Japan Cooperation Center, Petroleum

JCCP NEWS

No. 111 2012 January

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Topics

JCCP NEWS No. 111 January 2012

Table of Contents

Cover photo by Minoru Horike (Technical Cooperation Dept.). Nikko Odashirogahara in early December. The white birch tree among the other trees is called "Lady of the Odashirogahara."

Celebrating JCCP's 30th Anniversary

Masataka Sase
Executive Director,
Japan Cooperation Center, Petroleum (JCCP)

November 26 marked the 30th anniversary of Japan Cooperation Center, Petroleum. I wish to take this milestone occasion to extend my deepest gratitude to everyone who has supported JCCP over these 30 years.

JCCP was established in 1981, prompted by the two oil crises that occurred in the 1970s. Around the time of these oil crises, Japan possessed hardly any petroleum resources as a result of pursuing high economic growth, and depended on foreign countries, and particularly the Middle East countries, for large volumes of crude oil. At the same time, however, Japan was hit with the realization that it had neglected to foster close personal relationships outside the relationship of trading oil with the Middle East countries and other oil-producing countries. A strong sense of urgency to correct this situation led to JCCP's establishment.

During these past 30 years, oil-producing countries have achieved remarkable growth and prosperity as a whole. Today, oil companies in those countries have emerged as world leaders in both oil-related technologies and management. This is truly an achievement worth celebrating.

Japan and other oil-consuming countries, for their part, have developed technologies for ensuring advanced utilization of the precious resource, while also placing greater focus than ever before on energy conservation and environmental technologies, which have yielded significant results. Efforts have also been directed to cultivating new fields with the aim of achieving the best mix of energy use. Furthermore, the growth of emerging economies such as China and India has dramatically increased the

Opening ceremony in a regular course

presence of these countries in the energy scene. In sum, the environment surrounding JCCP has become more complex than was even imagined 30 years ago.

JCCP has efficiently kept pace with constantly changing needs in oil-producing countries, and has striven to provide cooperation that is truly meaningful to both oil-producing and consuming countries alike. With strong support from the oil and engineering industries, which were the driving force behind its establishment, JCCP has so far provided training opportunities in various oil facilities in Japan to more than 20,000 participants from 53 countries, and has dispatched over 5,000 Japanese experts to countries around the world over its 30-year history. It has also implemented more than 200 technical cooperation projects in conjunction with 22 countries, with significant results.

Securing petroleum resources remains a prominent issue in Japan today, as petroleum is not only a source of energy, but also a source that widely supports diverse aspects of people's lifestyles. Over many years, JCCP has played a central role in building close, personal relationships with the Middle East countries and oil-producing countries around the world, but the question now is how to further extend and develop JCCP's role in the future.

I shall take this 30th anniversary occasion as an opportunity to conduct a subjective review and assessment of JCCP's activities to date, and to establish JCCP's future direction, based on circumstances surrounding the global oil industry today.

I thank you for your continued support and guidance.

Message from a JCCP Graduate

We are delighted to have received the following message of congratulations from a JCCP graduate on occasion of our 30th anniversary.

Ms. Juniwati Rahmat Hussin
Vice President, Human Resource Management Division,
PETRONAS, Malaysia

I am honored to be invited to contribute a short message to celebrate JCCP's 30th anniversary.

The first time I heard about JCCP was in 1987. I was one of two members nominated by my company, PETRONAS, to attend the regular course on Essential Petroleum Refining for Process Engineers from 9th June to 3rd July 1987, along with Mr. Sabudin Bidol.

The course was very engaging, offering classroom training, simulation work and plant visits, and the lecturers and trainers were a team of experienced and dedicated professionals who went out of their way to assist us. The members of our group were from Thailand, Indonesia, Algeria, China, Peru and Malaysia—a very good mix of different nationalities and cultures—though I was the only rose amongst the thorns, as is usual in this male-dominated oil industry.

Thankfully, our experience was not all work, as our trainers arranged for us to visit places of interest inside and outside of Tokyo. I was struck by Japan's rich tradition and culture and by the fact that a deep respect for the old traditions still exists despite modernization.

What I learned during the month-long programme definitely helped me in my earlier years as a process engineer at my refinery. Moreover, I learned not only from our JCCP trainers, but also from my fellow classmates. There was a lot of sharing and networking amongst us.

I was delighted to be invited as a guest speaker for the 29th JCCP International Symposium held from 26th to 27th January 2011. Revisiting the JCCP Office in the Sunshine Building was like a trip in nostalgia for me. I felt I had come home!

I wish JCCP many more prosperous and rewarding years to come. Please continue the good work that has touched so many lives and has benefited our careers in so many ways. *Arigato gozaimasu*, and happy 30th anniversary!

Pictures from Ms. Juniwati's participation in a JCCP regular course in 1987

Signing an MOU on a Special Cooperation Program with Petrovietnam

Signing ceremony with Petrovietnam:
Mr. Le Minh Hong, Vice President (left)

On August 1, JCCP and Petrovietnam (Vietnam National Oil and Gas Group) signed a Memorandum of Agreement (MOU) to further promote the cooperative relationship between the two organizations.

1. Background

JCCP commenced special cooperation programs for oil-producing countries last fiscal year as a new initiative aimed at providing concentrated support to designated oil-producing countries. This fiscal year, the program was extended to Vietnam, in addition to Iraq, which was selected last year as the first counterpart for the program.

The two organizations ultimately came to sign the MOU after holding detailed discussions about the content of the program and agreeing to the following terms.

- To promote human resource development through regular courses, as well as Customized Programs-Japan (CPJ) and Customized Programs-Overseas (CPO)
- To survey needs for information exchange and technical cooperation programs
- To hold regular meetings for achievement of the above

2. Signing Ceremony

The MOU signing ceremony was held on August 1, 2011 in a conference room at the Petrovietnam Head Office in Hanoi, Vietnam.

Representing Petrovietnam, Mr. Le Minh Hong, Vice President, gave an opening address, first thanking JCCP for its role in helping Petrovietnam employees increase their knowledge and skills through the training programs it has offered over the past 21 years. He then explained that Petrovietnam has to date made active investments in the development of the upstream sector both overseas and in Vietnam as one of its priority concerns, but will hereafter also invest in the downstream sector by planning the construction of its second and third refineries following the full-scale commencement of its first refinery. After expressing his expectations of

strengthening cooperative ties with JCCP through both training programs and technical cooperation programs, Mr. Hong closed his speech by wishing for JCCP's further international contribution and development.

Following Mr. Hong, Mr. Masataka Sase, Executive Director of JCCP, also offered a few words of greeting, beginning with a round of thanks to Petrovietnam for making the necessary preparations for the signing ceremony, not to mention its understanding and cooperation in past JCCP training programs. Mr. Sase noted that JCCP and Petrovietnam have so far established a friendly relationship based on training programs, and said he expects the combination of training programs and technical cooperation programs will strengthen their friendship and promote greater exchanges. He ended with hopes for Petrovietnam's continued prosperity and development.

The two leaders then signed and exchanged the MOU, and mutually confirmed their agreement to strengthen their friendly relationship, in an amicable exchange of views among members of the two organizations. After the ceremony, the JCCP delegation toured the Traditional House (historical museum) and received a detailed description of the history of the oil industry in Vietnam.

In the afternoon following the signing ceremony, the delegation paid a courtesy call on H.E. Mr. Yasuaki Tanizaki, Japanese Ambassador to Vietnam. After giving a brief account of the signing ceremony, Mr. Sase explained that JCCP will be making particular efforts to strengthen JCCP activities in Vietnam, and Ambassador Tanizaki responded by expressing his expectations that JCCP activities will bring the two countries even closer together.

H.E. Mr. Yasuaki Tanizaki, Ambassador to Vietnam (left)

<by Koichi Io, Operations Dept.>

Visit to OPEC Headquarters

(From the right) Dr. Hasan M. Qabazard, Director, Research Division, OPEC; Mr. Masataka Sase, Executive Director; Mitsuyoshi Saito, Counselor for JCCP

A JCCP delegation visited the Headquarters of OPEC (Organization of the Petroleum Exporting Countries) located in Vienna, Austria on August 24, 2011, on their way to Turkey, Istanbul to attend the 36th Japan Cooperation Forum for the Middle East. The objective of the visit was to hold an exchange of views between Mr. Masataka Sase, Executive Director of JCCP, and OPEC executives as part of a series of JCCP's executive meetings with major international oil organizations.

During this time of the year in Central Europe, a slight chill usually begins to creep into the air in the mornings and evenings, but due to unusually high temperatures in Europe this summer, it was also hot enough in Vienna to cause perspiration just by walking the streets. I personally worried that the weather might adversely affect the condition of the white wines that are the local specialty of the city.

I remember that OPEC Headquarters was previously housed in an office building located along the Danube River Canal in Vienna, but I heard that it was recently transferred to a southwestern area of the city. Away from the bustle of the Ring Boulevard, the headquarters now have an entire white building to itself in a quiet neighborhood a block away from the Ring and in close proximity to a number of universities and diplomatic offices. Inside the building, I noticed a Chinese resident of Vienna working as a secretariat among a staff of executives composed mostly of people from oil-producing countries. The Chinese have certainly expanded their presence far and wide.

Below is an overview of our visit to the headquarters.

1. Meeting with Executives

We had the honor to meet with H.E. Secretary General Abdalla Salem El-Badri (Libyan) and other executives including Dr. Hasan M. Qabazard, Director, Research Division (Kuwaiti), and Mr. Abdullah Al-Shameri, Head, Office of the Secretary General (Libyan).

It so happened that news of the fall of the capital city of Tripoli to anti-Gadhafi rebels was first heard on the day prior to our visit to the headquarters. Therefore, on the day of our meeting, Mr. El-Badri, being a Libyan citizen, as well as the Chairman of the former National Oil Corporation (NOC) of Libya and the Libyan Minister of Petroleum, had spent an extremely busy morning holding telephone conferences with external sources, his secretary told us. Considering Mr. El-Badri's particularly busy schedule, we were fortunate to even have had the opportunity for the meeting.

2. Sympathy Regarding the Great East Japan Earthquake

At the beginning of our meeting, the OPEC officers asked about the situation in Japan after the earthquake.

They said they were deeply saddened by the earthquake that struck Japan, but they also said they believe in Japan and its strength to rebuild. In response to their question concerning the present state of the reconstruction process, Mr. Sase explained in detail the state of affairs concerning post-accident measures at the Fukushima Nuclear Power Station and the reality of Japan today as it works toward reconstruction from the disaster. Mr. Sase also asked for OPEC's support and cooperation.

3. Transformation of OPEC

The OPEC side explained that various aspects of OPEC, including its internal machinery, are undergoing rapid changes and reforms on the occasion of the organization's 50th anniversary, and noted that OPEC will also make greater efforts to promote dialogues with oil-consuming countries. Mr. El-Badri added that dialogues with Asian countries will be important as well, since Asia has emerged as one of the largest consumers of oil today.

4. JCCP Activities

As he has heard from Dr. Qabazard, Mr. El-Badri commended the significant contribution that JCCP activities have made to member countries of OPEC, and thanked JCCP especially for its broad-ranging activities in the Middle East and African regions.

Much to our delight, Mr. El-Badri gave his word that he will send an OPEC executive to give a commemorative presentation at the 30th JCCP International Symposium scheduled to be held in Tokyo in January 2012.

5. Other Exchanges of Views

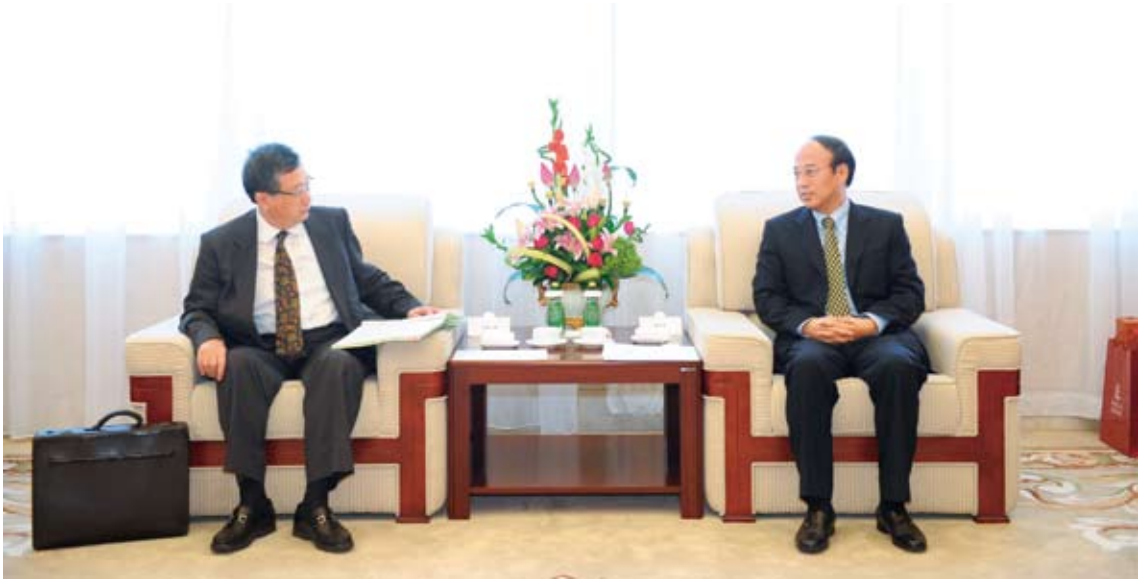
In the meeting, we also exchanged views on a wide range of other topics, including the oil and natural gas situation in relation to the Middle East and North African regions; the current state and outlook of resource supplies in Russia; the state of affairs regarding North Sea gas; and recent trends in oil prices, including in the United States.

Just as I was writing this article, the next news about Libya broke out. The media reported that Libyan dictator Moammar Gadhafi, 69, had been captured and killed during the siege of the city of Sirte in central Libya on October 20, and Mustafa Abdul Jalil, chairman of the National Transitional Council representing anti-Gadhafi forces, announced that he would declare liberation of the entire country in the next couple of days and begin forming a new interim government as the first step in the process of full-scale political transition. Upon hearing the news of Gadhafi's death, citizens throughout the country celebrated the end of the dictator's rule until dawn the next day, the media reported. The Arab Spring continues.

<by Mitsuyoshi Saito, Counselor for JCCP>

Photo published in OPEC Bulletin, *the organization's monthly magazine:*
H.E. Secretary General Abdalla Salem El-Badri (right)

Executive Meeting with SINOPEC



Mr. Dai Houliang, Senior Vice President (right)

On July 7 and 8, 2011, Mr. Masataka Sase, Executive Director of JCCP, and Akio Yamanaka from the Operations Department visited the top management of China Petroleum & Chemical Corporation (SINOPEC) with the following agenda.

(1) To pay respects to SINOPEC
(2) To thank the SINOPEC managers for their concern and support after the Great East Japan Earthquake
(3) To explain the status of JCCP activities after the earthquake and plans for resuming regular courses
(4) To hold policy dialogues about issues relating to JCCP activities, etc.

We departed from Narita and arrived in Beijing on July 7, and visited the SINOPEC Head Office at 10 a.m. the following day (July 8). Mr. Dai Houliang, Senior Vice President, Mr. Zhang Zheng, Deputy Director General, and Mr. Rong Qi, Director, Foreign Affairs Dept., received us in the executive reception room.

Mr. Dai, after cordially welcoming our visit, expressed his appreciation of JCCP's cooperation, acknowledging the friendly relationship that SINOPEC and JCCP have established over the years based on technical exchanges through JCCP regular courses and seminars. He said SINOPEC has been keeping close watch on the situation in Japan after the March 11 earthquake, especially since he heard that refineries also suffered severe damage, and was therefore relieved to hear that Japanese companies had begun to make a new start in a remarkably short period of time in a testament to their resilience and high level of management expertise. As a member of the same oil industry, he expressed his strong hope for the quick recovery of refining companies in Japan.

Mr. Sase then thanked SINOPEC for its concern and support after the March 11 earthquake, and gave an account of the magnitude of the earthquake and the damage it left in its wake. He also assured the SINOPEC side that a reconstruction framework is taking shape, that the nuclear plant is under control in a state of cold shutdown, and that Tokyo escaped serious damage owing to its distance from the disaster area.

In regard to JCCP, Mr. Sase explained that JCCP is operating as usual without suffering any particular effects from the disaster, apologizing for postponing and/or canceling regular courses in April and the following months and announcing that the September to October courses will be held in the Osaka region to dispel any worries and emotional stress on the part of the participants.

