Lecture),
- e. The politics and government administration of Japan (Lecture), and

(2) General Remarks

- a. General features of Petrochemical Industries
- b. General features of Petrochemical technology
- c. World Petrochemical Industry
- d. Petrochemical Industry in Japan

(3) Topics related to Management

- a. Marketing
- b. Planning of Petrochemical Complex
- c. Production Scheduling in Petrochemical Plants
- d. Plant Realization

c. Safe Keeping Measures in Petrochemical Plant

f. Protection of Environment

g. Maintenance of Petrochemical Plant

h. Petrochemical Plant Construction and Engineering-Construction Company

(4) Topics on related Industry and Technology

- a. Plastic Processing Technology

2) Presentations and Discussions

- a. Country Report Presentation
- b. Discussion among the participants and Japanese resource personnels

3) Field Visits

Observation visits to petrochemical and relevant plants, and governmental institute (eg. Ethylene, Synthetic fibre, Synthetic rubber, Tyre, Automobile, Detergent, and other downstream industries, as well as engineering firms)

5. FACILITIES AND INSTITUTIONS

Ministry of International Trade and Industry (MITI)

Japan Petrochemical Industry Association (JPCA)

6. REMARKS

CHEMICAL TECHNOLOGY 化学技術研究

1. PERIOD

August 31, 1992 to August 29, 1993 (12 months)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Nine (9)

3. QUALIFICATIONS

- 1) University graduates or equivalent in the field of chemical technology
- 2) Occupational experience as researchers of more than three (3) years in respective fields of chemical technology
- 3) Over 25 and under 40 years of age
- 4) Good working knowledge of English

4. DESCRIPTION OF TRAINING

- 1) Orientation at JICA and the Laboratory
- 2) List of subjects for individual studies to be selected
 - Optical properties of organic crystals
 - Organic synthesis under high pressure
 - Catalysis engineering - Environmental catalysis
 - Synthesis of bioactive compounds
 - Gene technology - Gene expression in yeast and protein engineering
 - Production of functional lipids
 - Biochemical and biophysical study of calcium transport and calcium binding proteins
 - Environmental chemistry / Degradation and elimination of polluting material
 - Removal of inorganic pollutants from industrial effluent
 - Production of liquid fuel from vegetable fat and oil using supercritical fluid
 - Reaction engineering for utilization of heavy oils and coals
 - Development of inorganic membranes and membrane reactors
 - Environmental measurement technique and evaluation
- 3) Observation tours

5. FACILITIES AND INSTITUTIONS

- 1) National Chemical Laboratory for Industry, Ministry of International Trade and Industry
- 2) Tsukuba International Centre, JICA

6. REMARKS

1. PERIOD

August 25, 1992 to February 18, 1993 (6 months)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Five (5)

3. QUALIFICATIONS

- 1) have master's degree or be equivalent with scientific experience of more than two years after university graduation.
- 2) be engaged in surface chemistry, organic chemistry, synthetic chemistry, applied chemistry, industrial chemistry, materials chemistry, catalytic science, electrochemistry or related fields.
- 3) have a good command of spoken and written English
- 4) be under 40 years old
- 5) be in good health, both physically and mentally, to pursue the study. Pregnancy is regarded as disqualified.

4. DESCRIPTION OF TRAINING

- 1) Research for catalytic science
- 2) Observation and study tours to related facilities

The purpose of the course is to enable participants to understand both basic and practical aspects of catalysis on four main themes in catalysis: homogeneous catalysis, heterogeneous catalysis surface science and electrocatalysis. It is aimed to help and encourage the participants through laboratory courses in one of these themes to engage themselves in catalytic research field in future.

