

JCCP NEWS

No. 121

2015 June

Connected by technology, person-to-person

- JCCP Alumni Meeting in UAE
- Executive Visits to Asia — Visits to Malaysia, Vietnam and Bangladesh—
- The 33rd JCCP International Symposium
- Participation in the Kuwait International HSE Conference
- The 23rd Joint GCC-Japan Environment Symposium



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JCCP Alumni Meeting in UAE

1. Holding the Alumni Meeting in the Presence of METI Minister Yoichi Miyazawa

On January 18, 2015, a JCCP Alumni Meeting was held at the Intercontinental Hotel in Abu Dhabi. Held in UAE for the second time since 2012, the meeting invited the broad participation of JCCP alumni in UAE, and was attended by a total of 78 members, including 65 alumni from UAE and 13 local Japanese personnel.

H.E. Mr. Yoichi Miyazawa, Minister of Economy, Trade and Industry, lent his presence to the Japanese side, and H.E. Dr. Maitha Salem Al Shamsi, Minister of State, and other important figures graced the event on the UAE side. As part of the agenda, H.E. Mr. Abdulla Nasser Al Suwaidi, Director General, Abu Dhabi National Oil Company (ADNOC), and Mr. Tsuyoshi Nakai, CEO of JCCP, exchanged letters regarding the strengthening of future cooperation between the two organizations.

(1) Speech by Minister Miyazawa as a guest of honor

In addition to METI Minister Yoichi Miyazawa, representing the Japanese side were Mr. Takayuki Ueda, Commissioner, Agency for Natural Resources and Energy; Mr. Hideo Suzuki, Director-General, Trade Policy Bureau, and relevant governmental personnel;



H.E. Mr. Yoichi Miyazawa, Minister of Economy, Trade and Industry, giving a speech as a guest of honor

H.E. Mr. Yoshihiko Kamo, Ambassador of Japan to UAE, and other members of the Japanese Embassy; and members from Japanese oil companies operating in UAE.

In his speech, Minister Miyazawa spoke about JCCP's long years of contribution since its establishment to human resource development and technical cooperation in the oil-refining sector in oil-producing countries. With specific reference to UAE, he noted that a total of more than 800 people from UAE have participated in training in Japan, and that a large majority of them now assume important positions in the UAE government and ADNOC and are instrumental in shaping a strong relationship of trust with Japan. In response to their efforts, Minister Miyazawa announced that the Japanese government will commence the JCCP-JOGMEC personnel exchange program for ADNOC employees this fiscal year as an addition to the conventional training activities of JCCP, as specified in the Joint UAE-Japan Statement issued in 2013 in a conference held between Japanese Prime Minister Shinzo Abe and H.H. Sheikh Mohammed bin Rashid Al Maktoum, Vice President of UAE, and H.H. General Sheikh Mohammed bin Zayed Al Nahyan, Crown Prince of Abu Dhabi. Minister Miyazawa also expressed the Japanese government's strong wish to strengthen relations between the two countries.

(2) Speeches by H.E. Dr. Maitha Salem Al Shamsi, Minister of State, and H.E. Mr. Abdulla Nasser Al Suwaidi, Director General, ADNOC

The event was attended by many important UAE figures, including H.E. Dr. Maitha Salem Al Shamsi, Minister of State; H.E. Mr. Abdulla Nasser Al Suwaidi, Director General, ADNOC; Mr. Ali Khalifa Al Shamsi, Director, C.P.&C.; Mr. Mubarak S. Al Ketbi, Deputy Director-M&R; Mr. Ismail M. Al Mulla, Offsite & Refinery Utilities Dept., Ruwais Refinery Division, Abu Dhabi Oil Refining Company (TAKREER); and JCCP alumni who are presently active in major departments in UAE.

In her speech, Dr. Al Shamsi expressed her appreciation for JCCP's contribution to human resource development in UAE, saying that JCCP is an important element in human resource development in UAE, and that she herself takes pride in JCCP as a friend who



H.E. Dr. Maitha Salem Al Shamsi, Minister of State, giving a speech as a guest of honor



H.E. Mr. Abdulla Nasser Al Suwaidi, Director General, ADNOC, giving a speech as a guest of honor

has worked with JCCP since 2001 when she was Vice Chancellor of UAE University. Mr. Al Suwaidi also gave words of appreciation for JCCP's contribution to human resource development and technical cooperation to date, and expressed his future expectations of maintaining and strengthening the friendly relationship that the two organizations have fostered.

(3) Exchange of letters regarding the future relationship of cooperation between ADNOC and JCCP

Following the above-mentioned speeches by Minister Miyazawa, Dr. Al Shamsi, and Mr. Al Suwaidi, Mr. Al Suwaidi and Mr. Tsuyoshi Nakai exchanged letters regarding the strengthening of future cooperation between the two organizations. Through this exchange, the two leaders verified their mutual intent to cooperate

even more closely in implementing business activities with the aim of further strengthening the friendly relationship they have fostered through their long years of partnership.