Lastly, in reference to JCCP's 30th anniversary this year, Mr. Sase said it has been a pleasure to maintain a friendly relationship with one of the leading oil companies in the world, and expressed his hopes of pursuing an even more cooperative and friendly relationship with SINOPEC for the next generation,

while constantly giving consideration to what would be mutually beneficial to the two organizations.

In response, Mr. Dai once again offered words of sympathy regarding the disaster, and said SINOPEC highly respects JCCP's decision to implement regular courses in Osaka in the mean time to eliminate participants' emotional concern. Furthermore, Mr. Dai congratulated JCCP on its 30th anniversary, saying he holds JCCP's efforts and achievement in high esteem. He noted that many managers and engineers from SINOPEC's subsidiary companies have participated in JCCP courses and acquired substantial skills and technologies from JCCP and its member companies. As a result, SINOPEC has grown along with China's economic growth to become the second-largest producer of crude oil in 2010 with a production capacity of 210 million tons. However, global economic growth has increased demand for oil products and has created a need for more advanced crude oil processing technologies. Therefore, Mr. Dai said he hopes to promote greater technical exchanges with JCCP and its member companies particularly in the area of refining technologies. SINOPEC's Maoming and Zhenhai Refineries have established ties with Idemitsu Kosan, and the Gauqiao-Shihua Refinery has a relationship with Cosmo Oil, but Mr. Dai said he wishes to continue these technical exchanges under the cooperative framework with JCCP. At the end, Mr. Dai thanked the JCCP members for visiting and providing detailed information about the present state of the disaster and JCCP activities, and offered to contribute in whatever way possible to the reconstruction process of JCCP and its member companies.

Through our visit to SINOPEC, we accomplished our agenda and verified SINOPEC's evaluation of JCCP training programs and its stance concerning its cooperative relationship with JCCP. Recognizing the company's remarkable growth and important role in the oil industry, we reaffirmed the need to further deepen cooperation with SINOPEC hereafter, particularly in addressing environmental issues and energy conservation.

<by Akio Yamanaka, Operations Dept.>

Topics

Signing an Agreement with the Ministry of Oil-Iraq on the Implementation of a Special Cooperation Program for Iraq

JCCP is implementing two projects, the "Study on Technical Support of Introduction of Produced Water Treatment for SOC in Iraq" and the "Study on Development of Asphalt Industry and Finding New Applications in Iraq," with the participation of oil companies and other relevant companies. They are being implemented as part of the Special Cooperation Program for Iraq under the Japanese Ministry of Economy, Trade and Industry's subsidy for oil refining technologies and projects in oil-producing countries.

On October 5, 2011, an agreement signing ceremony for implementation of the two projects was held in Tokyo, honored by the presence of Mr. Iqdam M. R. Hashim Al-Shadeedi, Director General, Training & Development Directorate, Ministry of Oil, and Dr. Kareem Abdulhasan Alwan, Manager, Petroleum Research & Development Centre, from Iraq, and H.E. Mr. Lukman Faily from the Embassy of Iraq in Japan. Also with the attendance of executive members from the participating companies, Mr. Iqdam and Mr. Morihiro Yoshida, Managing Director of JCCP, officially signed the agreement.

Mr. Yoshida said that he hopes to see the two projects conducted successfully through the efforts and cooperation of all parties concerned, and promised JCCP's best efforts to achieve its ultimate goal of building a firm, reliable relationship between Iraq and Japan. He also expressed his expectations that these efforts would, in the near future, help Japanese companies engage in

Members of the signing ceremony:
Mr. Iqdam M. R. Hashim Al-Shadeedi, Director General, Training & Development Directorate, Ministry of Oil (right), Mr. Morihiro Yoshida, Managing Director of JCCP (left)

successful businesses in Iraq. Mr. Iqdam said that the two projects are extremely important to Iraq, especially as the country is trying to get its economy off the ground and expand after decades of turmoil, and thanked all parties on the Iraqi side, JCCP and participating companies for implementing the projects in excellent cooperation with each other. He also expressed his strong wishes for the projects' success.

Ambassador Faily congratulated JCCP and the Ministry of Oil on reaching such an important agreement, and expressed his hopes that this will be the start of a long and fruitful relationship between the two parties. He also said he expects the two water and road improvement projects to lead to direct benefits to the country, where improving the oil sector is of primary concern to the government and people of Iraq. As there are many opportunities for Japanese companies in the energy sector in Iraq, Mr. Faily urged Japanese companies and businessmen to invest in the Iraqi oil sector, promising his embassy's full support in answering any queries. Representatives from the participating companies also gave a brief address to introduce their company and express their commitment to the projects. They included Dr. Takaji Akiya, Managing Director, Water Reuse Promotion Center; Mr. Shunichi Shiono, Managing Executive Director, Swing Corporation; Mr. Makoto Kuramochi, President, JX Nippon Research Institute Ltd.; and Dr. Takemi Inoue, Adviser, Green Consultant Co., Ltd.

In addition to the signing ceremony, Mr. Iqdam and Dr. Kareem spent roughly one week in Japan attending to other business, including a presentation session held by Mr. Iqdam on October 6, which attracted an audience of more than 30 from JCCP member companies who wished to hear Mr. Iqdam's views on the present state and future plans concerning the oil situation in Iraq, and a series of meetings about said projects and future possibilities for other projects.

Overview of the Projects

1. Background

Since its establishment, JCCP has received participants through the Ministry of Oil-Iraq for training programs in Japan, and has also sent Japanese experts to provide training in Iraq on a continuing basis. In the area of technical cooperation, the "Feasibility Study on Emergency Restoration of LPG Bottling Plant in Iraq" and the "Comprehensive Study for Reconstruction Assistance" were implemented over a limited period in 2003 to support the reconstruction process in Iraq. Thereafter, given the gradual stabilization of Iraq's political situation, JCCP invited Mr. Iqdam (then Deputy Director General of Training & Development Directorate,

Mr. Iqdam giving a presentation

Ministry of Oil-Iraq) to Japan in December 2009, when a memorandum of understanding (MOU) was exchanged to reconfirm the significance of deepening mutual understanding and of resuming and promoting exchanges between the two organizations through JCCP training programs and technical cooperation projects.

As per the MOU, a special cooperation program for Iraq was newly launched in fiscal 2010, and two issues of priority concern to the Ministry of Oil were investigated in a preliminary survey to implementing technical cooperation projects. The projects have since commenced on a full scale in fiscal 2011 upon signing the agreement this October.

2. Implementation of Technical Cooperation Projects

Below is an overview of the two projects.

(1) Study on Technical Support of Introduction of Produced Water Treatment for South Oil Company (SOC) in Iraq

As an effective application of water produced in the process of crude oil production, South Oil Company (SOC) has been seeking to re-use produced water as injection water, so it was decided that JCCP would offer technical assistance in applying Japan's wastewater treatment technologies to the treatment of produced water in Iraq.

1) Implementation period: April 1, 2011 – March 31, 2013 (2 years)
2) Counterpart: Ministry of Oil-Iraq, South Oil Company
3) Participating companies: Water Reuse Promotion Center; Swing Corporation
4) Goal: To establish a water treatment system for oilfield-produced water and propose a basic design for a commercial treatment facility

(2) Study on Development of Asphalt Industry and Finding New Applications in Iraq

In Iraq, asphalt is currently produced in the north, mid and south refineries, by blending the bottom oil from the propane deasphalting unit (PDA unit) that is used for lube oil production with residue oil in the vacuum distillation unit (VDU). The asphalt is made to conform to the same standard in all parts of the country. As a result, various defects, including rutting, wear, and cracking, are occurring in many places in the country. To remedy this problem, the project will propose measures such as for improving the operations of asphalt production units and the quality of improved asphalt.

1) Implementation period: April 1, 2011 – March 31, 2013 (2 years)
2) Counterpart: Ministry of Oil-Iraq, Iraq National Oil Company
3) Participating companies: JX Nippon Research Institute Ltd.; JX Nippon Oil & Energy Corporation; Green Consultant Co., Ltd.
4) Goals:
   (i) To create a pilot plant for the production of improved asphalt and to examine its application to other improved materials based on data acquired from the pilot plant
   (ii) To verify operating conditions for the production of straight asphalt and to propose operating conditions suitable for the production of asphalt and improved asphalt to the Iraqi side

<by Hironao Naganuma, Technical Cooperation Dept.>

Administration and Implementation of JCCP Regular Courses in the Osaka Area

1. Background to Holding JCCP Regular Courses in Osaka

The Great East Japan Earthquake of March 11 and the ensuing nuclear crisis at Fukushima Nuclear Power Station had left us with no choice but to temporarily cancel the implementation of regular courses. Thereafter, upon confirming a certain degree of progress in efforts to contain the situation, we decided to resume the courses in September and to hold all courses scheduled for September and October in the Kansai region instead of the Kanto region, to ensure their smooth implementation and to mitigate any emotional concerns of the participants. We chose Osaka to be the base of our activities in the Kansai region, as it offers convenient access from oil-producing countries and satisfies the various requirements of the courses, and we reviewed the relevant course plans so that the content that would have been provided in Tokyo headquarters could be effectively provided in Osaka.

Lecturers of the relevant courses moved to work in Osaka, and other JCCP officers and staff members divided their time between Tokyo and Osaka as necessary.

JCCP's primary consideration of participants' safety won the approval and appreciation of JCCP counterpart organizations in oil-producing countries, so that there was almost the same numbers of applications as usual. This was the first time since JCCP's founding that regular courses were held outside of Tokyo headquarters, but careful preparations for their administration and implementation led to their successful completion without incident.

2. Overview of Regular Courses Held in Osaka

The Osaka courses were implemented in two parts. The first part spanned a period of 18 days, from September 20 to October 7, and included a course on Environmental Management for Refineries (TR-10-11), attended by 20 participants from 13 countries, and a course on Project Management for Mechanical Engineers (TR-11-11), attended by 14 participants from 11 countries.

Opening ceremony:
Welcome speech by Mr. Masataka Sase,
Executive Director of JCCP

The second part spanned a period of 18 days, from October 11 to 28, and included a course on Petroleum Marketing and Oil Terminal (TR-12-11), attended by 17 participants from 10 countries, and a course on Advanced Field Devices and Control (TR-13-11), attended by 15 participants from 10 countries. In total, 66 participants attended the four courses that were implemented in Osaka.

The number of applications for the four courses hardly differed from normal, with 30 applicants from 16 countries applying for TR-10, 28 applicants from 15 countries for TR-11, 41 applicants from 14 countries for TR-12, and 23 applicants from 12 countries for TR-13.

Opening ceremony:
Self-introductions by the participants

3. Selection of Hotel Accommodation and Training Venue

Hotel accommodation and training venue in Osaka were chosen based on a comprehensive survey that included a number of criteria: price, accessibility from Kansai International Airport, available facilities and equipment, foreign hospitality, and participants' convenience and comfort, and their availability for the duration of the courses. As a result, Hotel Nikko Osaka in the Shinsaibashi district of Osaka was chosen as the hotel of accommodation, and Hearton Hall, located within a five-minute walk from Hotel Nikko Osaka, was chosen as the training venue.

Additionally, after a careful comparison of a number of companies, we employed the services of the International Hospitality and Conference Service Association (IHCSA) to greet the participants upon their arrival at the airport, provide orientation prior to each course, and to assist JCCP in the organization and implementation of the courses.

We owe the smooth implementation and successful completion of the courses to the cooperation and coordination of everyone at Hotel Nikko Osaka, Hearton Hall, and IHCSA.

4. Course Details

We strived to provide the courses at the same level as those implemented at Tokyo headquarters, and basically achieved our goal for all practical purposes, as follows.

(1) The participants were greeted upon their arrival at Kansai International Airport, from where they took a limousine bus to Osaka Air Terminal (OCAT) and a taxi from OCAT to Hotel Nikko Osaka, and checked into the hotel without delay or incident.

(2) Upon arriving at the hotel, the participants received a map of Osaka City, a guide to using the subway, and a map of the hotel vicinity along with other necessary documents. They used these resources to make the most of their free time.

(3) In the orientation session held on the day before the opening day, the participants toured the attractions around the hotel and around the Shinsaibashi, Dotonbori and Namba districts on foot during the morning, and visited major tourist spots in the city using the Midosuji and Tanimachi railway lines in the afternoon. Learning how to ride the subway and purchase train tickets proved useful in traveling to onsite training facilities and during their off-days. It also gave them an understanding of Japanese culture and history.

(4) The opening and closing ceremonies were held in the same smooth and successful manner as at Tokyo headquarters.

(5) Lectures on "Japanese Language" and "Japanese Economy" given by an Osaka-based lecturer were highly well received by the participants, who asked many questions and engaged in lively questions and answers.

(6) At the welcome and farewell parties, at which halal meat was available as it always is at Tokyo headquarters, the participants enjoyed the friendly atmosphere and established friendly relationships with each other and with JCCP staff members.

(7) Medical clinics and general hospitals near the hotel and training venue were selected in advance in case of injury or illness among the participants.

Lecture in a conference room at Hearton Hall

Closing ceremony:
Presentation of the JCCP certificate

As it so happened, one of the participants came down with a cold and consulted a clinic, but thanks to the clinic's quick and proper treatment, the participant was able to attend the course in full, without missing anything. We were relieved that there were few participants who became ill or were injured in Osaka.

(8) Based on information and ideas we provided on how to spend their off-days in Osaka, some participants even headed off to Kyoto, Nara, and Kobe to enjoy a cultural and historical experience.

5. Summary

As this was the first time for us to hold regular courses away from Tokyo headquarters since JCCP's founding, we encountered many difficulties and uncertainties in their arrangement and administration. However, owing to the cooperation of all companies involved, we were able to bring the courses to a successful completion.

We believe the experience and know-how we gained through the implementation of regular courses in Osaka could be put to use again if for some reason it ever becomes necessary to implement regular courses away from Tokyo headquarters in the future. Another good aspect of this experience is that it has clarified both the strong and weak points of conventionally implemented courses in Tokyo.

In closing, we wish to extend our deep appreciation once again to all companies and their employees who gave us their generous cooperation and support in our first attempt to hold regular courses in the Osaka area.

<by Yoshiko Kawashima, Operations Dept.>

CPO Seminar on Total Productive Maintenance Management (TPM) Held Jointly with Saudi Aramco

Participants of the seminar

1. Purpose and Background

A seminar on maintenance management based on TPM activities was implemented for engineers of Saudi Aramco, in response to a request from the company's Maintenance Council, which is responsible for all company-wide maintenance technologies, and the Professional Engineering Development Division (PEDD), the division in charge of training and developing professional engineers. It is worth noting that this seminar was the first to be formally registered under Saudi Aramco's company-wide engineer training program.

The very beginnings of the seminar go back to September 2010, when Mr. Sami A. Iskandrani, Assistant to the Vice President, Refining and NGL Fractionation, introduced JCCP to PEDD during JCCP's survey on the renewal of training courses. PEDD reviewed the lecture materials from four seminars that JCCP implemented in the past for Saudi Aramco personnel in the downstream sector since fiscal 2008 and, in a meeting held in May 2011 with the attendance of Mr. Nezar Al-Shammasi, Director, Maintenance Council, announced that it wished to register and implement the course on TPM-based maintenance management as part of PEDD's training program.

Al-Midra Tower

The five-day seminar took place from September 10 to 14, 2011, in a PEDD lecture room on the second floor of the east wing of the Al-Midra Tower Building. Four Japanese lecturers were sent to Saudi Aramco to conduct the seminar, including JCCP lecturers Kenji Saito and Fumihiro Tone, and Messrs. Yoshisumi Tamao and Akio Ishida from Idemitsu Kosan Co., Ltd.

The participants comprised 22 members from Saudi Aramco's maintenance sectors, ranging in experience from 3 to 30 years and a wide hierarchy of posts.

2. Content of the Seminar

In the opening session on the first day, Mr. Nezar Al-Shammasi, Director, and Dr. Dahamman M. Al-Anaji, Head (A) of PEDD, gave an opening address and spoke briefly about how the seminar came to be held with JCCP and what the objectives are. Mr. Al-Shammasi particularly explained that the Maintenance Council took an interest in JCCP's TPM-based maintenance management course because PEDD's training program has few courses related to maintenance. Dr. Al-Anaji

encouraged all participants to learn not only about specialized maintenance technologies, but also about principles and methods behind maintenance activities.

The first lecture was given by Saito on maintenance management in the refinery and maintenance optimization by risk management. It was intended to promote understanding that the seriousness of risks varies greatly according to national affairs and corporate philosophies, so that the same phenomenon might be regarded as a serious accident or a minor incident to different parties. The lecture also aimed to teach participants about the importance of accepting and understanding the best possible solution for an organization by creating a decision-making matrix to find the optimum alternative from among many possibilities.