5. FACILITIES AND INSTITUTIONS

Catalysis Research Center, Hokkaido University

6. REMARKS

1. PERIOD

August 6, 1992 to October 30, 1992 (3 months)

2. NUMBER of PARTICIPANTS TO BE RECEIVED

Eight (8)

3. QUALIFICATIONS

- 1) University graduates or equivalent
- 2) Qualified in this field for promotion of the industry at a government organization
- 3) Good working knowledge in English
- 4) Between 25 and 45 years of age

4. DESCRIPTION OF TRAINING

- 1) Lectures and training
 - Basic technology of bioindustries
 - Applied technology of bioindustries
 - Strategy of bioindustries
 - Effective application of biological resources
 - Equipments & technology for bioindustries
 - Key points for planning & execution of bioindustries
- 2) Observation tours

5. FACILITIES AND INSTITUTIONS

- 1) Nagoya International Training Centre
- 2) Japan Bioindustry Association (JBA)
- 3) Public institutes & universities
- 4) Related industries

6. REMARKS

No. 197

ORGANIC FINE-CHEMICALS TECHNOLOGY 有機ファインケミカルズ工学

1. PERIOD

May 21, 1992 to September 21, 1992 (4 months)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Six (6)

3. QUALIFICATIONS

- 1) Master's or doctor's degree holder majoring in organic chemistry, or organic industrial chemistry (especially synthesis and application of color-stuff chemistry, dyes, detergents or intermediates of organic chemicals)
- 2) At least three (3) years of experience of manufacture, application or research in organic chemical technology
- 3) Between twenty-five (25) and thirty-five (35) years of age
- 4) Good working knowledge of English or Japanese

4. DESCRIPTION OF TRAINING

Lectures, practices and factory observations on compounding techniques, application techniques of organic finechemicals, preventive measures against environmental pollution, handling techniques of analytical instruments

5. FACILITIES AND INSTITUTIONS

Osaka Municipal Technical Research Institute (OMTRI)

6. REMARKS

POLYMER MATERIALS AND TECHNOLOGY 高分子材料工学

1. PERIOD

September 3, 1992 to December 20, 1992 (4 months)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Six (6)

3. QUALIFICATIONS

- 1) University graduates having majored in organic chemistry or organic industrial chemistry, polymer chemistry or chemical engineering, or equivalent
- 2) At least 3 years of experience in production, test, research, application or development in organic chemical industry or polymer industry
- 3) Between 25 and 35 years of age
- 4) Good working knowledge of English or Japanese

4. DESCRIPTION OF TRAINING

Lectures, practices and observations concerning production techniques of high performance, high functional polymer materials; molding techniques of high performance polymer materials; application techniques of functional polymer materials; characterization techniques of polymer materials; testing and evaluation techniques of polymer materials

5. FACILITIES AND INSTITUTIONS

Osaka Municipal Technical Research Institute (OMTRI)

6. REMARKS

1. PERIOD

August 24, 1992 to March 28, 1993 (7 months)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Five (5)

3. QUALIFICATIONS

- 1) University graduates in the field of polymer science and technology
- 2) Occupational experience of more than 3 years as a researcher
- 3) Over 25 and under 35 years of age
- 4) Good working knowledge of English or Japanese

4. DESCRIPTION OF TRAINING

- 1) Introductory lectures 1 week
Introduction of RIPT, Topics concerning the individual research training
- 2) Individual studies 28 weeks
Applicants should select 3 subjects out of the following with priority
 - (1) Synthesis and Properties of Photofunctional Polymers
 - (2) Synthesis and Characterization of Photoreactive polymers
 - (3) Polymer Materials containing Noble Metal Clusters
 - (4) Thermosensitive Polymers
 - (5) Preparation and Characterization of Organic Polysilanes
 - (6) Structure and Properties of Fullerene (C_{60} and C_{70}) thin Films
 - (7) Structure and Properties of Oriented Semicrystalline Polymers
 - (8) Thermal Studies on Polymer-Water Interaction
 - (9) Rheological Properties of Fibre/Particle Reinforced Polymer Melts
 - (10) Spinning of Porous Hollow Fibres and Their Characterization
 - (11) Synthesis and Characterization of Biomaterials
 - (12) Biomimetic Materials
 - (13) Evaluation of Separation Characteristics of a Polymeric Membrane
 - (14) Weatherability of Polymeric Materials
 - (15) Numerical Analysis of Composite Materials by Computer
 - (16) Man-Machine Interface Programming for Apparel CAD System
- 3) Observation tour 1 week