Following the exchange of letters, Mr. Sultan Mohamed Al Mulla, ADNOC (graduate of a marketing course), and Ms. Hyatt Al Shihri, Bunduq (graduate of a human affairs and CSR course), spoke briefly about their JCCP experience and proposed a toast on behalf of all JCCP alumni in attendance. The event also featured an introduction of Japanese culture, namely a demonstration by a traditional Japanese candy craftsman and mochi pounding, which has already become well known in UAE. These performances livened up the venue and captured everyone's curiosity and attention. JCCP alumni who participated in the event reminisced fondly about their experiences in Japan, as the circle of



*Exchange of letters between ADNOC and JCCP:
(from the left) H.E. Mr. Abdulla Nasser Al Suwaidi, Director General, ADNOC;
H.E. Mr. Yoshihiko Kamo, Ambassador of Japan to UAE;
H.E. Mr. Yoichi Miyazawa, Minister of Economy, Trade and Industry;
H.E. Dr. Maitha Salem Al Shamsi, Minister of State; and
Mr. Tsuyoshi Nakai, CEO of JCCP*

pleasant chatter expanded at each table.

2. Summary of the Meeting

The alumni meeting yielded two positive results.

One is Minister Miyazawa's attendance. At JCCP's request, the minister kindly agreed to take time from his busy schedule to lend his presence to the alumni meeting during his visit to UAE from January 16 to attend the Fifth Assembly of the International Renewable Energy Agency (IRENA). His participation undoubtedly promoted greater recognition of JCCP's important role in strengthening friendly relations between UAE and Japan as an effective means for securing a stable supply of oil resources for Japan.

The other is the realization of the importance of building and maintaining human networks. With only two weeks of preparation time until the meeting, the JCCP side was foremost concerned about liaising with the UAE side and verifying attendance. However, as mentioned earlier, the meeting enjoyed a large turnout on the UAE side, which included not only JCCP alumni, but also a large number of important figures in the industry. This is certainly testament to the contribution JCCP has made to date. More specifically, it is the product of steady, daily efforts that have been made to maintain contact through JCCP's local office, and the strong relationship of trust that has developed between JCCP course lecturers and participants and remains strong enough that alumni will respond to sudden calls even months after returning to their country. This achievement



Group of JCCP alumni



Members who gathered at the meeting

reaffirms the importance of strengthening, maintaining and handing down the networking capacity of all JCCP participants and alumni in oil and gas-producing countries and each one of us JCCP personnel. It is by doing so that we can build the foundation of a friendship that can withstand the test of time when it most matters.

About the JCCP Alumni Meeting

The JCCP Alumni Meeting is held to verify the effects and evaluations of JCCP personnel exchange activities and technical cooperation projects in oil-producing countries, obtain hints for an even more effective implementation of future activities, and strengthen personnel exchanges with Japan. It also aims to promote deeper relations between counterpart oil-producing countries and Japan by requesting their continued support and cooperation in JCCP activities and building a network of cooperation in each country for these JCCP activities. Furthermore, as many JCCP alumni have become executive officers and managers in state-run oil companies in their respective countries, the alumni meeting is held with the hope that it will ultimately contribute to the stable import of crude oil supplies to Japan. The first meeting was held in UAE in November 2012, and the second in Saudi Arabia in March 2014. This was the third meeting held so far.

<by Tadashi Sugawara, Councilor>

Executive Visits to Asia

—Visits to Malaysia, Vietnam and Bangladesh—

Mr. Tsuyoshi Nakai, CEO of JCCP, visited Asia on two separate occasions following his visits to the Middle East as reported in the previous issue of this newsletter.

1. Malaysia and Vietnam

Over a period of 12 days from November 9, 2014, Mr. Tsuyoshi Nakai visited Kuala Lumpur to make a request of a JCCP international symposium speaker to give a presentation at the symposium and discuss the content of the presentation, then went on to Hanoi to pay his respects to executive officers at Vietnam Oil & Gas Group (Petrovietnam) and Vietnam National Petroleum Group (Petrolimex) as the new CEO of JCCP, follow up on JCCP programs implemented to date, and hold policy dialogues on future activities.

(1) Meeting with Mr. Tan Sri Mohd Hassan Marican, former CEO of Petronas

Mr. Tan Sri Mohd Hassan Marican was requested to be one of the speakers at the 33rd JCCP International Symposium held in January 2015. On November 10, Mr. Nakai made a final request, and discussed the content of his presentation. Mr. Nakai also took the opportunity to obtain information on oil situations in Asia and the Middle East.

According to Mr. Marican, the oil situation in Asia should be viewed in relation to the involvement of domestic politics and the status of national oil companies, as the relationship between national oil companies and the government is complex, with national oil companies having a considerable budget and frequently at odds with the government. Mr. Marican also shared stories about reforms at Petronas when he was CEO. Most notable was his view that human resource development is an important sector above all else, and efforts must be made to attract outstanding young people to the oil industry. Toward this end, Petronas established Universiti Teknologi PETRONAS and concentrated on developing human resources with particular emphasis on engineers. Case examples of personnel development in the Western countries were thoroughly investigated, and an international board was organized to incorporate the views of prominent people. Owing to such education, Mr.



Mr. Tran Van Thinh, General Director, Petrolimex (center)

Marican says Malaysia is beginning to lead the Islamic society as a hub of Islamic finance.