In the first half of the lecture, on maintenance management in the refinery, Saito used photos and diagrams to illustrate a comparison of differences in the refinery maintenance management framework, maintenance management software used, and work safety management between Japanese refineries and refineries in Middle East oil-producing countries. In the second half, on maintenance optimization by risk management, he focused on the corrosion of distillation columns and countermeasures against it. Participants were taught to predict risks by classifying corrosion-related malfunctions into three groups and understanding the probability and extent of damage of malfunctions in each group, and to select an optimum measure (maintenance method) based on a comparison of multiple countermeasures.

On the second day, Tone gave a lecture on safety management in the refinery and an overview of TPM activities. Using actual data, photos, videos, and analysis results, he described a number of major accidents that have occurred in oil complexes in Japan, including a corrosion fracture accident involving dead-end pipes, a pressure vessel explosion accident caused by improper renovation and poor change management, a plant explosion and fire accident caused by human error, and a tank destruction and fire accident caused by long-period ground motion. These are examples of cases resulting from poor design, poor change management, inadequate information and manuals, and natural disasters, to illustrate the fact that most fundamental causes are attributable to human error and improper management systems, and explained that maintenance management improvement activities and TPM came to be introduced as a means for breaking away from this type of adverse situation. Furthermore, after lecturing about the management system in Japanese oil refining companies and the important role of managers in boosting motivations in the workplace, Tone laid the groundwork for the third and fourth days' lectures by providing an overview of the TPM concept that has been refined and upgraded by Japanese refineries and introducing several representative small-group activities, including the tool-box meeting (TBM), danger prediction activity, point and call, and the 5Ss. Tone also took charge of the group discussion held on the fourth day, in the form of a workshop where participants were told to diagram their problems in an easy-to-understand manner. By having the participants give each other a clear presentation of an issue they currently face, he effectively promoted mutual understanding among the participants from diverse departments.

On the third day, Messrs. Tamao and Ishida from Idemitsu Kosan gave a lecture entitled "Case Examples of TPM and Improvement Activities for Refinery Management," and introduced TPM activities that are implemented in Idemitsu's refineries. Mr. Tamao first gave a general outline of TPM activities, its framework, and key points for establishing TPM activities as part of regular maintenance activities. He also discussed voluntary maintenance activities, and performed an exercise on identifying defects using photos of pumps, to make the point that "cleanup equals inspection" in initial cleanup, which is the first step in maintenance. In the exercise, about 70% of the participants were able to identify no more than five defects. The objective of the exercise was not only to identify the major defects but to make closer observations and discover as many defects as possible, however sufficient results were not obtained. Noting that young engineers at Idemitsu are able to find more than 100 defects in a single unit of equipment, Mr. Tamao emphasized that finding as many specific defects as possible leads to larger numbers of improvements. The exercise was a simple but effective way to instill an understanding of the significance of initial cleanup.

Mr. Ishida lectured about maintenance management systems and maintenance plans from the standpoint of a facility maintenance engineer. He gave examples of typical equipment maintenance and specifically explained where the focus of maintenance should lie, with the goal of deepening participants' understanding. The issues that Mr. Ishida covered regarding maintenance management systems were based on a prior request from PEDD

Mr. Yoshisumi Tamao (Idemitsu Kosan)

Mr. Akio Ishida (Idemitsu Kosan)

to introduce improvement examples of maintenance management and quality assurance. However, Mr. Ishida added his own ideas to the request, and narrowed his focus to onsite activities that are implemented in conjunction with the operations departments. By doing so, he effectively captured the attention of the maintenance engineers and promoted understanding of the importance of working in cooperation with the operations departments, as well as an understanding of the development of activities down the line.

On the fourth day, the participants were divided into three groups of six to seven members each to discuss the gap (problem) between their "to be" ideal images of the workplace and the "as is" reality, and solutions for bridging the gap. Each group was composed of engineers of various levels and positions, and was asked to select a group leader and presenter from among themselves.

Firstly, all members enumerated issues they currently faced and shared a common understanding of the gap between "to be" and "as is." Next, they sorted the priority of these issues as a group and selected an issue that was either relevant to all members or was judged to have the highest priority. Then, they examined the causes of the issue according to the 5-Why, 4M analysis, and fishbone analysis methods, and sought through discussion to identify the principal cause. The themes selected by the groups were "the handover of technical knowledge and experience," "extending the MTBF (mean time between failures) of pumps," and "the difference between planned and actual maintenance man-hours." In contrast to the previous sessions, this group discussion exercise drew out the participants' professional side as maintenance engineers, as they discussed and probed their theme in highly technical terms and dissected the cause of the issue. Unfortunately, while the discussions did not yield an action plan for solving their respective issue, they were meaningful in that young and experienced engineers alike expressed and asserted their views on an equal footing.

On the last day, Dr. Al-Anaji of PEDD gave a closing address. He revealed that a participant had come to him during the seminar to point out what he thought were some problems with the seminar, but stressed that the seminar was not intended to be strictly a technical acquisition seminar in the first place, but a management seminar centered on the Japanese concept of TPM to gain a proper understanding of "owner's mind." Dr. Al-Anaji also stated that the seminar will be held again next year and onward, and expressed his appreciation for JCCP's cooperation. Before closing the seminar, Tone presented a completion certificate to each participant.

3. Observations

As impressions and opinions of the seminar, half the participants said the content was beneficial and would help them in their jobs. Others gave a poor rating, saying that they had expected strictly technical content but the

Group discussions

Closing ceremony

seminar did not meet their expectations. This disparity may have occurred because the participants were from diverse job levels, and their evaluations may have differed according to their level. Nevertheless, since engineers in higher positions seemed to understand the significance of TPM and emotional matters relating to an employee's mindset, it can be said that the seminar successfully conveyed the necessity of TPM at least to the experienced engineers. In fact, one of the experienced participants reproved the young engineers who claimed TPM is unnecessary, by saying that when he was young the young engineers did all the equipment cleaning, painting and maintenance by themselves, but because there is now a clearly defined job description for operations, cleanup and other activities, there is a definite lack of mutual interest in each other's duties.

It is also worth noting that while Japanese refineries principally do not employ maintenance technicians and instead have their engineers conduct and manage maintenance activities with the help of subcontractors, Saudi Aramco undertakes all maintenance activities in-house. For this reason, the development of maintenance technicians and the transfer of technologies from veteran to young engineers is an extremely important issue to Saudi Aramco.

Taking into consideration the views and suggestions given by the participants, it is clear that measures need to be taken to improve the seminar, perhaps by narrowing down the target of the seminar to only participants of certain job levels, or by dividing the seminar into two sessions and offering a general overview and basics of TPM in the first half and holding a workshop on actual application case examples in the second half. We will explore these measures and others to improve the seminar for future implementation.

<by Fumihiro Tone, Training Dept.>

Presentation of the completion certificate

CPO Seminar on HRD/HRM for PERTAMINA

A Customized Program-Overseas (CPO) on Human Resource Management/Development was held from July 4 to 12, 2001, in Jakarta and Balongan, Indonesia.

1. Background

Human resource-related CPO seminars for PERTAMINA were previously implemented in 2003 and 2005, but no CPO—not even those on technical topics—has been held in Indonesia since them. This recent CPO originated in a proposal made to a participant from the PERTAMINA Learning Center who attended a regular course on human resource development (TR-16-11) last December. She took the proposal back to PERTAMINA, and received the approval of the company's internal management.

2. Lecturers

Akio Hoshino (Training Dept., JCCP)
Bunsuke Kariya (Training Dept., JCCP)
Hiromasa Tanaka (Professor of Humanities, Meisei University)
Takuya Saito (Personnel Dept., JGC Corporation)
Masanobu Kibata (Production Engineering Dept., Idemitsu Kosan Co., Ltd.)

3. Seminar Overview

The seven-day seminar was largely divided into two parts. The first part consisted of a regular seminar on human resource management/development (HRM/HRD) at the PERTAMINA Learning Center (PLC) in Jakarta. The second part consisted of a seminar on Kaizen held at the Balongan Refinery, attended by engineers of the refinery in addition to participants from the first part of the seminar in Jakarta.

(First part) Following an opening ceremony, Hoshino spent the first two days giving a lecture on general HRM under the title, "Transition & Status-quo of Japanese-style HRM." On the third day, Mr. Saito from JGC Corporation lectured on HRM and HRD systems in his company, and on the fourth and fifth days, Prof. Tanaka gave a lecture on training theories.

(Second part) All members of the first part of the seminar traveled to the Balongan Refinery, located some 170 kilometers east of Jakarta, where the first day was spent on lectures on general Kaizen theories (Hoshino) and Kaizen best practices in the refinery (Kariya). The next day, which was the last day of the seminar, Mr. Kibata from Idemitsu Kosan introduced Kaizen case examples experienced in Idemitsu Kosan's refineries, and implemented a new initiative in the form of a "tour"

At the PERTAMINA Learning Center:
Ms. Ida Halya, Leadership Development Program Manager (center)

for discovery of Kaizen ideas in the refinery. After the tour, the seminar ended with a closing ceremony and the presentation of completion certificates.

4. Seminar Content

[Days 1 & 2]
"Transition & Status-quo of Japanese-style HRM" (Hoshino, JCCP)

The seminar began following an opening greeting by Ms. Ida Halya, Manager, Leadership Development, PLC, with the first two days featuring a four-part lecture by Hoshino.

(Part 1) Japanese history and the mentality of the Japanese people underlying Japanese-style HRM
(Part 2) Japan's high economic growth and the characteristics of personnel management and organizations in Japan
(Part 3) Recent environmental changes
(Part 4) Reality and issues of HRM in Japan

The lecture centered on Japanese-style HRM practices, such as the lifetime employment and seniority systems, and recent changes in social and corporate environments. In the beginning, the participants appeared rather reserved, probably because they were mostly strangers to each other, but as time went on, they began to more openly share their opinions.

As a breather and a brief break-in topic, Hoshino provided a glance at a typical Japanese company, describing the organizational framework, office layout, and the role and status of women in the workplace, and showed a DVD on the active achievements of women in Japanese society. The DVD captured the strong interest of the participants, and particularly the eight female participants of the group.

Akio Hoshino, JCCP lecturer

[Day 3]
"HRM and HRD Systems in a Major Engineering Firm" (Saito, JGC Corporation)

JGC Corporation introduced the performance-based pay system around 2001 to align themselves with the flow of the times. In reference to this system, Mr. Saito explained the company's personnel system in general, including the current ranking system, salaries, evaluations, recruitment, and welfare benefits.

The participants asked many specific questions, particularly about the evaluation system, because PERTAMINA is still struggling to establish the performance-based pay system and position-specific allowance system that it introduced in 2008.

Mr. Takuya Saito (JGC Corporation)

[Days 4 & 5]
"Training Program Development Seminar" (Prof. Tanaka, Meisei University)

This two-day seminar is a standard program given by Prof. Tanaka in the regular course on Human Resource Development. It introduces comprehensive knowledge needed to implement education and training, such as methods for surveying training needs, designing training

Prof. Hiromasa Tanaka (Meisei University)

programs, and evaluating training results. Owing in part to Prof. Tanaka's proficiency in English, the seminar was well received and captured the participants' strong interest. The latter half of the second day posed a challenge to the participants' individual powers of comprehension, discussion and conviction, as Prof. Tanaka's lecture content was given in quiz form, and the participants, divided into four groups, had to discuss their answers within the group and reach a final group answer.

[First half of Day 6]
"Kaizen General" (Hoshino, JCCP)

Following an opening greeting from Mr. Dadik Pribad, General Manager of Balongan Refinery (a participant in a course on Refinery Management held in 2007), Hoshino gave a lecture on Kaizen in the refinery to provide knowledge of the Kaizen concept and the unique "Kaizen mind" of the Japanese people. The lecture explained the process of introducing Kaizen activities, the 5S method of achieving Kaizen, and the "Toyota Way" as an example of the result of accumulating Kaizen efforts, to explain what is needed to establish a "Kaizen mind" in the workplace.

Bunsuke Kariya, JCCP lecturer

[Latter half of Day 6]
"Kaizen Examples in the Refinery"
(Kariya, JCCP)

As a follow-up to the lecture on "Kaizen General," which provided basic knowledge of the concept of Kaizen activities, this lecture introduced actual examples of Kaizen in oil companies. Beginning with the background to introducing Kaizen activities, it focused on the "8 actions to avoid," examples of Kaizen related to safety, examples of Kaizen for reducing man-hours, and best practices in achieving energy-saving processes. Visual images of "before" and "after" each Kaizen example were shown to facilitate comparison and practical understanding of Kaizen. Giving consideration to an administrative participant who continued from the first part of the seminar, the lecture introduced only one technical example of energy conservation, and instead placed emphasis on topics related to safety and efficiency improvement of administrative tasks.

[Day 7]
"Kaizen Idea Discovery Tour in the Refinery"
(Kibata, Idemitsu Kosan)

In this session, Mr. Kibata gave an hour-long lecture on specific Kaizen activities from a technical perspective that included safety and operational functionality in the refinery as preliminary knowledge. He then took the refinery engineers on a tour of the refinery to discover potential Kaizen points. Focusing mainly on the area around the pumps of the RFCC unit, he advised the engineers to consider what kinds of "Kaizen" could be made, and whether there are any problems with existing management methods. Improvement points proposed by the engineers were jotted down on post-its, which were then affixed to a diagram of the pump area that Mr. Kibata had prepared in advance. Based on this diagram, everyone brainstormed for better ideas and held discussions on the spot.

All in all, there seemed to be much room for "Kaizen" in terms of ensuring safe operations and efficient maintenance. The participants found that the grimy sampling line, valves protruding out into the aisles, steam trace pipes that lead to unknown destinations, and concrete floors with many level differences could all use some improvement.

Kaizen discovery by Mr. Masanobu Kibata (Idemitsu Kosan)

5. Participants

(1) The HRM/HRD seminar held at PLC in Jakarta was attended by 19 participants, including eight women. Eighteen were members concerned with HR at PERTAMINA's head office and its refineries/oil terminals throughout the country—some from as far away as Irian Jaya—and one was an engineer from the Balongan Refinery. Averaging 37 years of age, they represented a wide range of job levels, from new rank-and-file employees to supervisor-class employees.

(2) The lectures on "Kaizen General" and "Kaizen Examples in the Refinery" that were given at the Balongan Refinery were attended by 25 participants, including the 19 participants of the first part of the seminar who transferred to the refinery along with the lecturers, and six refinery engineers.

6. Summary

(1) JCCP has held CPOs on HRM and HRD many times in a number of different countries to date, but this particular CPO was different in that the classroom lecture on general Kaizen theories was combined with a new initiative designed to provide hints to discovering specific Kaizen ideas by actually walking through a refinery in search of seeds of Kaizen ideas and expanding on them on site. The objective of this exercise was to cultivate a "Kaizen mind" among the refinery engineers.

(2) Because this was our first attempt at holding a Kaizen idea discovery tour, there were many points to be improved, or "Kaizen points," in and of themselves. Namely, there were many things that we did not anticipate. For example, it seemed that the purpose of this Kaizen Seminar was not fully understood by the refinery side, and the lecturer's voice could not be heard above the sound level in the refinery. Nevertheless, we are convinced that this new program has promising potential to offer extremely effective training to refinery workers. In fact, in a meeting held at PLC after completion of the seminar, the PERTAMINA side requested continuous guidance of practical Kaizen measures in the refinery in the form of a CPO. For our part, we will improve various details of implementing the program and make greater efforts to convince refinery executives that cultivating a Kaizen mind would bring many benefits in the long run.

(3) Post-seminar evaluation results indicated that the seminar was a success. Participants who attended both the first and second parts of the seminar responded "good" or "excellent" in regard to the relevance of the program to their current activities. They also evaluated the program content level as either "good" or "excellent," and expressed strong interest in participating in a course in Japan.

With participants after the Kaizen discovery tour

7. Courtesy Visit with the Human Resources Director at the PERTAMINA Head Office

After completing the seminar, the lecturers returned to Jakarta to pay a courtesy visit to Ms. Rukumi Hadihartini, Human Resources Director, at the PERTAMINA Head Office. The JCCP members thanked Ms. Hadihartini for PERTAMINA's participation in JCCP training programs, and gave an explanation about the cancellation and postponement of the first half-year's regular courses in the wake of the Great East Japan Earthquake and about the resumption of courses in the second half of the year. They also engaged in an exchange of views regarding requests and proposals for JCCP training programs.

8. Meeting with PLC

On the last day of our stay in Indonesia, we held a meeting with PLC to acquire PERTAMINA's views and expectations on future JCCP training programs and points for improvement, and received the following expectations for new courses.