5. FACILITIES AND INSTITUTIONS

- 1) Research Institute for Polymers and Textiles (RIPT), Agency of Industrial Science and Technology, Ministry of International Trade and Industry
- 2) Tsukuba International Centre, JICA

6. REMARKS

1. PERIOD

January 13, 1993 to July 11, 1993 (6 months)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Six (6)

3. QUALIFICATIONS

- 1) Senior engineers engaged in research, development and/or manufacture in the field of glass technology
- 2) Occupational experience of at least 3 years
- 3) Under 35 years of age
- 4) University graduates from department of technology with Master's degree or above
- 5) Good working knowledge of English
- 6) Good health, both physically and mentally, to undergo the training

4. DESCRIPTION OF TRAINING

- 1) Lectures and Practices
 - Functionality and future prospects of glass
 - Function related to light
 - Function related to electricity
 - Function related to surface
 - Raw materials of glass, purity
 - Glass structure and function
 - Melting techniques, including special melting techniques
 - Evaluation techniques of functionality
 - Application of functional glass
 - Mixing of raw materials of special glass, melting and forming
 - Heat treatment of glass
 - Measurement of functionality such as permeability and refraction index, etc.
 - Measurement of insulating property and conductivity
 - Measurement of modulus of elasticity and strength, etc.
- 2) Observations and study tours

5. FACILITIES AND INSTITUTIONS

Governmental Industrial Research Institute, Osaka (Agency of Industrial Science and Technology, Ministry of International Trade and Industry)

6. REMARKS

QUALIFIED METAL CASTING TECHNOLOGY II 高品位鋳物技術II

1. PERIOD
September 10, 1992 to March 6, 1993 (6 months)
2. NUMBER OF PARTICIPANTS TO BE RECEIVED
Five (5)
3. QUALIFICATIONS
 - 1) University graduates or equivalent
 - 2) Presently engaged in practical works of foundry engineering at research institutes, educational institutes or industries
 - 3) Occupational experience of more than 2 years
 - 4) Under 35 years of age
 - 5) Good working knowledge of English
4. DESCRIPTION OF TRAINING
 - 1) Lectures and practical training
 - High technology in materials
 - Moulding high technology
 - Advanced melting technology
 - Modern casting design
 - Equipment modernization
 - 2) Observation tours
5. FACILITIES AND INSTITUTIONS
 - 1) Nagoya International Training Centre (NITC), JICA
 - 2) Government Industrial Research Institute, Nagoya
 - 3) Aichi Prefectural Industrial Research Institute
 - 4) Metal Industries Institute, Mie Prefecture
 - 5) Foundry Industries
6. REMARKS

No. 202

SURFACE MODIFICATION TECHNOLOGY FOR MATERIALS

(Anti-Corrosion, Surface Treatment of Metal, non-metal & new materials) II

1. **PERIOD** 表面改質技術（金属・非金属・新材料及び防食）II
May 7, 1992 to September 19, 1992 (5 months)

2. **NUMBER OF PARTICIPANTS TO BE RECEIVED**

Five (5)

3. **QUALIFICATIONS**

- 1) University graduates or equivalent
- 2) Qualified in their respective fields
- 3) Occupational experience of more than 2 years
- 4) Under 35 years of age
- 5) Good working knowledge of English

4. **DESCRIPTION OF TRAINING**

- 1) Lectures and/or Practical Training
 - Ni, Cr, Zn coat, Al-anodizing, phosphating
 - Plasma surface modification
 - Physical, chemical vacuum vapour deposit
 - Surface functionizing for electronics
 - Modification for composite, new materials
 - Surface modification for super conductive materials
 - Theory and practice of corrosion
 - Waste water treatment & recycling
 - Related high technology
- 2) Observation tours

5. **FACILITIES AND INSTITUTIONS**

- 1) Industrial Research Institute, Aichi Prefecture
- 2) Nagoya Municipal Industrial Research Institute
- 3) The Plating Industrial Association of Aichi Prefecture
- 4) Nagoya International Training Centre (NITC), JICA
- 5) Industries