(2) Meeting with Mr. Tran Van Thinh, General Director, Vietnam National Petroleum Group (Petrolimex)

On November 11, Mr. Nakai visited the Petrolimex Head Office and met with Mr. Tran Van Thinh, General Director. Mr. Thinh noted that he participated in a JCCP training program in 2008 when he was General Manager of the Technology Department, and said he has benefited greatly from his JCCP experience. He learned about the management practices of Japanese companies then, and has since maintained his relationship with such Japanese companies as Idemitsu Kosan, JX, Tatsuno and Tamada Industries. He expressed his hopes that JCCP will continue to offer useful training programs next fiscal year. Mr. Thinh also explained that although Petrolimex is a product sales company, it has an interest in domestic refinery operations, and expressed his expectations for cooperation from Japanese companies in the refinery construction project that is underway in Van Phong, where Petrolimex owns an oil terminal.

(3) Meeting with Dr. Le Manh Hung, Vice President, Vietnam Oil & Gas Group (Petrovietnam)

Also on November 11, Mr. Nakai visited the Petrovietnam Head Office and met with Dr. Le Manh



Dr. Le Manh Hung, Vice President, Petrovietnam

Hung, Vice President. Dr. Hung has participated in a JCCP training program in the capacity of Director of the Refining Technology Department at Petrovietnam, and displayed a good understanding of JCCP activities, including technical cooperation projects. At the beginning of the meeting, he summed up the relationship between the two organizations by noting that Petrovietnam has sent 1,500 employees to JCCP training programs and JCCP has dispatched 200 Japanese experts to Petrovietnam over their 24-year history, and that the programs have provided knowledge not only of technologies but also of management practices that are an integral part of Petrovietnam's business today.

Mr. Hung also had future requests of JCCP, mentioning in particular that Petrovietnam is interested in learning about quality control and LP models that conform to European standards. He also outlined needs for training and technical cooperation for increasing competitiveness, as well as training regarding the integration of oil refining and petrochemistry.

2. Bangladesh

Over 11 days from December 8, Mr. Nakai visited Bangladesh, which JCCP newly included among its beneficiary countries in fiscal 2012. There, Mr. Nakai met with the top management of Bangladesh Petroleum Corporation (BPC) to introduce JCCP activities and hold a policy dialogue. BPC is responsible for the oil downstream sector in Bangladesh under the Ministry of Power, Energy & Mineral Resources (MPEMR), and governs a number of companies as an industrial entity, including Eastern Refineries Limited (ERL). In addition to BPC, Mr. Nakai also visited ERL on his recent visit and inspected the company's refinery.

(1) Meeting with Eng. Gazi Md. Ali Afzal, Managing Director, ERL

On December 9, Mr. Nakai gave a general explanation of the FY2015 JCCP program at ERL. In response, Eng. Gazi Md. Ali Afzal, Managing Director, indicated an intention to send ERL personnel to participate in relevant courses upon a careful internal examination of the course contents and the needs of each department.

Eng. Ali Afzal explained that two projects are presently being considered at ERL, one for single buoy mooring (SBM) that would allow efficient offloading of crude oil from a large tanker, and another for the construction of a group of crude oil storage tanks. ERL is also considering the construction of a new refinery facility (Unit-2) with twice the processing capacity as the present one, in anticipation of a future increase in energy demand.

While the two projects mentioned earlier are still at the stage of examining financial arrangements, Eng. Ali Afzal said he hopes they will be realized, as they are important projects that would contribute to ensuring a stable supply of energy to Bangladesh.



Eng. Gazi Md. Ali Afzal, Managing Director, ERL (third from right)

(2) Meeting with Mr. Md. Eunusur Rahman, Chairman, BPC

On December 10, Mr. Nakai visited BPC in Dhaka. BPC was founded 45 years ago as a national oil company, and broadly engages in the import and refining of crude oil, distribution of oil products and manufacture and distribution of lube oil. It had been able to satisfy domestic energy demand during its early years, but a rapid surge in demand accompanying an increase in population has caused supply to lag behind demand. Thus, consideration is being given to augmenting its

facilities within two to three years.

Mr. Nakai explained that JCCP offers a variety of courses as part of its personnel exchange activities, and prompted BPC to contact JCCP if it wishes to take part in them. In reply, Mr. Md. Eunosur Rahman, Chairman, first thanked Mr. Nakai for the offer, and noted that Bangladesh is still in the process of developing, although it has maintained high economic growth over many years. He said he understands Japan is highly competent in the downstream sector, but wishes to take advantage of the opportunity of its personnel exchange program, as the BPC Group is urgently seeking to develop large numbers of refinery personnel.

*<by Akio Yamanaka, Planning and Public Relations Group,
Administration Dept.;
Osamu Nonaka, Technical Cooperation Dept.>*



Mr. Md. Eunosur Rahman, Chairman, BPC (second from right)



The 33rd JCCP International Symposium



The guest of honor, chairmen, and speakers of the symposium

The 33rd JCCP International Symposium was held over the two days from January 21 to 22, 2014, under the auspices of the Ministry of Economy, Trade and Industry (METI). More than 400 people from METI, oil-producing countries, foreign embassies in Japan, governmental agencies, domestic companies and organizations attended the event held at the Prince Park Tower Tokyo.