(1) Course on the procurement-logistics-supply chain in regard to crude oil, catalysts, chemicals, and maintenance equipment
(2) CPO on Kaizen in the refinery and CPJ on Kaizen for human resource development
(3) IT technologies

We explained that there are certain areas in which JCCP is not capable of providing training in its present capacity.

9. Conclusion

The past two CPO seminars for PERTAMINA were held in Bandung, but this CPO that was held for the first time in five years took place at the PERTAMINA Learning Center in Jakarta. Participants who gathered from various areas of the country to attend the seminar established mutual friendships through the seminar, and were reluctant to part with each other and the lecturers after completion of the seminar to return to their respective places of work. As members of the hosting side of the seminar, we were extremely pleased to see that JCCP training programs not only benefit the participants in their operations, but also contribute to creating personal friendships.

We understand that PERTAMINA provides many diverse types of training. Perhaps this is one of the reasons why we receive many more applications to JCCP regular courses than to customized programs.

New oil and gas field development projects are underway in Indonesia, and the country is fast becoming an important oil-producing country to Japan. Based on this awareness, we will strive to plan and propose customized programs that more closely match the needs of PERTAMINA and thereby strengthen our friendly relationship with the company.

<by Akio Hoshino, Training Dept.>

Presentation of the completion certificate

Courtesy visit to Ms. Rukumi Hadihartini, Human Resources Director (center)

CPO Seminar on Maintenance Management for Petrovietnam

After completion of the seminar

1. Background

Two years ago, JCCP implemented a seminar on maintenance technologies for rotary machinery and static equipment under the title, "Refinery Maintenance Management," at the request of the Zung Quat Refinery, the country's first refinery. Last year, in a survey of needs for JCCP training programs in counterpart countries, Mr. Tran Van Hoa, General Manager, Training & HRD Division, Petrovietnam, requested a seminar on automation. In consideration of the above, a comprehensive Customized Program-Overseas (CPO) on maintenance management was decided to be implemented, with a focus not only on rotary machinery and static equipment, but also on field instrumentation devices, DCS (distributed control system), and automatic control technologies that use instrumentation devices and systems.

2. Plant Tour

Since the beginning, we had been hoping to visit a Vietnamese production facility associated with JCCP training prior to implementing the above-mentioned seminar. Since a Customized Program-Japan (CPJ seminar on instrumentation) happened to be underway, we consulted with the participants of the seminar, and received an invitation to visit the construction site of a bioethanol plant by Mr. Ha Anh Triet from Petrovietnam Oil Corporation (PVOIL). We gratefully accepted the

Construction site of the bioethanol plant

Seminar scene

invitation and, prior to implementing the seminar, set out to visit the plant, which we understood was about 150 km from the city. Due to traffic congestion in the city and slow driving on segments of unpaved roads, it turned out to be a long journey that took us some five hours, but we ultimately arrived at our destination. In Vietnam, ethanol is made using the roots of a woody shrub called cassava that is widely grown in the country. Parts other than the roots are used as boiler fuel, so the cassava is used in its entirety without putting any part to waste. At the plant, the steel framework of the cassava storage warehouse was already assembled, the ethanol distillation tower was installed, and other related facilities were under construction. Operations are slated to commence next spring. With plans for the construction of similar plants in northern Vietnam (under construction) and central Vietnam, we felt we glimpsed the progress of a rapidly developing country.

3. Seminar Overview

The five-day seminar took place in a hotel in Ho Chi Minh City, from September 26 to 30, 2011.

In addition to lectures given by members of JCCP's Training Department (S. Miyawaki, H. Saito, and K. Suzuki), we enlisted the expertise of Mr. Haruo Takatsu from Yokogawa Electric Corporation and Mr. Sho Ushikubo from Endress+Hauser Japan Co., Ltd. as outside lecturers and asked them to lecture on the maintenance of automated control systems and field instrumentation devices that utilize DCS and advanced control technologies.

A total of 20 participants attended the seminar from Petrovietnam's six companies throughout Vietnam, including five members from Petrovietnam Energy Technology Corporation (PVEIC), a maintenance company affiliated with Petrovietnam.

4. Seminar Details

The seminar incorporated Mr. Hoa's request and included the maintenance management of instrumentation devices and automation issues in addition to the maintenance management of rotary machinery and static equipment, which was previously covered in the seminar held at the Zung Quat Refinery. The lecture on rotary machinery focused on the reliability improvement of machinery that contributes to loss prevention in the refinery. The lecture on static equipment explained

Presentation of the completion certificate

the importance of material selection and of matching operations to the characteristics of the material, in reference to trouble cases experienced in Japan. In regard to field instruments, a description was given of the characteristics of radar level gauges that have begun to be widely used in recent years. The lecture on automation introduced model predictive control and other advanced control technologies that are favored by refineries and petrochemical plants. It not only focused on the functions and methods of introducing these technologies, but also explained the necessity and measures for maintaining advanced control at high operation levels. Finally, the lecture provided CAI practice in a representative method of tuning basic control loops (PID control), which is needed for the effective introduction of advanced control technologies.

5. Summary

The seminar covered a number of different technology fields within the perspective of maintenance. Even within this perspective, however, we thought the lecture on advanced control might perhaps be difficult to grasp, but the participants demonstrated a high level of understanding of advanced controls. In fact, some even commented, for example, that the advantages of introducing advanced control do not match their calculated estimates.

In the post-seminar evaluation, many participants expressed their desire to participate in a training program in Japan or requested a long-term seminar. In response to these expectations, we will continue to seek opportunities to hold seminars such as this as a regular part of our cooperation activities in Vietnam.

<by Kazuhiro Suzuki, Training Dept.>

CPO Seminar on Energy Saving and Maintenance for SINOPEC's Tianjin Refinery

Group photo taken at the opening ceremony

1. Background

"Energy saving and maintenance activities in the refinery" has been one of the priority themes for training in the mutual cooperation program between SINOPEC and JCCP. Therefore, it was decided to be taken up in a Customized Program-Overseas (CPO) designed to introduce various case examples relating to energy saving and maintenance issues. The seminar was held from September 5 to 9 at SINOPEC's Tianjin Refinery. It was the first seminar in as much as 11 years to be implemented in northern China since the previous seminar at the Yanshan Refinery in 2000.

The CPO was made possible with the full support of Mr. Zhang Zheng, Deputy Director General, who assumed a leadership role in planning and arranging for the implementation of the seminar, and with the cooperation of Mr. Ron Qi, Ms. Li Bing Jie, and Ms. Yang Fang from the Foreign Affairs Department. On the Japanese side, JCCP lecturers S. Miyawaki, T. Kubota, and H. Saito, and Mr. Hiroshi Sano from Idemitsu Kosan Co., Ltd., who joined the group as a member company specialist, successfully implemented the seminar as planned.

2. Seminar Content

(1) Opening ceremony

An opening ceremony kicked off the seminar on the first day. Mr. Zhang, representing the counterpart

At the seminar venue:
Mr. Wang Lixin, Vice President, Tianjin Refinery
(fourth from right)

Opening ceremony:
Mr. Zhang Zheng, Deputy Director General,
Foreign Affairs Dept. (third from right)

department to JCCP, expressed his deep appreciation regarding the successful completion of the seminar held last year at the Zhenhai Refinery in Ningbo City, and also regarding the continued relationship of cooperation between the two organizations since the establishment of JCCP.

Following Mr. Zhang, Mr. Wang Lixin, Vice President of the Tianjin Refinery, delivered a few words of greeting, noting that this seminar is a commemorative event marking roughly one year since the previous CPO seminar held last year, and the 11th year since the last seminar was held in northern China (at the Yanshan Refinery in 2000). As one of the organizers of the seminar, he also expressed his relief and delight that a far larger number of participants than expected signed up to attend the seminar (approx. 90) even compared to the last year's successful seminar (approx. 60).

In response, we thanked the SINOPEC Head Office and the Tianjin Refinery for making the various arrangements for implementation of the joint seminar, and expressed our hopes that it will present an opportunity to promote further cooperation between SINOPEC and JCCP, and that personnel and technical exchanges through JCCP activities will lead to future development of the oil industry in both countries.

(2) Overview of JCCP training programs

First of all, we introduced JCCP activities using a DVD with Chinese narration instead of our conventional English version. This proved to be highly effective in facilitating understanding among the SINOPEC participants.

In regard to JCCP training programs, we explained the differences between the two types of programs—JCCP programs and member company programs—and noted that member company programs might be easier to understand for those who are not too confident with their use of English, because JCCP programs are held in English while member company programs are usually accompanied by a Japanese translator.

(3) Lecture on loss prevention activities in the refinery (Miyawaki)

In this lecture, Miyawaki gave an overview of the history and experiences of the oil industry in Japan in the context of global developments, and explained the dramatic transitions that have heretofore taken place in the environment surrounding the oil business through the period of high growth, the oil crises, and the largest-ever surge in crude oil prices after the collapse of the bubble economy. He also described the process through which Japanese oil companies have strengthened their business structure through repeated integrations and reorganizations, and introduced the series of initiatives that have been implemented for improvement of refinery maintenance management, including fundamental technologies for efficient and stable refinery operations, such as loss prevention activities that have been adopted to increase efficiency in the oil refining sector.

(4) Energy-saving technologies (Kubota)

In this lecture, Kubota explained the concept of Japan's energy conservation laws and introduced general energy-saving initiatives actually implemented by refineries in Japan. By presenting various case examples of energy-saving initiatives and explaining them based on the actual experiences of Japanese refineries, he showed that reducing energy consumption in the refinery is extremely important to refinery operations (including profit improvement).

(5) TPM activities and energy saving in the refinery (Mr. Sano)

In this lecture, Mr. Sano provided actual case examples of oil companies' efforts to introduce TPM activities in their refineries, describing the process that commonly begins with repeated trial and error until the activities actually take root. In particular, specific examples of company-wide efforts and factors involved in centrally managing the activities of diverse refineries within a unified framework contained many lessons relevant to SINOPEC, as it is a company that indeed manages diverse refineries. To facilitate greater understanding, Mr. Sano used a case example to explain

Seminar lecture scene
Mr. Hiroshi Sano, Idemitsu Kosan (right)

that an effective method of promoting TPM activities and energy saving in refineries is to adopt the top runner method, whereby the activities of the refinery producing the most outstanding results are introduced to other refineries as a model of best practices.

(6) Examples of maintenance activities in Japanese refineries (Saito)

The content of this lecture was arranged in response to prior requests made by SINOPEC, and covered issues relating to the maintenance framework and the actual management of maintenance operations in the refinery.

Among the topics covered, active questions and answers were exchanged regarding the comparative evaluation of maintenance costs. Particularly in regard to the basis for calculating maintenance cost ratios (for example, technical standards on whether or not refinery personnel cost and fuel oil cost should be included), Saito emphasized the importance of establishing a unified standard as appropriate to the specific purpose of cost calculations.

The participants also had many questions regarding individual cases of open inspection cycles, and demonstrated particularly strong interest in pursuing matters of concern they face in their actual work, among other relevant topics.

Q&A with participants:
H. Saito, JCCP lecturer

A closing ceremony was held after the last lecture, and a JCCP completion certificate was presented to each participant. In his closing speech, Mr. Zhang expressed his appreciation for the successful completion of the seminar, and urged all participants to apply the knowledge they gained in the seminar to make improvements in their respective refineries. The seminar thus came to a close after fully completing the scheduled agenda.

Because we lecturers had the opportunity to visit a construction site of the Tianjin Refinery to assess the actual status of improvement activities prior to implementing the seminar, we think that the added perspective allowed us to provide lectures and presentations that were especially pertinent to the SINOPEC participants.

3. Summary

As mentioned by Mr. Zhang at the beginning of a prior meeting at the SINOPEC Head Office, this seminar was the first JCCP seminar to be held in northern China in as much as 11 years and a first for the Tianjin Refinery. However, it was brought to a successful completion owing to the full cooperation of the SINOPEC Head Office and the president and vice president of Tianjin Refinery, not to mention all relevant personnel of the refinery.

Post-seminar evaluations by the participants showed strong requests for continued implementation of the seminar in the future. When considering the conspicuous decrease in opportunities for mutual exchange with SINOPEC and other state-owned oil companies in China through JCCP programs, we feel it would be realistically practical to make the most of the few available opportunities and ensure each provides an ideal forum for promoting mutual understanding through the communication and exchange of information. Such opportunities would no doubt come to hold even larger significance than ever within the greater scheme of cooperation among the rapidly expanding East Asian market economies, as well as for the further development of JCCP activities.

Lastly, we extend our sincerest gratitude to everyone in all relevant departments who kindly gave us their support and cooperation in various aspects of the seminar.

<by Shintaro Miyawaki, Training Dept.>

CPO Seminar on Heavy Oil Upgrading Held at Vietnam Petroleum Institute (VPI)

Opening ceremony

1. Background and Overview of the Seminar

A Customized Program-Overseas (CPO) on heavy oil upgrading was jointly held by Petrovietnam and JCCP as a mutual cooperation project of the two organizations, based on the Memorandum of Understanding for the implementation of JCCP training programs in Vietnam beginning this fiscal year. As heavy oil upgrading is a priority issue at Petrovietnam, the basic framework of the program, including schedule and content, was carefully arranged with Petrovietnam's personnel and training departments, and detailed requests regarding the program content were discussed with training coordinators at Vietnam Petroleum Institute (VPI), Petrovietnam's Research and Development Center for refinery processing and catalysts.

The seminar was held over a period of four days, from September 5 to 8, 2011, in a conference room of VPI in Ho Chi Minh City. Lectures were given by a team of six members composed of Takaaki Yuasa and Tetsuo Arii from JCCP, Mr. Toshiyuki Karasawa from JGC Corporation, Mr. Hidetoshi Tani from Toyo Engineering Corporation, and Messrs. Seijiro Nonaka and Tran Viet Ha from JGC Catalysts and Chemicals Ltd. The participants were a group of 27 people in charge of research and development of refinery processes and catalysts, and included three process engineers from the Petrovietnam Head Office (Hanoi) and five experienced operators from Petrovietnam's refinery.

2. Seminar Content

The first day began with self-introductions by all participants, followed by an introductory presentation of JCCP using a DVD. Yuasa then introduced the history and present state of Japan's oil industry and gave an overview of the characteristics and necessity of heavy oil upgrading. Arii also gave a lecture on heavy oil upgrading, focusing on the characteristics of each individual process in reference to actual examples of combinations used in Japanese refineries that flexibly satisfy product standards and needs. Because the participants varied in their level of experience, the lecture adopted an interactive style to constantly gauge their understanding and proceed accordingly.

On the second day, Mr. Karasawa from JGC Corporation gave a detailed lecture on the selection of heavy oil upgrading processes and an overview of the thermal cracking and integrated gasification combined cycle (IGCC). In particular, he discussed methods for examining the economic efficiency of introducing a heavy oil process to the refinery, and introduced case studies of specific schemes to explain methods of selecting heavy oil processes, major factors that influence economic efficiency, and important points for consideration when selecting a heavy oil process. The advanced knowledge of processes the lecture provided was well received by the participants, who said they look forward to applying it to their actual work.

Tetsuo Arii, JCCP lecturer

Mr. Hidetoshi Tani, Toyo Engineering Corporation

On the third day, Mr. Tani from Toyo Engineering lectured about catalytic cracking technologies (FCC & RFCC) and heavy oil hydrotreatment technologies. In regard to catalytic cracking technologies, he discussed the processes in general, including operational variables, the impacts and countermeasures for impurities in feedstock oil, and the effectiveness of new processes and devices, and also discussed the characteristics of each licensor from a cross-cutting perspective. In addition to FCC and RFCC, Mr. Tani introduced other related processes such as the gasoline desulfurization unit and propylene splitters, and explained the basic reactions, general process specifications, and characteristics of heavy oil hydrotreatment technologies. A brief mention was also made of the new technologies of OCR (on-stream catalyst replacement) and the ebullated-bed slurry phase process. The lecture elicited active questions and answers and turned out to be an extremely productive session.

On the fourth and final day, Messrs. Nonaka and Ha from JGC Catalysts and Chemicals gave lectures on the theory of fluid catalytic cracking (FCC) and the theory of heavy oil hydrotreatment catalysts, respectively, and explained reaction theories and catalyst production and evaluation technologies. Participants who work with catalysts engaged the lecturers in a lively Q&A session.

In the closing ceremony, the Japanese-side members thanked Petrovietnam for its cooperation in the successful implementation of the seminar, expressed their future expectations, and introduced the Customized Program-Japan (CPJ) that will be held in Japan on the same theme this coming December. Lastly, they urged the participants to apply the knowledge they gained in this seminar to Petrovietnam's second refinery, which is currently under construction, and the third refinery that is being planned.