6. **REMARKS**

1. PERIOD

November 5, 1992 to March 6, 1993 (4.5 months)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Eight (8)

3. QUALIFICATIONS

- 1) be university graduate majored in metallurgical or mechanical engineering or the equivalent,
- 2) be currently engaged in the field of electrical steel making for more than three (3) years and not be academic researchers or technicians,
- 3) be under thirty five (35) years of age,
- 4) have a sufficient command of spoken and written English

4. DESCRIPTION OF TRAINING

- 1) Lectures and practical training
 - Steel materials
 - Electric arc furnace equipment and control units
 - Electrical steel making and its control
 - Continuous casting operation and computerized control
 - Secondary refining technology
 - Quality control
 - Others (refractories, electrodes, etc.,)
- 2) Observation tours
 - Control techniques of arc furnace melting
 - Control techniques of continuous casting
 - Other related techniques

5. FACILITIES AND INSTITUTIONS

- 1) Aichi Steel Works, Ltd.
- 2) Chubu Steel Plate Co. Ltd.
- 3) Daido Steel Corporation
- 4) Topy Industries Ltd.
- 5) Government Industrial Research Institute, Nagoya
- 6) Nagoya International Training Centre (NITC), JICA

6. REMARKS

STEEL PROPERTIES FOR FABRICATION 鋼材の加工と加工特性

1. PERIOD

June 8, 1992 to October 10, 1992 (4 months)

2. NUMBER OF PARTICIPANTS TO BE RECEIVED

Nine (9)

3. QUALIFICATIONS

- 1) those who have three years' occupational experience of more in the field of production, fabrication, or inspection steel products.
- 2) those who are university graduates or have the equivalent academic background, whose speciality is metallurgy, or mechanical engineering.
- 3) not more than 35 years of age
- 4) have a sufficient command of spoken and written English.

4. DESCRIPTION OF TRAINING

- | | |
|--|---|
| <ol style="list-style-type: none"> 1) Fundamental Properties of Steel <ul style="list-style-type: none"> - Equilibrium Diagram - Heat Treatment - Weldability - Fatigue - Tribology - Corrosion - Fracture and Fractography 2) Steel Production and Properties <ul style="list-style-type: none"> - Iron Making - Steel Making - Heavy Plates - Salpes - Bars and Wire Rod - Hot Rolled Sheets - Welded Pipes - Seamless Tubes - Cold Rolled Sheets - Surface Treated Sheets - Stainless Steel - Steel Standard | <ol style="list-style-type: none"> 3) Techniques of Testing and Inspection <ul style="list-style-type: none"> - Material Testing (General) - Material Testing (Sheets) - Non-Destructive Testings - Physical Testings - Instrumental Analysis 4) Casting, Forging and Welded Structures <ul style="list-style-type: none"> - Iron Casting - Casting Defect and Counter Measure - Ingot Making and Steel Casting - Forging and Heat-Treatment - Forging Defect and Counter Measure - Fabrication of Steel Structure 5) Quality Control 6) Study and Visit to Related Industries <ul style="list-style-type: none"> - Steel Fabrication in Automobile Maker - Electric Arc Furnace and Bar Rolling - Study Trip - Others 7) Others |
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5. FACILITIES AND INSTITUTIONS

- 1) Kitakyushu International Training Association
- 2) Kyushu Institute of Technology
- 3) Fukuoka Industrial Technology Center, Mechanics & Electronics Research Institute
- 4) Nishinippon Institute of Technology Mechanical Engineering Dept.
- 5) Japan Casting and Forging Corp.
- 6) Nissan Motor Co., Ltd.
- 7) Shinnippon Nondestructive Inspection Co., Ltd.
- 8) Sumitomo Metal Industries, Ltd.
- 9) Tokai Steel Works, Ltd.
- 10) Nippon Steel Corporation, etc.

6. REMARKS

Lecture 237 Hr
 Practice 102 Hr
 Field Study 120 Hr