1. Theme

The theme of this year's symposium was "Sustainability and International Cooperation in the Petroleum Industry." It was discussed in detail in two

sessions held on the second day, under the subthemes "Advances in HR Development" and "Challenges for Advanced Technology."

Given the dramatic changes in the global oil situation brought about by the shale oil and gas revolution, the drop in crude oil prices, and the increasing need to address environmental issues, national oil companies that directly contribute to their respective country's growth face the challenges to strengthen human resource development and introduce the latest technologies.

From the above perspective, the symposium was held as a forum for exchanging information and views with leading authorities from oil-producing and consuming countries, who continue to address the challenges of the oil industry in their respective capacities.

2. Overview

(1) First Day (January 21): Opening Ceremony

An opening ceremony was held at 2:00 p.m. on January 21, featuring a welcome address by Mr. Keizo Morikawa, President of JCCP, followed by a greeting from the guest of honor, Mr. Takayuki Sumita, Director-General of the National Resources and Fuel Department at METI.

By way of discussing the objectives of the symposium, Mr. Morikawa pointed out that the global oil supply-demand structure is entering a period of transition. Amid



Mr. Keizo Morikawa, President of JCCP, delivering a welcome address



Mr. Takayuki Sumita, Director-General, National Resources and Fuel Department, METI, giving a speech as the guest of honor

an increase in oil demand accompanying economic growth in newly emerging countries, he said the surge in shale oil production in North America has caused crude oil prices to drop to levels seen five years ago, and environmental restrictions are governing a shift toward gas and the dissemination of renewable energies. However, no matter what the situation, Mr. Morikawa emphasized the importance of securing a stable supply of oil and, toward this end, stressed that it is essential to introduce advanced human resource development programs and technologies by promoting dialogue between oil producers and consumers.

Mr. Sumita spoke next of the importance of building a long-term, continuous relationship of trust between oil-producing and consuming countries, particularly in these times of increasing dependence on fossil fuels as a ramification of the Great East Japan Earthquake and nuclear accident, and the serious impact that has been brought to bear on the global economy through the sharp fall in crude oil prices precipitated by the shale revolution. Mr. Sumita also mentioned METI Minister Yoichi Miyazawa's participation in the JCCP Alumni

Meeting held in UAE during his visit to the Middle East, and the warm welcome he received from the JCCP alumni in attendance, many of whom now hold important positions in the national oil company in UAE. He noted that as dialogue between oil producers and consumers is becoming increasingly important, he holds strong expectations for JCCP's schemes of personnel exchange with oil-producing countries.

(2) Leaders' Panel

A panel discussion was held to promote active discussion among leaders of various companies as a first attempt of its kind, where special lectures and keynote presentations had been featured in previous symposiums.

- 1) Tan Sri Mohd Hassan Marican, Chairman & CEO (former Petronas CEO), mh Marican Advisory Sdn. Bhd., gave a presentation titled "Sustainability and International Cooperation in the Petroleum Industry." He broadly discussed the global oil situation with reference to the statuses of China and Saudi Arabia, the role of the United States, the situation in the ASEAN countries, etc., and stressed that the oil industry should make active efforts to deepen mutual understanding and establish new relationships of cooperation.
- 2) Mr. Khaled Al-Asousi, Deputy Chief Executive Officer (Support Services), Kuwait National Petroleum Company (KNPC), gave a presentation titled "K-LEAD." He stated that leaders at KNPC are expected to efficiently manage petroleum, the sole energy resource in Kuwait, and outlined the K-LEAD human resource and capacity development program for such leaders at KNPC.
- 3) Mr. Michio Ikeda, Director, Executive Vice President, JX Nippon Oil & Energy Corporation, gave a presentation titled "Challenges Facing the Japanese Oil Industry—What We Have Done & What We Are Going



Tan Sri Mohd Hassan Marican, former Petronas CEO, giving a presentation



Mr. Khaled Al-Asousi, Deputy Chief Executive Officer, KNPC, giving a presentation



Mr. Michio Ikeda, Executive Vice President, JX Nippon Oil & Energy Corporation, giving a presentation

to Do—.” He first discussed the present state of Japan’s oil industry, and explained JX Nippon Oil & Energy Corporation’s four policies that reflect the current state of the oil industry in Japan (shift to petrochemicals, export of oil products, enhanced stability and efficiency of refinery operations, and corporate integration).

4) Mr. Abdulaziz Al-Meer, Director of Planning and Performance, Qatar International Petroleum Marketing Company (Tasweeq), gave a presentation titled “Tasweeq—Continuing to Deliver Energy Reliably to Japan.” He said Tasweeq will continue to be a reliable supplier to Japan, and discussed the oil industry in Qatar, Qatar’s relationship with Japan, the global oil and gas markets today, and the role of Tasweeq.

5) Dr. Fereidun Fesharaki, Chairman, FACTS Global Energy (FGE), gave a presentation titled “Sustainability vs. Volatility: The New Paradigm in the Petroleum Industry.” He discussed the trend in crude oil prices and the global demand-supply situation, and said it is important to realize that fluctuations in crude oil prices are a structural issue.