Presentation of the completion certificate

3. Evaluation and Impressions of the Seminar

Seminar evaluations showed that practically all participants thought the seminar was extremely meaningful and would benefit them in their present jobs. Therefore, it seems the seminar appropriately corresponded to the participants' level of knowledge.

Attended by catalyst researchers and biofuel researchers from VPI, as well as process engineers with operational experience in a refinery, the seminar was also meaningful in that it provided a broad range of knowledge.

The program was designed to feature two themes: to provide knowledge of methods for selecting optimal process combinations in consideration of the necessity and economic efficiency of heavy oil treatment processes; and to provide catalyst technologies that are necessary for advanced treatment of heavy oil. With almost all participants reviewing the seminar favorably, saying they were able to acquire extremely useful knowledge despite the short seminar period of four days, JCCP is relieved and pleased that the seminar was a success.

<by Takaaki Yuasa, Training Dept.>

CPJ Seminar on Practical Training for Young Instrumentation and Control Engineers for Vietnam

Participants of the course

The "Practical Training for Young Instrumentation and Control Engineers," which was newly launched last fiscal year, was again implemented this year.

This seminar was established based on JCCP's long-standing goal of providing ever-more-practical training, and on strong requests from participants of regular courses on instrumentation and control for systematic training that covers a broad range of topics, from basic to applied technologies. In consideration of the above, a practical program that covers a broad range of basic to applied themes in the two fields and that includes hands-on exercise was designed for young instrumentation and control engineers in oil-producing countries.

After reviewing and improving on the program implemented last year, the seminar was held this year over a period of 32 days (net 24 days), from August 22 to September 22, 2011.

Course Overview

1. Participants

The course was offered to 12 young Vietnamese engineers (average age of 30) this year, as part of the special assistance program for Vietnam.

All participants exhibited high levels of motivation to acquire Japan's technologies, and diligently engaged in training. They also showed good teamwork, actively participated in discussions, and maintained a cooperative attitude throughout the course.

2. Program Details

The program fundamentally placed emphasis on practical exercises rather than on lectures, and covered a wide range of basic to applied issues in instrumentation and control, in roughly equal parts.

(1) In the instrumentation field, basic topics included the measurement of flow, temperature and pressure, the measurement of fluid levels which was newly included this year, and the selection of control valves. At the applied level, participants performed exercises in equipment maintenance, the series of tasks that need to be performed from the basic design to onsite construction stages, and the advanced technologies of field bus designing and wireless instrumentation.

(2) In the control field, emphasis was placed on the latest technologies, including refinery information

Control exercise using a computer

Exercise in the disassembly and inspection of a liquid level gauge

systems, DCS, and safety instrumentation systems, based on control theories provided at JCCP Headquarters. This year, control technologies in power generation facilities were added as a new feature.

(3) Practical exercises were provided as follows to facilitate theoretical and practical knowledge.
- Exercises in control theories using a computer and DCS, operational assistance systems, and multivariable predictive control
- System construction exercise using actual DCS equipment
- Exercise in using an actual safety instrumentation system
- Exercise in using a wireless instrumentation device
- Exercise in using analyzers and other onsite measuring instruments
- Exercise in the disassembly and inspection of instrumentation devices (flow meter, liquid level gauge, control valve)
- Exercise in instrumentation engineering using virtual equipment

(4) Offsite training and training by outside lecturers were provided as follows.

Offsite training (7 companies)
- Yokogawa Electric Corporation (the latest DCS, software overview, control systems of power generation facilities) / Aug. 30 – Sept. 1
- Endress+Hauser Japan Co., Ltd. (exercises in liquid level gauge engineering and maintenance) / Sept. 2
- Invensys Process System Japan, Inc. (overview of safety instrumentation systems) / Sept. 7
- Oval Corporation (exercise in flow meter engineering and maintenance) / Sept. 12
- Yamatake Corporation (exercise in DCS and control valve engineering and control valve maintenance) / Sept. 13-14
- Emerson Japan, Ltd. (DCS and wireless instrumentation engineering) / Sept. 15
- Idemitsu Kosan Co., Ltd. Tokuyama Refinery (refinery control and information systems) / Sept. 9

Outside lecturers (5 companies)
- Toyo Engineering Corporation (overview of

Control exercise using a wet simulator

Exercise in the disassembly and inspection of a flow meter

instrumentation and control engineering) / Aug. 25-26
- Osaka Systems Planning, Inc. (overview of refinery information systems) / Aug. 29
- Yokogawa Electric Corporation (exercise in constructing an operational assistance system) / Sept. 16
- JGC Corporation (MPC exercise using a simulator) / Sept. 19
- Chiyoda Corporation (instrumentation design and workflow, control and safety instrumentation design, onsite instrumentation works) / Sept. 20-21

3. Observations

The course was long, and the program was broad, covering both lectures and practical exercises in instrumentation and control, but we were able to complete the program successfully, owing to the generous cooperation of various oil-related facilities in Japan and outside lecturers, as well as to the outstanding participants and their determination. We were especially impressed with the participants' sense of initiative in acquiring technologies and their quick adaptation to life in Japan.

Their overall evaluation of the course was generally satisfactory, but they seemed to have strong interest in further pursuing regular instrumentation maintenance, daily maintenance, and issues related to electric power. Some discussions on maintenance topics did take place, but we regret that they may not have been sufficient.

4. Future Issues

This seminar is planned to be held regularly from the next fiscal year, but based on the evaluation of this recent program, we will conduct a thorough review and make further efforts to provide consistently more practical training in the future.

<by Shigeru Matsui, Training Dept.>

3D virtual exercise

Lecture on control systems in the refinery

Report on the Training Cooperation Program —Colombia, Venezuela and Brazil—

Two members from JCCP's Training Department—A. Hoshino and T. Kubota—made a round of visits to Colombia, Venezuela and Brazil from September 27 to October 6 under the Training Cooperation Program to strengthen relationships with oil-producing countries outside of the Gulf countries to diversify future energy sources, and to exchange views toward a future renewal of JCCP courses.

Venezuela is one of the founding members of OPEC and an important country as the world's second-largest (2011, 01OGJ) petroleum market after Saudi Arabia in terms of confirmed oil reserves. Brazil has the second-largest confirmed oil reserves in South America after Venezuela, and became a net exporter of oil in 2009. It is also the world's second-largest producer of ethanol. Colombia's oil reserves are smaller, but the country is the third-largest producer of crude oil in South America.

JCCP enjoys a friendly relationship with Colombia and Brazil, but wishes to strengthen the ties even further. On the other hand, the relationship with Venezuela has been gradually declining. While during the early years after establishment of JCCP participants from Venezuela had formed the second-largest group of participants to JCCP regular courses among the countries of Central and South America after Mexico, there were only two participants from Venezuela in the past eight years. Therefore, the visit to Venezuela was made with the aim of promoting cooperation in personnel training and re-establishing a liaison channel in the country.

Mr. Byron Miranda, Refinery Manager (third from left)

Mr. Jorge Pederos, Commissioning & Start-up Director, Reficar (left)
Ms. Marcela, Personnel Affairs Leader and coordinator for JCCP (right front)

1. Colombia

(1) Ecopetrol S.A., Cartagena Refinery

The JCCP members visited the Cartagena Refinery, located along the coast of the Caribbean Sea some 700 km north of the capital city of Bogotá, and were greeted by Mr. Byron Miranda, Refinery Manager, and a large number of JCCP graduates.

The refinery is currently undergoing an expansion project to increase its crude oil throughput from 80,000 b/d to 165,000 b/d, and the construction of relevant units including a fluid coker and hydrocracker is underway, with operations slated to commence in 2015. Mr. Jorge Pederos, Commissioning & Start-up Director of Reficar (Refinería de Cartagena S.A.), a subsidiary of Ecopetrol, personally gave the JCCP members a tour of the construction site. Later, he noted that the refinery has plans to bring in additional employees to operate the new units once they are installed, but a major challenge lies in providing technical training to all employees. He therefore said he hopes JCCP will accept a large number of Ecopetrol refinery employees to future regular courses.

Mr. Pederos also requested a Customized Program-Overseas (CPO) intended solely for Ecopetrol.

(2) Ecopetrol Bogotá Head Office, Management Department

After visiting the Cartagena Refinery, the JCCP members returned to the Ecopetrol Head Office in Bogotá to pay a courtesy visit to the management executives of the company. They met with Mr. Federico Maya Molina, Vice President of Refinery & Petrochemical, and other executives, and asked for their cooperation in further strengthening the friendly relationship between Ecopetrol and JCCP. Mr. Molina and the other members were familiar with JCCP's activities, and as at the Cartagena Refinery, they said they will be looking to JCCP for cooperation, particularly given the large increase in employees at the refinery.

(3) Ecopetrol Bogotá Head Office, Human Talent and Training Departments

Ms. Monica from the Human Talent Department in the Head Office provided an overview of the department. She explained that after a new organizational structure was adopted last year, the department now has 152 employees.

With Ecopetrol being such a large organization, few people seemed to know about JCCP activities, so the JCCP members asked for some time to introduce JCCP activities and give a spontaneous mini-seminar on human resource management. Members of the Human Talent Department listened attentively to the presentation, and expressed an interest in participating in a regular course on human resource development. To more widely share information about JCCP regular courses across the company, they asked for the JCCP regular course registration packet to be sent not only to Ms. Ana Victoria in the Human Resource Dept., who is JCCP's coordinator in Ecopetrol, but also to Ms. Claudia Rios, Manager of Human Talent. We hope the continuation of such efforts will lead to stronger mutual ties between the two organizations.

In response to a request from Ecopetrol, JCCP implemented a seminar on heavy oil upgrading in Colombia in 2008, and participated in an environmental forum in 2009. This year, Ms. Gladys Lopera, Project Leader, from the Barrancabermeja Refinery participated in the first regular course (Environmental Management (TR-10-11)) held in Osaka after the March 11 earthquake. Through these and other interchanges, JCCP is maintaining a good relationship with Colombia.

2. Venezuela

(1) PDVSA Head Office

JCCP formerly corresponded with the Human Resource Training Department in the PDVSA Head Office as its counterpart department in Venezuela, but because it had become difficult to maintain steady communication with the department, the counterpart department was transferred this February to the training center coordinator at INTEVEP, a state-owned research institute for petroleum technologies. However, the coordinator was soon transferred to a different department, and JCCP lost contact with Venezuela because no replacement was appointed thereafter.

To realize the recent visit, JCCP asked JGC Corporation's overseas affiliate (JGC Venezuela C.A.), a JCCP member company doing business in Venezuela, to introduce a contact department in the PDVSA Head Office. On the day prior to visiting the PDVSA Head Office, Mr. Koji Sakurai, President of JGC Venezuela, kindly took the time to brief the JCCP members on basic information about Venezuela, and provided valuable insight into the social and economic state of the country.

On the day of the visit, the JCCP members first paid a courtesy call on Ms. Rosa Rodriguez, General Manager Refining and Performance Control, who indicated strong interest in JCCP's training program for the refinery department. They then took part in a teleconference with the following four refineries.

(1) Center of Refinery Paraguana (CRP)
(2) El Palito Refinery
(3) Puerto la Cruz Refinery
(4) Isla Refinery

Under the moderation of Mr. Plinio Arana, Refining and Performance Control Department, the JCCP

PDVSA Head Office

Preparing for the teleconference

members introduced JCCP's activities and this year's course program. Some of the participants of the conference seemed to have heard about JCCP's activities through the implementation of member-company programs, but they were generally unfamiliar with JCCP and its activities.

Under this situation, it was a significant achievement to JCCP that Ms. Rosa Rodriguez agreed to serve as a coordinator between JCCP and PDVSA's refineries, and Ms. Gloria Montanez, Administration Human Resource Department, agreed to serve as a coordinator for administration and human resource matters. Needless to say, however, continued efforts need to be made to promote the establishment of stronger ties with Venezuela.

3. Brazil

(1) Petrobras University

Petrobras University is a corporate university that alone provides professional training to all Petrobras employees. It also serves as JCCP's counterpart in Brazil. With as many as 107 classroom facilities, the university turns out 2,000 graduates every year. In 2010, JCCP implemented a seminar on refinery offsite operations for Petrobras employees, which was very well received by all participants.

Upon arriving at the university, the JCCP members were warmly greeted by Mr. Gustavo Tamara, Human Resource Dept. International Coordinator, and a large number of JCCP graduates. They thanked everyone for their warm support after the March 11 earthquake, and then explained about the changes made to the 2011 course program and plans for next year's program. Mr. Tamara expressed strong interest in the courses related to human resource management and the environment, particularly as he belongs to the Human Resource and HSE Department, and promised to give greater consideration than ever to Petrobras' future participation in regular courses and implementation of seminars in Brazil.

The JCCP members completed their visits with a renewed awareness that even more active and continuous efforts need to be made to deepen relationships with the faraway countries of Central and South America.

In front of Petrobras University

Seminar participants and Mr. Gustavo Tamara, Human Resource Dept. International Coordinator (third from left)

<by Tetsuji Kubota, Training Dept.>

Report on the Training Cooperation Program —Indonesia, Vietnam and Thailand—

A two-member JCCP delegation consisting of Mitsuyoshi Saito, Counselor, and Koichi Io from the Operations Department visited Indonesia, Vietnam and Thailand from July 27 to August 6 and exchanged views and information with key figures in JCCP counterpart organizations in those countries.

1. Purpose

In the wake of the March 11 Great East Japan Earthquake, JCCP received heartwarming messages of sympathy and encouragement from overseas counterpart organizations and past participants of JCCP courses. While JCCP was not directly affected, all courses scheduled between April and July were either canceled or postponed in consideration of the aftershocks of the earthquake and the possible confusion that might arise from planned power outages.

Under this situation, the recent visits were made with the purpose of conveying JCCP's appreciation for everyone's sympathy and support after the earthquake, as well as to explain the status of the training program thereafter, announce the resumption of regular courses in September, and to elicit requests concerning JCCP training activities.

2. Indonesia

2-1. PERTAMINA Learning Center (PLC)

On July 28, the delegation visited PLC in the morning and met with Ms. Ida Halya, Development Leadership Manager, JCCP's counterpart training coordinator, and JCCP graduates.

On behalf of JCCP, Saito first expressed his gratitude to the Indonesian government and the people of Indonesia for their generous support after the Great East Japan Earthquake (in the form of relief supplies, donations, and the dispatch of rescue teams) and to JCCP's friends at PERTAMINA for their warm messages of support and encouragement. He then explained that regular courses that were scheduled to take place after the earthquake were canceled or postponed in consideration of participants' concerns about the impact of the earthquake.

Ms. Halya said Indonesia had experienced a similar disaster, at which time Japan gave tremendous support. It has never forgotten Japan's generosity, and simply did what it could to help Japan after the March 11 earthquake. She expressed her hopes and conviction that Japan and the Japanese people, whom Indonesia holds in the highest respect, will overcome this difficult period.

Io then referred back to matters concerning JCCP's regular courses, explaining that while seven out of nine courses that were scheduled to be implemented between April and July have been canceled and two have been postponed to a later time in the second half of the fiscal year, life in Tokyo has returned to normal. To provide reassurance, he explained that the four courses planned for September and October will be held in Osaka, however courses in November and beyond will be implemented in Tokyo as originally planned.

The JCCP members also interviewed the PERTAMINA side about needs and requests concerning JCCP courses, and received the following responses.

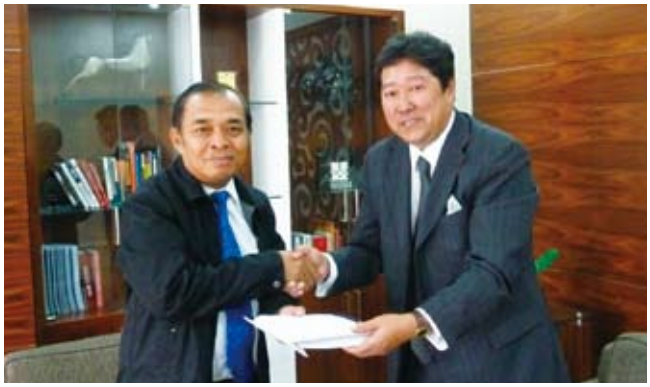
- The Customized Program–Overseas (CPO) on Kaizen, held in July, was extremely beneficial. PERTAMINA experienced the uniquely Japanese practice for the first time, but would like to incorporate it into its operations in the future.
- PERTAMINA would like to see the implementation of a course on financial issues. (JCCP plans to offer a new course on financial issues in the FY2012 course program.)

They also met with Mr. Suwardi Somatri, Vice President, in the afternoon and gave a brief account of the morning meeting at PLC.