Based on the five presentations, a Q&A session was held between the panelists and the floor, and an active discussion took place regarding the outlook of the crude oil market amid the sharp drop in crude oil prices, international cooperation in the oil industry, etc.

(3) Reception

A reception was held after the leaders’ panel, and Mr. Atsushi Taketani, Director, Petroleum Refining and Reserve Division, National Resources and Fuel Department, METI, gave a welcome speech, followed by Mr. Marican, former CEO of Petronas, who gave a speech representing the oil-producing countries, and Mr. Michio Ikeda, Executive Vice President, JX Nippon Oil

& Energy Corporation, who gave a speech on behalf of the Japanese side and led a toast.

(4) Second Day (January 22): Discussion Sessions

Two discussion sessions were held on the second day: Session 1 in the morning (chaired by Mr. Masayuki Kobayashi, Executive Officer, Distribution & Operation, International Oil Products, Crude Oil & Marine Oil Business Center, Showa Shell Sekiyu K.K.), and Session 2 in the afternoon (chaired by Mr. Ryosuke Shimizu, Director, Senior Vice President, Technology & Engineering Division, Chiyoda Corporation).

In Session 1, themed “Advances in HR Development,” four speakers discussed human resource development initiatives and visions in their company/organization. Mr. Tetsuo Arii, Master Lecturer, Training Department, JCCP, gave a presentation titled “Transition of Human Resource Development of Oil Producing Countries and Innovation of JCCP Program”; Dr. Le Phuoc Hao, Rector, PetroVietnam University, gave a presentation titled “Challenges and Solutions to the Education and Development of Highly Qualified Human Resources for the Oil and Gas Industry in Vietnam”; Dr. Francisco Juan Carlos Rodriguez Ramirez, Manager, Marketing College, Pemex University, gave a presentation titled “Universidad Pemex: A Successful Strategy for Human Resources Development”; and Mr. Akira Wakamoto, General Manager, Manufacturing Division, Showa Shell Sekiyu K.K., gave a presentation titled “Development of Competitive Human Resources of Showa Shell.”

Chairman Kobayashi then summarized the presentations as having shown an extremely clear picture of each company/organization’s strategies for achieving specific targets in relation to the session theme of “advancement.” He said the companies/organization represented by the speakers are adopting



Mr. Abdulaziz Al-Meer, Director of Planning and Performance, Tasweeq, answering a question



Dr. Fereidun Fesharaki, Chairman, FGE, answering a question



Mr. Tsuyoshi Nakai, CEO of JCCP, serving as moderator of the Leaders’ Panel



The leaders' panel engaging in active discussion

new technologies that reflect rapid changes in the business environment and are also addressing human resource development needs at the same time in consideration of the social environment of their country. In response to these efforts, Mr. Kobayashi expressed his hope that Japanese companies and the government will continue to deepen mutual exchanges to play a leading role in promoting human resource development in each country.

Mr. Aidarova Dina Tukibayevna, Leading Specialist, Human Resources and Labor Remuneration Department, KazMunayGas, was scheduled to make a presentation, but had to cancel his attendance due to unavoidable circumstances.

In Session 2, themed “Challenges for Advanced Technology,” four speakers discussed their company/organization’s initiatives and visions regarding advanced technology. Dr. Hilai Abdullah Al Hinai, GM of Corporate Support Services, Oman Oil Refineries and Petroleum Industries Company (Orpic), gave a presentation titled “Challenges Facing Orpic Growth”; Mr. Kiatchai Maitriwong, Acting Senior Petroleum Refining Executive, Refinery Business, The Bangchak Petroleum Public Company Limited, gave a presentation titled “Bangchak Way for Sustainability”; Dr. Mikael

Berthod, Centre Manager, Takreer Research Centre, gave a presentation titled “Bottom of the Barrel Upgrading Strategy in Takreer”; and Mr. Shigetaka Fujii, Technical Specialist, Refinery, Petrochemical & New Energy Process Engineering Unit, Chiyoda Corporation, gave a presentation titled “Innovations in Petroleum Refining Industry and Role of Japanese Refining Technology.”

Chairman Shimizu summarized the presentations of Session 2, saying that they showed how environmental conservation is a priority issue in refinery operations, from the planning of refinery facilities to quality improvement and operational enhancement, and reaffirmed the awareness that efforts to promote environmental conservation are a part of CSR activities that are extremely important to the oil refining industry’s existence as a member of the local community. As those who engage in the oil refining business, he said the speakers all displayed the awareness that technical challenges are indispensable, and that refinery management is responsible for addressing such technical challenges. Mr. Shimizu also noted that JCCP activities are widely accepted as being extremely important to strengthening relations between oil-producing countries and Japan, and recognition of JCCP is particularly high in oil-producing countries. Under this situation,



Session 1: Q&A session with the floor



Session 2: Q&A session with the floor

he expressed his expectations that occasions provided by JCCP will be actively used as forums for technical exchanges between oil-producing countries and Japan.

Mr. Hilal Ali Ismaeel, Inspector General, Inspector General Office – Ministry of Oil, and Mr. Rachmad Hardadi, Director, PT. Pertamina (Persero), who were scheduled to take part in the discussion session, were unable to attend due to unavoidable circumstances.