2-2. PERTAMINA Head Office

After the visit to PLC, the JCCP delegation visited the PERTAMINA Head Office to pay their respects to Mr. Waluyo, Director of General Affairs.

Mr. Waluyo offered his condolences over the March 11 earthquake, saying that he was stunned when he first heard about the disaster, especially because he had never imagined that the Japan he loves would be struck by a disaster similar to what Indonesia had experienced in the past, but said with firm conviction that with Japan's history of reconstruction and advanced technologies, there will always be paths to recovery. He also said PERTAMINA has been awaiting the resumption of



At PERTAMINA Head Office:
Mr. Waluyo, Director of General Affairs (left)

regular courses and would have participated even if they were held in Tokyo, but holding them in the Osaka region is a prudent decision.

Aside from talks about the disaster and the status of regular courses, Saito mentioned that JCCP had reached its 30th anniversary in November and is currently preparing a special commemorative publication of JCCP's history. He noted that top executives of state-run oil companies overseas had provided congratulatory messages for the 20th anniversary publication, and asked if PERTAMINA would consider writing a complimentary message for the 30th. Mr. Waluyo graciously assented, promising PERTAMINA's full cooperation.

2-3. Ministry of Energy and Mineral Resources, Directorate General (MIGAS)

On July 29, the JCCP delegation visited the MIGAS Head Office and met with Ms. Evita Legowo, Director General; Mr. Edi Purnomo, Secretary General, JCCP's counterpart training coordinator; and JCCP graduates.

Ms. Legowo warmly welcomed the visit by the two JCCP members, and said she had been looking forward to hearing about the status of regular courses after the earthquake and plans for their resumption, because JCCP's training activities play an important part in MIGAS' training initiatives.

Saito responded by extending JCCP's appreciation to the Indonesian government and the people of Indonesia for their support (natural gas, relief supplies, donations, dispatch of rescue teams, etc.) after the Great East Japan Earthquake, and said that the many messages of support and encouragement from friends and JCCP graduates at MIGAS provided a reassuring reminder of the strong bond of friendship between the two organizations.

The JCCP members then interviewed Mr. Purnomo, JCCP's counterpart training coordinator, and JCCP graduates about needs and requests concerning JCCP courses. In addition to a request for a course on energy conservation, the MIGAS side requested the implementation of courses on topics relevant to a governmental institution (such as public investment, energy policies and regulations, etc.).

Additionally, as the MIGAS side was concerned about the impacts of the nuclear accident, the JCCP members provided a detailed explanation about the status of the affected nuclear reactors using reference materials prepared in advance, and stressed the safety level in Tokyo, where JCCP headquarters are located.

At MIGAS:
Ms. Evita Legowo, Director General

3. Vietnam

Details of the delegation's visit to Vietnam are provided in the article on "Signing an MOU on a Special Cooperation Program with Petrovietnam."

4. Thailand

4-1. PTT Public Co., Ltd. (PTT)

On August 4, the JCCP delegation visited the PTT Head Office and met with Mr. Pitipan Tepartimargon, Senior Executive Vice President, Corporate Human Resources, and other members of PTT.

Saito initially expressed JCCP's appreciation for Thailand's generous support in response to Japan's situation after the Great East Japan Earthquake and for the many messages of concern and consolation from friends of JCCP at PTT. He said that ensuing circumstances had required JCCP to cancel or postpone courses that were scheduled to be implemented between April and July, but that the courses for September and beyond will resume anew. He explained that they had made this visit specifically to announce this news and to personally encourage the participation of PTT employees.

Mr. Pitipan thanked the JCCP members for their visit

At PTT:
Mr. Pitipan Tepartimargon, Senior Executive Vice President, Corporate Human Resources (center)

and for providing a detailed account of the situation in Japan after the earthquake. He said PTT has been waiting for regular courses to resume, as JCCP training activities as a whole are important to PTT's training scheme. He added that as a fan of Japan he has visited Japan many times, so he knows the Japanese people are an honest, hardworking and painstaking people who have overcome numerous challenges to make their nation what it is today, and said he believes Japan will once again emerge from the recent disaster.

In response to questions from the PTT side about the impacts of the nuclear accident at Fukushima, the JCCP members used detailed reference materials to explain the present state of nuclear decontamination and the progress in cooling the nuclear reactors, and how Japan is devoting full-scale efforts to contain the accident according to a specific timetable.

Thereafter, the JCCP delegation paid a courtesy call on Ms. Papinya Tansamrit, Vice President, Learning and Development Center Dept., and held a meeting about regular courses with JCCP's counterpart training coordinator. The JCCP members were told that PTT is satisfied with regular courses and has no particular proposals or requests. The PTT side revealed that Mr. Pitipan debriefs the PTT participants to JCCP regular courses after their return to Thailand, to hear about their impressions and experience.

4-2. The Bangchak Petroleum Public Company Ltd. (BCP)

On August 5, the JCCP delegation visited the BCP Head Office and held a meeting with Mr. Vichien Usanachote, Senior Executive Vice President, Refinery Business; Mr. Wattana Opanon-Amata, Senior Executive Vice President, Corporate Administration and Information Technology; and Mr. Kiatchai Maitriwong, Executive Vice President, Corporate Administration and Information Technology. They also met with JCCP's counterpart training coordinator and JCCP graduates.

After warmly welcoming the delegation, Mr. Vichien said he was saddened by the news of the earthquake disaster, but with its history in overcoming numerous trials in the past, he said he was certain that Japan has the strength to recover once again. Additionally, Mr. Vichien expressed PTT's expectations of JCCP regular courses as an extremely meaningful training program, while revealing that he himself had participated in a regular course in the past and holds fond memories of that experience. With that, the rest of the meeting took place on a note of warm friendliness.

Mr. Vichien, Mr. Wattana, and Mr. Kiatchai probably receive courtesy calls regularly but do not usually take part in working-level meetings regarding training matters. However, as graduates of JCCP regular courses, they joined in the meeting and lunch with the JCCP delegation, as perhaps a token of their appreciation and expectations of JCCP.

At BCP:
Mr. Vichien Usanachote (fourth from right);
Mr. Wattana Opanon-Amata (third from left); and
Mr. Kiatchai Maitriwong (second from left)

5. Conclusion

The recent visits to Indonesia, Vietnam and Thailand allowed JCCP members to personally explain the present status of JCCP regular courses after the March 11 earthquake and to obtain requests and proposals from counterpart organizations in those countries. They also provided assurance of the organizations' appreciation and expectations of JCCP, and strengthened JCCP's awareness of the importance of deepening friendly relationships with the organizations in the future.

We wish to extend our warmest appreciation to everyone who supported and contributed to the visits.

<by Koichi Io, Operations Dept.>

Report on the Training Cooperation Program —Uzbekistan, Kazakhstan and Russia—

As part of the activities JCCP is undertaking to renew the content of its training courses, three lecturers from JCCP's Training Department—T. Kubota, S. Matsui and T. Sasaki—visited Uzbekistan, Kazakhstan and Russia from July 11 to 20, under the Training Cooperation Program.

With respect to Uzbekistan, JCCP began making approaches last year to Uzbekneftegaz, a state-owned oil and gas holding company, and recently was given the opportunity to visit the company for the first time to introduce JCCP's training activities and request its participation in JCCP's training programs. In Kazakhstan and Russia, the JCCP members visited KazMunayGas and Lukoil, with which JCCP has established a close relationship, with the following agenda: 1) to thank them for their support and encouragement after the Great East Japan Earthquake; 2) to explain and win their understanding about the changes made to this year's course program, as well as about the implementation of the first several courses in the latter half of the year in Osaka and the initiatives being made for the full resumption of the courses; and 3) to exchange views and promote their participation in customized programs.

1. Uzbekistan: Uzbekneftegaz (July 13, 2011)

In 2001, Uzbekistan became the first country in Central Asia to gain direct access to and from Kansai International Airport and Narita International Airport in Japan. As JCCP has had little chance to acquire appropriate information and facts about the country so far, the recent visit to Uzbekneftegaz was a precious opportunity to introduce JCCP and its activities directly to the company's management personnel and potential participants for the first time, with hopes of establishing a closer relationship with the country in the future.

Uzbekistan is a popular tourist destination as a country that lies at the heart of the Silk Road. However, the capital city of Tashkent retains little of its Silk Road legacy, as it was rebuilt into the urban city that it is today after being devastated in a major earthquake in 1960. The streets of Tashkent were crowded with large numbers of Korean cars as a clear indication of the close relationship between Uzbekistan and Korea. In fact, we had even arrived in the country on the same airplane as a large group of Korean VIPs.

With the kind cooperation of the Japanese Embassy, JETRO, and other Japanese institutions based in Uzbekistan, we acquired basic knowledge about the country's relationship with Japan, and witnessed the active cooperation between the two countries in ODA projects found throughout the city and in the Japan Center located in a high-rise building in the suburbs of Tashkent.

JCCP's relationship with Uzbekneftegaz began in

The International Business Building, which houses the Japan Center

Meeting at Uzbekneftegaz

Presentation of a commemorative item from Mr. Jamshidbek Kirgizov, Head Specialist

1998, when a JCCP member-company course was held for the first time for a group of Uzbekneftegaz employees. Since then, a cumulative total of 66 Uzbekneftegaz employees have intermittently participated in training courses in Japan, as of last fiscal year. At the same time, however, only two members have ever participated in JCCP-initiative courses, thus creating a large difference with its Central Asian neighbor Kazakhstan.

We visited Uzbekneftegaz, located in the center of Tashkent, on our second day in Uzbekistan, and were greeted by Mr. Jurabek T. Mirzamahmudov, Deputy Head of the Main Department for forecasting, resources and investment programs, who coordinated our visit to the company. After exchanging a few words of greeting, we were guided to a conference room, where we were met by Mr. Elmirza R. Turdikulov, Senior Specialist of the Head Department of Regime & HR, who was himself a participant in a regular course held last year, and more than 20 other staff members. We were initially surprised by the large gathering, but gave a general presentation about JCCP as planned. The Uzbekneftegaz side also gave a corporate presentation, as follows:

- Uzbekneftegaz is a state-owned holding company that controls the subsidiaries composing the Uzbekneftegaz Group.
- It has two refineries—the Bukhara and Fergana Refineries—respectively in the eastern and western areas of the country, but places greater emphasis on gas and gas chemical refining facilities, because the country has a larger abundance of natural gas than of crude oil.
- It has an international cooperation agreement with Gazprom and Lukoil in Russia, as well as with China (CNPC), Malaysia (Petronas), and Korea, and implements major projects with these countries. It especially enjoys a strong cooperative relationship with Petronas in a gas-to-liquids (GTL) project and with a Korean company in a joint polyethylene-polypropylene project, but has no specific projects with Japan.

In the Q&A session held toward the end of the meeting, questions mostly focused on gas processes and upstream operations, reflecting the general emphasis that is placed on the gas refining and petrochemical sectors in Uzbekistan instead of oil refining. However, the Uzbekneftegaz side showed strong interest in JCCP's regular courses, and promised its participation in the future. In fact, Mr. Jamshidbek Kirgizov, Head Specialist, who gave the corporate presentation, attended the regular course on Petroleum Marketing and Oil Terminal this October.

2. Kazakhstan: KazMunayGas (July 15, 2011)

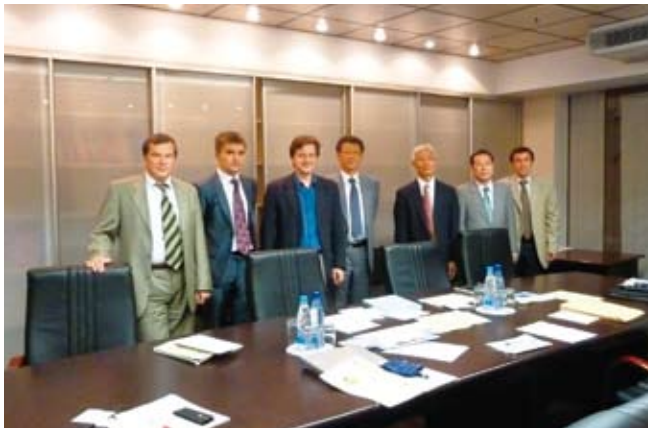
From Tashkent, we flew several hours and arrived in Astana, Kazakhstan's capital, where the cold rain brought temperatures down almost 20 degrees compared to the summer-like heat in Tashkent.

A total of 13 members gathered for the meeting at KazMunayGas, including Mr. Nurlan Zh. Sirazhev, HSE Director; Mr. Yerzhan Murzatayev, Acting-HR Director, and other members of the HR Department; and various members from the Group's refining, transportation, and research departments (which includes a university).

The meeting proceeded in an extremely friendly atmosphere, especially because six of the members on the KazMunayGas side were previous participants of JCCP training programs. As they were very familiar with JCCP's activities, they not only showed interest in our proposals, but also identified a number of themes common to all refineries. Detailed discussions will be held continuously hereafter, but general requests were

Meeting at KazMunayGas

Members of the meeting at KazMunayGas



Members of the meeting at the Ministry of Energy

made for the following:

- Level-based roles (senior engineers, process operators, etc.) and organizational structure for regular repairs and maintenance
- Procedures for revamping advanced process control systems
- Training of young instrumentation engineers
- Petrochemical themes (as also requested by Uzbekneftegaz)

The discussion moved on to other topics, including the feasibility of JCCP playing a role for providing advice and consultation regarding company-wide improvement activities for all upstream sectors of the KazMunayGas Group of companies. This proposal can perhaps be interpreted as an indication of KazMunayGas's high expectations of JCCP.

3. Russia (Moscow)

(1) Ministry of Energy (July 18, 2011)

The meeting with the Ministry of Energy was realized at the ministry's request made a week prior to our departure from Japan, such that the actual meeting date was decided on the day we arrived in Moscow.

We met with Mr. Ilja B. Galkin, Vice Director, and Mr. Yury V. Zolotarev, Division of Asia and Africa Head of Division, and explained JCCP's activities in detail, including our relationship with Russia.

The ministry members said they are considering planning a training program on energy conservation with Japan's cooperation, and invited JCCP to participate in an international conference scheduled to be held the following week in Moscow, although we unfortunately had to decline the invitation due to time constraints.

For our part, we asked the ministry members if it would be possible for the ministry to offer guidance to domestic oil companies and urge them to participate in JCCP's training programs. The ministry side responded that there is no framework for the collective management of oil companies by the government, because oil companies in Russia are not state-owned, and also vary in size.

(2) Lukoil (July 19, 2011)

As the final destination of our mission, we paid a visit to Lukoil. We had advanced knowledge about the stringent security when entering the company premises, but we were nevertheless surprised and impressed by their thoroughness. The strict security measures enforced at the security gate ensured that no unauthorized personal computers, mobile phones and camera are brought onto the presmises.

Dr. Evgeny B. Shevchishin, HR Department, presided over the meeting along with Mr. Sergey F. Zujev, Deputy Head Global Refining, who lent his presence as a technical expert at our request. As at KazMunayGas,

Group photo with members of the meeting in front of the entrance to Lukoil

Lukoil also identified specific themes common to all refineries, and requested not only a general training program on each theme, but also detailed training on their actual applications. Further discussions will follow hereafter, but their requests primarily included the following:

– Organization of a framework for regular repairs in the refinery, and discussions and studies on best practices
– Discussions and studies on specific cost management practices in the refinery, including a Solomon survey

4. Summary

After roughly a year of planning visits to the countries of Central Asia, we finally achieved a visit to Uzbekistan. During the planning stage, the Japan-Uzbekistan Association and pioneering Japanese companies in Uzbekistan generously offered their cooperation, providing us with information about the country and even introducing a contact office in the publicly owned company of Uzbekneftegaz.

Once in Uzbekistan, we also received assistance from many Japanese people working far away from home. We are especially grateful to the Japanese embassy in Uzbekistan, as well as to everyone at the local JETRO office and Japanese companies who taught us everything we needed to know about present affairs in Uzbekistan.

Thanks to everyone's support and cooperation, our first interaction with Uzbekneftegaz yielded the company's promise to send participants to JCCP's regular courses in autumn, and in this regard, met with a certain measure of success. However, we hope to make greater efforts to expand our first contact with Uzbekneftegaz and establish a deep and long-lasting relationship with the company hereafter.