3. Closing Statement

Mr. Tsuyoshi Nakai, CEO of JCCP, delivered a closing statement to the following effect before bringing the symposium to a close: “The two days of the symposium were a fruitful couple of days filled with useful information, but most important to JCCP is what everyone has gained from it. Yesterday, the symposium opened at a highly interesting timing, and the possibility of such cooperation in the downstream sector

was evident throughout the various discussions. This morning, human resource development was the focus of discussion, and various views and information were exchanged in relation to the need to increase national workers. This afternoon, discussions revolved around the topic of technical projects. In both sessions, we obtained hints regarding the future course of JCCP activities.”

He continued, “Yesterday, speakers mutually exchanged views instead of simply giving speeches. Such changes will continue to be explored to further develop this symposium into an even more active forum for exchanges, and thus ask for your continued support and cooperation.”

The symposium program is provided on the following pages, and the presentation materials of each speaker have been posted on the JCCP website (<http://www.jccp.or.jp>) for your reference.

<by Koichi Ito, Administration Dept. & Training Dept.>

The 33rd JCCP International Symposium Program

“Sustainability and International Cooperation in the Petroleum Industry”

Date & Time	Proceedings
Jan. 21 (Wed) 14:00 – 17:30	<p>Opening ceremony Opening address: Mr. Keizo Morikawa, President, JCCP Guest-of-honor speech: Mr. Takayuki Sumita, Director-General, Natural Resources and Fuel Department, Agency for Natural Resources and Energy, METI</p> <p>Leaders’ panel (in order of presentation) [Moderator] Mr. Tsuyoshi Nakai, CEO, JCCP</p> <ul style="list-style-type: none"> ■ Tan Sri Mohd Hassan Marican, Chairman & CEO (former Petronas CEO), mh Marican Advisory Sdn. Bhd. “Sustainability and International Cooperation in the Petroleum Industry” ■ Mr. Khaled Al-Asousi, Deputy Chief Executive Officer (Support Services), Kuwait National Petroleum Company (KNPC) “K-LEAD” ■ Mr. Michio Ikeda, Director, Executive Vice President, JX Nippon Oil & Energy Corporation “Challenges Facing the Japanese Oil Industry —What We Have Done & What We Are Going to Do—” ■ Mr. Abdulaziz Al-Meer, Director of Planning and Performance, Qatar International Petroleum Marketing Company Ltd. (Tasweeq) “Tasweeq — Continuing to Deliver Energy Reliably to Japan” ■ Dr. Fereidun Fesharaki, Chairman, FACTS Global Energy (FGE) “Sustainability vs. Volatility: The New Paradigm in the Petroleum Industry”
18:00 – 20:00	Reception

Date & Time	Proceedings
Jan. 22 (Thu) 9:30 – 12:00	<p>Session 1 “Advances in HR Development” [Chairperson] Mr. Masayuki Kobayashi, Executive Officer, Showa Shell Sekiyu K.K.</p> <p>(in order of presentation)</p> <ul style="list-style-type: none"> ■ Mr. Tetsuo Arie, Manager, JCCP “Transition of Human Resource Development of Oil-producing Countries and Innovation of JCCP Program” ■ Dr. Le Phuoc Hao, Rector, PetroVietnam University “Challenges and Solutions to the Education and Development of Highly Qualified Human Resources for the Oil and Gas Industry in Vietnam” ■ Dr. Francisco Juan Carlos Rodriguez Ramirez, Manager, Pemex University “Universidad Pemex: A Successful Strategy for Human Resources Development” ■ Mr. Akira Wakamoto, General Manager, Showa Shell Sekiyu K.K. “Development of Competitive Human Resources of Showa Shell”
13:30 – 16:00	<p>Session 2 “Challenges for Advanced Technology” [Chairperson] Mr. Ryosuke Shimizu, Director, Senior Vice President, Chiyoda Corporation</p> <p>(in order of presentation)</p> <ul style="list-style-type: none"> ■ Dr. Hilal Abdullah Al Hinai, GM Corporate Support Services, Oman Oil Refineries and Petroleum Industries Company (Orpic) “Challenges Facing Orpic Growth” ■ Mr. Kiatchai Maitriwong, Acting Senior Petroleum Refining Executive, Refinery Business, The Bangchak Petroleum Public Company Limited “Bangchak Way for Sustainability” ■ Dr. Mikael Berthod, Centre Manager, Takreer Research Centre “Bottom of the Barrel Upgrading Strategy in Takreer” ■ Mr. Shigetaka Fujii, Technical Specialist, Chiyoda Corporation “Innovations in Petroleum Refining Industry and Role of Japanese Refining Technology”
16:00 – 16:05	Closing address: Mr. Tsuyoshi Nakai, CEO, JCCP

Participation in the Kuwait International HSE Conference

1. About the KIHSE Conference

Mr. Tsuyoshi Nakai, CEO of JCCP, and five other members from JCCP participated in the Kuwait International Health, Safety and Environment Conference (hereinafter referred to as the KIHSE Conference), which convened in Kuwait on February 16 and 17, 2015.

The KIHSE Conference was inaugurated this year under the main leadership of Kuwait Petroleum Corporation (KPC), with the objective of providing a forum for HSE experts from around the world to share the knowledge and expertise of their country toward building HSE strategies and ensuring their continued success in the oil and gas sectors in the Gulf countries and throughout the world.

The conference commenced with an opening presentation by Dr. Ali Saleh Al-Omir, Minister of Oil-Kuwait, under whose patronage the conference was held.



Opening presentation

On both days, a plenary presentation session was held in the large auditorium in the morning, and three tracks on environment, health and safety were held in the afternoon, featuring presentations and Q&A sessions in each track.

Representing JCCP, Mr. Nakai gave a presentation at the beginning of the first day's plenary session, and Mr. Tetsuo Ariei, Counselor, gave a presentation in the Session 2 environment track held in the afternoon of the first day, and spoke about the contributions Japan and JCCP activities have made in the HSE field.



Presentation by Mr. Tsuyoshi Nakai, CEO of JCCP

2. HSE Activities and JCCP's Contribution

In his presentation, Mr. Nakai introduced the perspective of “legal regulations + ISO + α ” in describing how safety management in Japan is characterized by rigid legal safety criteria as well as Japanese-style work processes, and discussed how these processes are supported by teamwork and human resource development. With regard to teamwork, he explained that giving responsibility and authority to each individual placed in charge of an operation forms the foundation for the development of a distinctly Japanese safety culture. With regard to human resource development, he explained the importance of continuing daily activities, and noted that the Japanese culture that forms the foundation of this concept could already be observed in the 14th century collection of essays entitled *Essays in Idleness*.

Essays in Idleness: “Famous Tree Climber”

There was a man who was known as an expert tree climber. Whenever he ordered his apprentice to do some work high up in a tree, he would remain silent when the apprentice came upon a dangerous spot, but would call to him to be careful to climb down without hurting himself, only when the apprentice had climbed down to around the height of the eaves of a house. The reason for this, the expert explained, is because at dizzying heights where tree branches are thin and dangerous, nothing needs to be said, as the climber himself will pay careful attention;

accidents occur precisely when the climber reaches heights that are not so dangerous and lets his guard down.

Mr. Nakai used this story to explain the dangers of dropping one’s guard and the necessity of issuing a precaution, and introduced how safety culture is firmly established through such awareness raising practices as “finger pointing and calling,” danger prediction activities and identification of potential dangers, which are routinely implemented at worksites in Japan.

Mr. Nakai also spoke about environmental countermeasures, describing Japan’s history of achieving sustainable growth during the country’s high-growth period, not only by strengthening regulations and capital investment, but also by implementing anti-pollution measures and energy conservation policies, and the subsequent changes in the focus of energy policies and environmental countermeasures. He additionally discussed initiatives for wastewater purification in coastal waters and waste reduction.

Mr. Nakai explained that JCCP wishes to contribute to development in each region and country by sharing the formidable knowledge that Japan has accumulated. To this end, he said JCCP has continued to receive foreign participants to training programs in Japan and to send Japanese experts abroad since its establishment in 1981, so that as of fiscal 2013, 796 participants from around the world (including 399 from the Middle East) have benefited from JCCP training in Japan, and 80 Japanese experts have provided their expertise in oil-producing countries (including 34 to the Middle East).



Presentation by Mr. Tsuyoshi Nakai, CEO of JCCP

3. Issues and JCCP’s Initiatives in the Environmental Sector

Mr. Arii introduced the initiatives of Japan’s oil industry in response to needs for energy efficiency and



Presentation by Mr. Tetsuo Arii, Councilor, JCCP

for a low-carbon society, and explained the importance for the oil industry in both oil-producing and oil-consuming countries to pursue technical development in consideration of the fact that oil resources essentially serve two purposes — as an energy medium and as a raw ingredient for new materials. He also noted that the oil market will see a diversification of energy conversion and concentration of carbon gas processing in the future, and introduced Japan’s R&D and commercialization initiatives toward this trend.

Lastly, Mr. Arii reaffirmed JCCP’s commitment to support mutual cooperation between oil-producing and consuming countries for effective energy utilization, and to implement activities that provide technical support to Japanese companies’ cooperation with oil-producing countries.

4. HSE Initiatives in Each Country

The presentations given by speakers from different countries all shared the awareness that HSE is a universal responsibility that forms the foundation of their company, and that the commitment of the top management



Closing ceremony

and the creation of a safety culture through human resource development are indispensable to fulfilling that responsibility. In addition to Kuwait, the speakers included important figures from Qatar, Abu Dhabi, Bahrain and Oman, but their presentations indicated that HSE is a priority issue common to all countries.

The KIHSE Conference showcased various views and knowledge through 50-some speakers, including government ministers, corporate CEOs and other important figures, and was closed with a promise to be convened continuously next fiscal year and beyond.

<by Kunio Kawashima, Training Dept.>

Topics

The 23rd Joint GCC-Japan Environment Symposium

The Joint GCC-Japan Environment Symposium is held to promote deeper understanding of environmental improvement and conservation in the oil downstream sector by bringing together environmental experts from the GCC countries and Japan, and providing a forum for them to strengthen mutual understanding, exchange information and share innovative technologies and their application. Previous symposiums have been held under such themes as “water,” “greening,” “soil,” “environment,” and “environmental issues in refineries.”