<by Teruhiko Sasaki, Training Dept.>

JCCP Regular Courses Completed in September – October 2011

TR-10-11 Environmental Management for Refineries
September 20 – October 7, 2011 **Lecturer: Bunsuke Kariya**

Content: Petroleum Industry in Japan;
Overview of Environmental Pollution Control in Japan and Japanese Industry;
Global Warming Countermeasures;
Measures for Controlling Global Warming Management;
Waste Water Control and Soil Remediation in the Refinery;
Air Pollution Control in Refineries;
Case Study and Action Plan by each participant

<13 countries / 20 participants>

Site visits: Water Plaza Kita-Kyushu (Kita-Kyushu City);
Cosmo Oil Co., Ltd. (Sakaide Refinery);
JX Nippon Oil & Energy Co., Ltd. (Marifu Refinery);
Shimadzu Corporation (Kyoto Sanjo Factory);
Research Institute of Innovative Technology for the Earth (Kyoto)

Countries: China, Colombia, Timor-Leste, Indonesia, Iraq, Kuwait, Nigeria, Pakistan, Saudi Arabia, Sudan, Thailand, UAE, Vietnam

TR-11-11 Project Management for Mechanical Engineers
September 20 – October 7, 2011 **Lecturer: Fumihiro Tone**

Content: To improve the project management ability and leadership of mechanical engineers in the construction or maintenance department at oil refineries.
Project Management Activities in Oil Refineries in Japan;
Case Study of Problems and Countermeasures in Participant's Project Management;
Recent Technologies for High Pressure Vessel Manufacturing;
Project Planning and Management in the Refinery;
Tank Inspection Planning and Execution & TPM Activity;
Recent Technologies for Turbine and Boiler;
Project Management for EPC Project & HSE Evaluation;
Project Schedule Management Practice;
Project Engineering for EPC Project by Utilizing IT;
Project Cost Management;
Project Risk Management and Contract

<11 countries / 14 participants>

Site visits: The Japan Steel Works, Ltd. (Muroran Plant);
Idemitsu Kosan Co., Ltd. (Hokkaido Refinery);
Hokkaido Joint Oil Stockpiling Co., Ltd. (Hokkaido Office);
Mitsubishi Heavy Industries, Ltd. (Takasago Works)

Countries: China, Iraq, Kuwait, Mexico, Myanmar, Nigeria, Pakistan, Sudan, Thailand, UAE, Vietnam

TR-12-11 Petroleum Marketing & Oil Terminal
October 11 – October 28, 2011 **Lecturer: Kazuo Kojima**

Content: Petroleum Industry in Japan;
Management by Rational Thinking Process;
Crude Oil Terminal by Private Sector;
Production of Pipelines & Maintenance;
Delivery & Storage of Oil Products & Maintenance;
Shipping System & Maintenance at Refinery;
Crude Oil Terminal by Government Sector;
Jet Fuel Facilities & Refueling to Airplane at the Airport; New Automobile Fuel & Vapor Recovery Technology;
World Energy Situation

<10 countries / 17 participants>

Site visits: JX Nippon Oil & Energy Staging Terminal Corporation (Kiire Base);
JFE Steel Company (West Works);
JX Nippon Oil & Energy Corporation (Fukuoka Oil Depot);
JX Nippon Oil & Energy Corporation (Mizushima Refinery);
JOGMEC (Shirashima National Oil Stockpiling Base);
Central Japan International Airport (Centrair Fueling Facilities Company)

Countries: Brazil, China, Indonesia, Nigeria, Sudan, Thailand, Timor-Leste, UAE, Uzbekistan, Vietnam

TR-13-11 Advanced Field Device and Control
October 11 – October 28, 2011 **Lecturer: Shigeru Matsui**

Content: Design of Field Instrumentation/Design of Typical Control Loop;
Latest Instrument Technology/Recent Trend of Instrument and Control;
Latest DCS and Wireless Sensor/Operation Support System Practice;
Process Control Theory/PID Controller and Tuning Method & Practice;
Safety Instrumented System/Practice of SIS;
Vibration Measurements and Diagnosis/Practice of Balancing Method;
Design of Control Valve/Practice of Maintenance;
Design of Flow Meters/Practice of Maintenance;
Design of Level Gauges/Practice of Maintenance;
Refinery Information and Control System

<10 countries / 15 participants>

Site visits: Yokogawa Electric Corporation;
Invensys Process System Japan, Inc.;
Shinkawa Sensor Technology, Inc.;
Yamatake Corporation;
Endress+Hauser Japan Co., Ltd.;
Idemitsu Kosan Co., Ltd. (Tokuyama Refinery)

Countries: China, Colombia, Indonesia, Iraq, Mexico, Nigeria, Pakistan, Sudan, UAE, Vietnam

FY2012 JCCP Course Schedule

In FY2012, JCCP will offer 24 courses, including 21 regular courses (TR) and 2 intensive courses (IT), as shown below.

Course No.	Course Title	Period
TR-1-12	Petroleum Marketing	Apr. 9 – 26, 2012
TR-2-12	Upgrading Processes of Heavy Oil	Apr. 9 – 26, 2012
TR-3-12	DCS Fundamentals and Applications	Apr. 9 – 26, 2012
TR-4-12	Essential Petroleum Technologies in the Future	May 8 – 25, 2012
TR-5-12	Petroleum Distribution	May 29 – Jun. 15, 2012
TR-6-12	Maintenance Management	May 29 – Jun. 15, 2012
TR-7-12	Refinery Management	May 30 – Jun. 13, 2012
TR-8-12	Practical Training for Younger Instrument and Control Engineers	Jun. 5 – Jul. 13, 2012
TR-9-12	Safety Management for Refineries	Jun. 19 – Jul. 6, 2012
TR-10-12	Diagnostic Techniques and Maintenance for Rotary Machinery	Jun. 19 – Jul. 6, 2012
TR-11-12	Human Resource Management (HRM)	Sep. 18 – Oct. 5, 2012
TR-12-12	Environmental Management	Sep. 18 – Oct. 5, 2012
TR-13-12	Project Management for Mechanical Engineers	Sep. 18 – Oct. 5, 2012
TR-14-12	Advanced Field Devices and Control	Oct. 9 – 26, 2012
TR-15-12	Gas Processing for LNG	Oct. 30 – Nov. 16, 2012
TR-16-12	Material Problems and Their Countermeasures	Oct. 30 – Nov. 16, 2012
TR-17-12	Information and Control Systems Utilized in Refineries	Nov. 20 – Dec. 7, 2012
IT-1-12	Turnaround and Inspection	Nov. 26 – Dec. 7, 2012
IT-2-12	Finance and Accounting Management	Nov. 26 – Dec. 5, 2012
TR-18-12	Energy Saving for Profitability Improvement	Jan. 15 – Feb. 1, 2013
TR-19-12	Inspection and Reliability Evaluation	Jan. 15 – Feb. 1, 2013
TR-20-12	Quality Management of Refinery Products	Feb. 5 – 22, 2013
TR-21-12	Advanced Process Control on DCS	Feb. 5 – 22, 2013
TR-22-12	Human Resource Development (HRD)	Feb. 12 –Mar. 1, 2013

Marketing, Distribution, HRM, Finance

Refining Process, LNG

Maintenance, Inspection, Project Management

Control, Instrumentation

Researcher Invitation Program

As part of JCCP's FY2011 Researcher Invitation Program, three researchers from King Fahd University of Petroleum and Minerals (KFUPM) were invited to Japan and engaged in the following studies under the cooperation of the Japan Petroleum Institute and Japanese universities.

1. **Dr. Mohammad Shamsuzzoha, Assistant Professor, Chemical Engineering Department, KFUPM**

Dr. Shamsuzzoha studied "process control of divided wall distillation" under the guidance of Dr. Hiroya Seki, Associate Professor, Chemical Resources Laboratory, Tokyo Institute of Technology, from June 30 to August 15. He visited JCCP on August 9 to present his study results.

Dr. Mohammad Shamsuzzoha

2. **Dr. Nabil Al-Yassir, Assistant Professor, Center of Research Excellence in Petroleum and Refining & Petrochemicals, Research Institute, KFUPM**

Dr. Al-Yassir studied "materials design of complex metal oxide catalysts" under the guidance of Dr. Wataru Ueda, Professor, Catalyst Research Center, Hokkaido University, from July 11 to August 19. He visited JCCP on August 22 to present his study results.

Dr. Nabil Al-Yassir

3. **Dr. Oki Muraza, Assistant Professor, Center of Research Excellence in Nanotechnology, Chemical Engineering Department, KFUPM**

Dr. Muraza studied "zeolite nanocrystals as building blocks for improved refining catalysts" under the guidance of Dr. Takao Masuda, Professor, Graduate School of Engineering, Hokkaido University, from July 11 to August 25. He visited JCCP on August 26 to present his study results.

Dr. Oki Muraza

In future, JCCP has plans to invite researchers from Venezuela, Iraq and Kuwait to conduct studies in Japan.

<by Sadao Wada, Technical Cooperation Dept.>

FY2010 Long-term Researcher Dispatch Program

Since 2007, JCCP has been implementing a program of dispatching Japanese researchers to engage in advanced research and guidance at King Fahd University of Petroleum and Minerals (KFUPM), Saudi Aramco and Kuwait Institute for Scientific Research (KISR), as an initiative that combines JCCP programs (International Joint Research Scheme and Technical Cooperation Program). On September 5, a FY2010 briefing meeting was held with the attendance of some thirty members. Three researchers are currently engaged in research and guidance at the three institutions, and are contributing to strengthening cooperation with oil-producing countries through technical transfer and personnel exchange. The profiles of the three researchers are provided below.

Dr. Katsuomi Takehira (front row, second from left)
Dr. Hideshi Hattori (front row, third from left)
Dr. Hidehiro Higashi (front row, third from right)

1. Dr. Hideshi Hattori
(Professor Emeritus, Hokkaido University)

(1) Host institution
Center for Refining & Petrochemicals Research Institute, King Fahd University of Petroleum and Minerals, Saudi Arabia

(2) Research theme
R&D of solid acid and solid base catalysts for petroleum refining and petrochemical applications

(3) Summary of activities
Dr. Hattori has been conducting research and guidance at KFUPM's Center for Refining & Petrochemicals Research Institute since commencement of the Long-term Researcher Dispatch Program in 2007. In fiscal 2010, he provided counsel and proposals regarding his research theme, such as for the establishment of research policies and installation of devices, and prepared a research plan for "development of catalysts for styrene and ethylbenzene production through toluene side chain alkylation" that will be submitted to King Abdulaziz City for Science and Technology (KACST) for application for grant funding. Dr. Hattori also presented part of the results of his study on "catalysts for alkane isomerization and aromatic transformation reactions for high-quality gasoline" at the TOCAT6/APCAT5 conference held in July as the only oral presentation from Saudi Arabia.

2. Dr. Katsuomi Takehira
(Professor Emeritus, Hiroshima University)

(1) Host institution
KAUST Center-in-Development (KCID) on Transformative Research in Petrochemicals and Polymers Project Center, King Fahd University of Petroleum and Minerals, Saudi Arabia

(2) Research theme
R&D of catalysts for petrochemical feedstock production by dehydrogenation

(3) Summary of activities
Dr. Takehira has been providing research guidance on the development of styrene production catalyst by ethylbenzene dehydrogenation at KFUPM since fiscal 2009. His study has been published in four separate papers in *Applied Catalysis A: General*, and is highly acclaimed both inside and outside of Saudi Arabia. Additionally, a KFUPM researcher submitted to the academic journal *Chemical Engineering Journal* a paper on the results of a reaction engineering analysis of ethylbenzene dehydrogenation in a riser simulator using a catalyst prepared and structurally analyzed by Dr. Takehira and his students, along with data from the structural analysis of the catalyst, and acknowledged Dr. Takehira's profound achievement.

3. Dr. Hidehiro Higashi
(formerly from JGC Catalysts and Chemicals Ltd.)

(1) Host institution
Kuwait Institute for Scientific Research (KISR)

(2) Research theme
Research assistance on enhancement assessment performance of pilot tests on direct desulfurization catalysts and improvement of refinery operations

(3) Summary of activities
Dr. Higashi has been active in improving the issue in Kuwait where the reactors of existing direct desulfurization units are extremely difficult to control, and there is strong need for operational improvement measures. He has begun making preparations for the construction of a cold flow simulator model that would allow replication of flows inside the reactor, examining flows inside a reactor equipped with a tracking device, and examining the application of the nanobubble technology to refinery wastewater treatment unit. Dr. Higashi also engages in a wide range of activities for improving refinery operations, such as by assisting KISR researchers, providing advice on test and analysis methods, offering decisions on the selection and combination of catalysts for actual operations, and promoting greater understanding of catalyst performance.

Briefing meeting held on Sept. 5

<by Sadao Wada, Technical Cooperation Dept.>

Signing Ceremony for Phase II of Treatment and Utilization of the Oilfield-produced Water in Oman

Signing ceremony at SQU

JCCP commenced Phase II of Treatment and Utilization of the Oilfield-produced Water in Oman this fiscal year with Sultan Qaboos University (SQU) as the counterpart and Shimizu Corporation as a partner company on the Japanese side, and held a signing ceremony with SQU on September 27. Phase II comes on the heels of a successful demonstration test conducted in the first phase of the project from 2007 to 2010.

1. Background and Technical Development Overview

In Oman, three to six times more oilfield-produced water is pumped up from the oilfields compared to the actual volume of oil that is excavated, and is one of the country's most serious environmental concerns. The southern oilfields, in particular, produce as much as 300,000 tons of water per day. This corresponds to 1.5 times the volume of water used daily in the capital city of Muscat, and is clearly an enormous amount of water resource. The effective utilization of produced water would help solve the waste issue that accompanies oilfield development, and could also contribute significantly to Oman's vision of achieving sustainable development through the cultivation of new water sources.

A feasibility study on the treatment of oilfield-produced water was carried out from 2007 to 2009, and indicated that a number of different issues related to produced water exist in Oman according to region and oilfield. Based on this study, a compact, container-sized mobile pilot treatment plant was designed in fiscal 2010, with future plans for its installation in various different oilfields.

The first pilot plant was installed and operated on a test basis in the Mina Al Fahal (MAF) Refinery of Petroleum Development Oman (PDO). Hereafter, it will be moved to an actual oilfield where a demonstration test will be performed toward application of the plant to oilfield-produced water in various oilfields in the country.

The daily volume of oilfield-produced water ranges from 1,000 to 300,000 m^3, but is considerably larger than what the pilot plant can treat. Therefore, a plan for increasing the scale of the plant will be discussed during FY2011, so that the plant can be applied to the treatment of actual volumes of oilfield-produced water.

There are more than 2,000 oil wells in Oman. The quality of oilfield-produced water greatly differs according to each oil well, but most of the produced water contains oil, phenol, and larger concentrations of boron

than was previously thought, as well as heavy metals, ammonia (which does not fall under any restrictions in Japan), and substances restricted by effluent regulations, such as barium and lithium. For this reason, measures will be taken to assess not only the removal of oil content from actual oilfield-produced water, but also the removal of restricted substances using adsorbents.

Various considerations have been given to date concerning the utilization of treated oilfield-produced water for agricultural irrigation. However, some produced water contains a high concentration of salt and cannot be used for irrigation even after it is treated. Therefore, studies are now being made to examine its potential application to culturing algae. Algae culture is attracting widespread attention in recent years as a promising new industry, and weather conditions in the Middle East are said to be extremely suitable. Moreover, as it was found that some types of algae accumulate high concentrations of vitamins and other types accumulate hydrocarbons and other alternative fuel materials, further studies will be made into the possibility of developing the algae culture industry as a new branch of the oil industry.

2. Signing Ceremony

Phase II of the demonstration test will be performed in a number of oilfields in Oman following the successful completion of the test using the above-mentioned compact and mobile produced-water pilot treatment plant at a crude oil terminal. At the signing ceremony for Phase II held at SQU, Prof. Amer Ali Al Rawas, Deputy Vice Chancellor of SQU, and Mr. Morihiro Yoshida, Managing Director of JCCP, signed the agreement, and Dr. Ali bin Saud Al-Bemani, Vice Chancellor of SQU, delivered a speech commending the success of the project so far and thanking JCCP for the continuation of the project as Phase II. Mr. Shinichi Yamanaka, Counselor at the Japanese Embassy in Oman, also gave a speech in praise of the successful technical transfer between Oman and Japan; Mr. Yoshida thanked the Omani side for its smooth promotion of the project and asked for its continued support; and Mr. Keiji Shiba, project leader from Shimizu Corporation, thanked all parties concerned for their support of the demonstration test and asked for their cooperation once again in implementing continued tests.

Pilot plant installed in the MAF Refinery

News of the ceremony appeared in four newspapers (one English-language and three Arabic) the following day.

<by Kenji Ikushima, Technical Cooperation Dept.>

Signing Ceremony with KFUPM for the Project on "Development of High Olefin Yield FCC Catalyst"

Signing ceremony:
(Front row, from left) Dr. Mohammad Al-Homoud, Vice Rector for Academic Affairs, KFUPM; and Mr. Morihiro Yoshida, Managing Director of JCCP
(Back row, from left) Dr. Sulaiman Al-Khattaf, Director of KFUPM Center for Refining and Petrochemicals; and Mr. Masaki Ikematsu, Senior Vice President, JX Nippon Research Institute, Ltd.

On September 14, 2011, JCCP and King Fahd University of Petroleum and Minerals (KFUPM) held a contract signing ceremony for implementation of the joint research on "Development of High Olefin Yield FCC Catalyst" at KFUPM in Saudi Arabia. In the presence of Mr. Mitsuru Murase, Counsellor at the Embassy of Japan in Saudi Arabia, the contract was signed by Dr. Mohammad Al-Homoud, Vice-Rector for Academic Affairs, who stood in for Dr. Sahel N. Abdul-Jauwad, Vice-Rector for Applied Research; and Mr. Morihiro Yoshida, Managing Director of JCCP. Also present were Mr. Masaki Ikematsu, Senior Vice President, JX Nippon Research Institute, Ltd., and Mr. Yasuharu Furukawa, Managing Director, JGC Catalysts & Chemicals Ltd., representing the participating companies on the Japanese side. News about the ceremony and details of the project was published in a number of local newspapers.

In his opening speech, Dr. Al-Homoud described that KFUPM has developed excellent ties with JCCP and other partners in Japan over the past two decades, and the joint research on FCC catalysts is a continuation of the success story of the fruitful collaboration with JCCP in this important area. He also thanked all parties concerned for their unified cooperation to achieve the goal of enhancing KFUPM's capability and expertise in catalyst design for increased olefin production, and expressed his expectation that the new project would deepen mutual understanding, ties, and friendship and further expand collaboration between the two organizations into a broader range of other areas of mutual interest.

Mr. Murase commented on Saudi Arabia and Japan's mutually important relationship, and said the KFUPM-JCCP joint study is expected not only to contribute to Saudi Aramco's intent and vision for 2020 by increasing production of olefin, but also to strengthening the general friendship of the two countries, including their complementary relationship in the energy sector.

Mr. Yoshida expressed his heartfelt gratitude for the message of warm sympathy extended by the people of Saudi Arabia after the March 11 earthquake and tsunami, saying that their support and encouragement gave Japan courage to overcome the disaster. He then talked about the joint studies that JCCP and KFUPM have implemented over the 18 years since 1993. In regard

to the study of FCC catalysts for high olefin production, he explained that while a previous project, which was implemented from 2008 to 2010, placed emphasis mainly on how to evaluate FCC catalysts, the new project that begins in 2011 will aim to enhance the technical level of FCC catalysts to increase the production of olefins not only from heavier feed oil but also from lighter feed oil, naphtha. Project activities include supplying a micro-activity test (MAT) unit for naphtha trial order for FCC test catalysts, and basic research up to the practical research on the correlation between the design specification of FCC catalyst and olefin yield.

Mr. Yoshida also said he hoped the project would be conducted successfully as well, with the effort and cooperation of all parties involved, and reaffirmed JCCP's commitment to build a firm and reliable relationship between Saudi Arabia and Japan by conducting the joint technical projects.

Messrs. Ikematsu and Furukawa introduced their respective companies, JX Nippon Research Institute and JGC Catalysts and Chemicals, and expressed enthusiasm for their participation in the project.

Project Overview

1. Background

In recent years, Saudi Aramco has experienced an increasing demand for olefins such as polypropylene. Therefore, in order to increase olefin production, it has asked KFUPM to conduct a study on FCC catalysts that would provide a higher yield of olefins from naphtha, light oil, etc. compared with conventional catalysts.

Under such circumstances, KFUPM and JCCP have agreed to carry out a joint R&D project on FCC catalysts for high olefin yield from fiscal 2011 to 2013, based on the results of a previous project on "Enhancement of FCC Catalyst Evaluation," which was implemented from fiscal 2008 to 2010.

The new project aims to enhance KFUPM's technical capability to an adequate level for designing FCC catalysts for high olefin production by assessing the correlation between FCC catalyst composition and olefin yield by using vacuum gas oil feed and naphtha feed.

2. Overview of the Previous Project

The new project is based on the results of a previous project that was implemented over the past three years with a focus on the introduction of FCC catalyst performance evaluation technologies. In that project, an advanced cracking evaluation unit (ACE unit) was introduced to KFUPM to evaluate FCC catalysts for gas oil and other heavy oil feedstock, and operational training of the unit was provided at the Central Technical Research Laboratory of JX Nippon Oil & Energy Corporation. Additionally, lectures on FCC catalyst evaluation methods were provided by researchers from JGC Catalysts and Chemicals Ltd. The project came to a successful conclusion after achieving the intended results

Members of the signing ceremony:
(Front row, from left) Mr. Yasuharu Furukawa, Managing Director, JGC Catalysts & Chemicals Ltd.;
Mr. Mitsuru Murase, Minister at the Japan Embassy in Saudi Arabia;
Dr. Mohammad Al-Homoud, Vice Rector for Academic Affairs, KFUPM;
Mr. Morihiro Yoshida, Managing Director of JCCP;
Dr. Sulaiman Al-Khattaf, Director of KFUPM Center for Refining and Petrochemicals;
Mr. Masaki Ikematsu, Senior Vice President, JX Nippon Research Institute, Ltd.; and
Mr. Kenji Nita, General Manager, JCCP Riyadh Office

in introducing FCC catalyst evaluation technologies for gas oil and other heavy oil feedstock.

3. New Project

The new project that begins in fiscal 2011 will take Saudi Aramco and KFUPM's requests into consideration and will focus on technologies for the development of FCC catalysts that would produce high yields of propylene and other olefins not only from gas oil and other heavy oil feedstock, but also from light naphtha feedstock. For this purpose, a naphtha micro-activity test unit (MAT unit) will be installed at KFUPM.

The following is the basic outline of the project.

FY2011:

An FCC catalyst design for high olefin production will be created, and the test production of the catalyst will be outsourced to a specified manufacturer. The performance of the test-produced catalyst will then be evaluated, and basic research relating to the correlation between FCC catalyst design and olefin yield will be studied.

FY2012:

Based on the results of the above, the applied research phase relating to the correlation between FCC catalyst design and olefin yield will be studied.

FY2013:

Based on the results acquired in FY2011 and FY2012, the practical research phase for applying the FCC catalyst to high olefin production will be studied.

4. Future Prospects

If the new three-year R&D project achieves the intended result in laying the foundation for creating an FCC catalyst design that could be applied to a commercial FCC unit for high olefin yield, an order for the production of novel FCC catalysts will be placed with a specified manufacturer, and the catalysts will be applied to FCC units in Saudi Aramco's refineries. Then, by evaluating the performance of equilibrium catalysts, improvements will be made to the cracking performance and physical properties of the FCC catalysts. Ultimately, it would be possible to develop novel commercial FCC catalysts that deliver stable cracking performance and physical properties for higher yields of propylene and other olefins compared with conventional catalysts, and thereby contribute a great deal to Saudi Aramco's refineries for yielding large profits.

<by Hironao Naganuma, Technical Cooperation Dept.>

Ex-post Evaluation Committee for Projects Completed in FY2010

1. Overview

In fiscal 2006, JCCP established a system for the evaluation of all technical cooperation projects upon their completion. Multiple-year projects are comprehensively evaluated in terms of their initial planning, management, adjustment in response to the rate of progress and changes in the external environment, and achievement including the degree of satisfaction of the beneficiary country. The overall results and direction acquired from the comprehensive evaluation are then fed back into subsequent projects to constantly enhance the general efficiency and effectiveness of technical cooperation projects.

2. FY2010 Ex-post Committee

The FY2010 Ex-post Committee held its first meeting on June 13, 2011 and its second meeting on July 26, 2011. The committee was headed by Dr. Ichiro Okura, Executive Vice President for Planning at Tokyo Institute of Technology, and was composed of three members, namely Dr. Yoshiki Ogawa, Professor, Department of Policy Studies, Faculty of Economics, Toyo University; Dr. Masatoshi Sugioka, Contract Professor, Faculty of Engineering, Muroran Institute of Technology; and Dr. Noritaka Mizuno, Professor, Department of Applied Chemistry, School of Engineering, The University of Tokyo.

3. FY2010 Projects for Evaluation

The Ex-post Committee evaluated four projects this year. The following are the overall results of their evaluation, based on their assessment of each project from four perspectives: "project goal and status," "project management," "degree of achievement of the project goal," and "practical application and spin-off effects of the project."

(1) Project on Enhancement of FCC Catalyst Evaluation Technologies (Saudi Arabia)

1) Goal

This project aimed to contribute to increasing the production of high added-value gasoline base materials by transferring Japan's advanced catalyst improvement technologies to Saudi Arabia.

2) Evaluation

Sufficient technical assistance has been provided for installation of an FCC catalyst evaluation unit, and the intended results of the project have been achieved. Operational technologies for the evaluation unit have taken root, and the unit is now being used on a continuous basis in Saudi Arabia. The project has also provided support for human resource development, and has contributed to building technical capacities in Saudi Arabia through the transfer of technologies related to the FCC catalyst evaluation unit.

(2) Study on the Treatment and Utilization of Oilfield-produced Water (Oman)

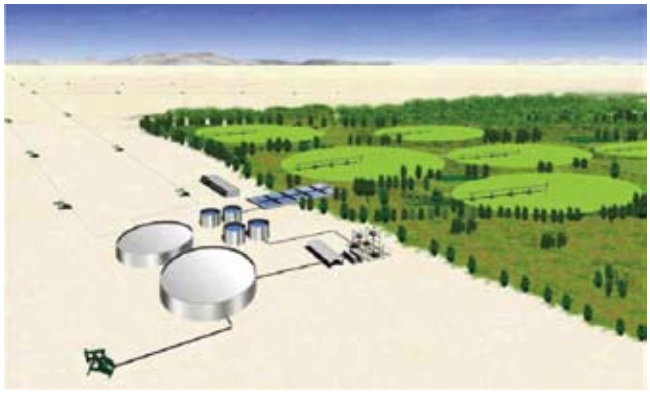
1) Goal

This project aimed to transfer technologies for processing oilfield-produced water associated with crude oil production in Oman, so that produced water could be reutilized in mining crude oil and any surplus could be used for irrigation. It was also expected to mitigate environmental loads by reducing the amount of produced water that is discharged to the surrounding environment.

Thus, the ultimate goals of the technical transfer were to eliminate the environmental constraints that accompany crude oil production, contribute to increasing crude oil production in Oman from both the environmental and economic aspects, and ensure a stable supply of crude oil to Japan.

2) Evaluation

As a result of introducing a pilot plant for a low-cost wastewater treatment system and conducting an operational test, the project demonstrated that oil content in wastewater could be treated/recovered at low cost. The pilot plant was unveiled in an opening ceremony attended by H.E. Dr. Mohammed Saif Al-Rumhi, Minister of Oil & Gas; H.E. Mr. Seiji Morimoto, Japanese Ambassador to Oman; Mr. Raoul M. Restucci, Managing Director of PDO; and Dr. Ali bin Saud Al-Bemani, Vice Chancellor of SQU. News of the ceremony was reported by six newspapers in Oman and also by Japanese broadcasting station NHK, and garnered widespread attention about



Rendering of the oilfield-produced water treatment facility

the project in both Oman and Japan.

The new treatment technology is far more advanced than the conventional method of using an inorganic coagulant to remove oil content. Therefore, if the technology's practical viability can be proven by the subsequent operation of the pilot plant, the technology can be expected to take root in Oman. Moreover, oilfield-produced water treatment and utilization technology is sought not only in Oman but also in many other oil-producing countries, so JCCP may be expected to play a central role in transferring the technology to all oil-producing countries in the future. Thus, the intended results of the project have been fully achieved.

(3) Study for Process and Operational Improvement in Mina Al Fahal Refinery (Oman)

1) Goal

This project aimed to improve and increase efficiency of refinery operations in Oman without undertaking a large-scale renovation of refinery units but by implementing small-scale works or modifying the operating conditions of refinery units, and thereby allow refineries to increase their production of high value-added products. The transfer of technologies for the production of environment-friendly gasoline was also expected to expand Oman's gasoline sales channels in Europe and contribute to increasing the profitability of Oman's refineries.

2) Evaluation

Project components were selected based on mutual agreement between JCCP and Oman Refineries and Petrochemicals Company LLC (ORPC)*, in terms of their relevance to issues that were specifically identified by ORPC. Many of the components were implemented immediately after the report, and those for which a feasibility study was conducted from the perspective of installation or renovation were timely measures with high probability of being executed hereafter. With ORPC's cooperation, the project has achieved its intended goal.

The project has addressed many problems and flaws, and has thoroughly imparted to ORPC personnel not only simple measures for addressing those flaws, but also methods for establishing countermeasures based on a fundamental analysis of their causes. In this way, it has provided a large frame of reference to ORPC personnel, and has contributed to the development of Omani engineers.

* The company now operates under the name of Oman Oil Refineries and Petroleum Industries Co. (ORPIC).

(4) Technology Introduction for Improvement of Reactor Efficiency at Esfahan Refinery (Iran)

1) Goal

This project aimed to improve the catalyst loading method for hydrocracking units in Iran's refineries for increased production of high-quality kerosene and gas oil without requiring spending on equipment renovation.

2) Evaluation

Overall, the project has achieved its intended goal regarding activities for the introduction of a catalyst loading method, despite the issues that arose in the final year of the project, which prevented Japanese project members from traveling to Iran. The technology can be expected to spread to other refineries operated by National Iranian Oil Refining and Distribution Co. (NIORDC) and eventually take root throughout Iran, but some type of follow-up activities need to be taken toward this end.

The project has contributed to enhancing technical capacities in Iran, and has increased recognition of Japan's technologies. In fact, the technical transfer and human resource development for catalyst loading and operation of hydrocracker reactors are showing sustainable effects in the country.

4. Summary

The members of the Ex-post Evaluation Committee gave high marks to the four relevant projects, and provided valuable recommendations and views for future improvement. JCCP will give serious consideration to their guidance and advice, and apply it to improving the implementation and evaluation of future technical cooperation projects.

<by Kenji Ikushima, Technical Cooperation Dept.>

Announcement

Please Help Us Update Our Roster

Thank you for reading *JCCP NEWS* as always.

JCCP will reach a significant milestone in its history this autumn.

We will be celebrating JCCP's 30 years of operations, during which more than 20,000 participants have attended JCCP training programs.

In commemorating this achievement, we extend our deepest appreciation to you all for your support and cooperation in our activities.

All of you who have participated in a JCCP training program in the past (graduates) are a precious asset to JCCP. We therefore wish to take this occasion to confirm your current addresses and update our roster of former participants so that we may reconnect and maintain contact with you into the future.

Our current roster mostly shows information that you provided at the time you participated in a JCCP training program, and could be outdated by now. If there have been any changes in your affiliation (position), email address, or any other contact information, we ask that you provide the latest information on the attached registration form and return the form to JCCP's Planning & Public Relations Group. Those of you who return the form to us are entitled to receive the latest issues of *JCCP NEWS* and announcements and invitations to exhibitions and reunions.

Also, if you know of anyone who is a former participant but is not receiving copies of *JCCP NEWS*, or anyone who wishes to update his/her contact information, we would appreciate it if you would forward this message and the attached form to that person.

Thank you for your cooperation.

Hisayoshi Tanda
General Manager, Planning & Coordination

Masumi Kitahara (Ms.)
Manager, Planning & Public Relations

Personnel Change

Outgoing Personnel

Technical Cooperation Department

Hiroshi IIDA

Thank you for reading *JCCP NEWS*.
If you have any comments or feedback you wish to make about this newsletter, or if there has been a change to your mailing address, please email us at planning@jccp.or.jp.

Editorial Postscript

As mentioned in the message from Mr. Sase, Executive Director of JCCP, at the beginning of this issue, JCCP is celebrating its 30th anniversary this year. More than 20,000 participants from oil-producing countries have received training in Japan through JCCP to date, and many have gone on to assume key positions in oil companies in their respective countries. In celebration of this special occasion, we received a congratulatory message from a JCCP graduate, Ms. Juniwati Rahmat Hussin, Vice President of Human Resource Management at PETRONAS, and have printed it on page 4. In the same way, we plan to publish messages from JCCP graduates in future issues of *JCCP NEWS* to more widely promote understanding of JCCP's long-standing history, activities and role in establishing personal relationships among people in the global oil industry.

We thank you for reading *JCCP NEWS*, and hope you will continue to favor us with your readership.

Masumi Kitahara
JCCP Editor
Planning & Public Relations Group

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