Tokyo hosted the first symposium in 1992, and the GCC countries have taken turns in hosting subsequent symposiums. The recent 23rd symposium was hosted by Kuwait for the fifth time, following previous symposiums held in 1996, 1998, 2003 and 2009. With Kuwait Institute for Scientific Research (KISR) as co-organizer, the latest symposium was held over a three-day period from December 15 to 17, 2014, under



Guest of honor, keynote speakers, speakers and staff of the symposium

the theme of “Water Resources Development and Environment Protection in GCC Countries.”

On December 14, one day in advance of the opening of the symposium, the Japanese delegation, led by Dr. Takao Kashiwagi, Professor Emeritus of Tokyo Institute of Technology, and including the Japanese speakers, Mr. Eiji Hiraoka, JCCP Special Counselor, and other JCCP members paid a courtesy call on Dr. Najji Al-Mutairi, Director General, KISR, to thank him for his support for the implementation of the symposium. Dr. Kashiwagi and Dr. Al-Mutairi engaged in a fruitful discussion, with Dr. Kashiwagi explaining the Japanese government’s energy policy and Dr. Al-Mutairi discussing sustainable renewable energies centered on photovoltaic generation in response.

The symposium featured five sessions, attended by 204 participants from the GCC countries and Japan.

An opening ceremony was held on December 15, featuring welcome speeches by Dr. Al-Mutairi on



*Presentation of a commemorative gift
(from Mr. Najji Al-Mutairi, Director General, KISR,
to Mr. Eiji Hiraoka, Special Counselor, JCCP)*



Keynote presentation by Dr. Takao Kashiwagi, leader of the Japanese delegation

the Kuwaiti side, and H.E. Mr. Toshihiro Tsujihara, Ambassador of Japan to Kuwait, and Mr. Hiraoka on the Japanese side.

Keynote speeches followed the opening ceremony. Mr. Muhammad Al-Rashed, Executive Director, Water Research Center, KISR, gave a speech on “Water Security and Desalination in the GCC Countries”; Dr. Kashiwagi gave a speech on “Strategic Energy Plan of Japan, Focus on Energy System Reform of Japan and Building Smart Community”; and Mr. Salem Al-Hajraf, Executive Director, Environment & Life Sciences Research Center, KISR, gave a speech on “Energy Security and Supply Diversification for the State of Kuwait.”

In his speech, Dr. Kashiwagi explained that the necessity of regulatory reforms, including the promotion of renewable energies and the liberalization of energy, and the realization of smart communities contribute largely to environmental conservation not only from an economic perspective, but also with regard to enhancing people’s convenience and improving the lifestyles of local residents. They are thus new trends that would contribute not only to developed nations, but also to

newly emerging economies, as well as the entire world.

Presentation sessions followed the keynote speeches. In Session 1 on “Utilization of Alternative Energy,” Mr. Hisato Aoyama, Professional Engineer Manager, Technology Development Center, Process Technology Division, JGC Corporation, represented the Japanese side and gave a presentation on “Water Recycle System Utilizing Residual Fuel and Waste Water in the Oil Industry.”

Session 2 was themed on “Ground Water Development and Protection Strategy.”

Session 3 on “Environmental Challenges” was held on the following day, and Mr. Toru Nishiyama, Senior Manager, Sales Strategic Planning Dept., Dowa Eco-System Japan Co., Ltd., gave a presentation on “Waste Management Services for Oil and Gas Industry” on the Japanese side.

In Session 4 on “Technologies for Desalination and Wastewater Treatment,” Mr. Mitsuyoshi Hirai, Managing Director, Water Reuse Promotion Center, represented the Japanese side and gave a presentation on “Technology of Reverse Osmosis Desalination.”

In Session 5 on “Environmental Practices in Refineries and Oil Fields,” Mr. Takanori Kawanishi, Assistant Manager, Central Technical Research Laboratory, JX Nippon Oil & Energy Corporation, gave a presentation on “Preventing Corrosion of Seawater Heat Exchangers Made with Copper Alloys” on the Japanese side.

A total of 16 general presentations were given, including those from the five GCC countries (Kuwait, Saudi Arabia, UAE, Bahrain and Oman).

On the third day, Dr. Khaled Hadi, Division Director Operations Division, KISR, took the participants from Japan and the GCC countries on a tour of Kadhmah Water Production Plant, a pilot plant operated by KISR in the Doha district in northern Kuwait. The facility



Venue of the presentation sessions



Audience at a presentation session

has the capacity to manufacture 300 ml PET bottles by blow moulding, and to fill and package 6,000 bottles of mineral water per day. Today, the mineral water produced is sold within KISR facilities on a test basis, but there are plans to increase production capacity and market the mineral water from 2015.

In Japan, the act of thoughtlessly using something as though it were inexhaustible is expressed by the phrase, *yumizuno gotoku* (literally, “going through something like hot and cold water”). Underlying this expression was the common awareness that Japan had an abundance of water resources that could be used lavishly. Needless to say, in Japan today, the awareness of energy and resource conservation has spread widely, as can be seen in consumers’ selection of “water-conserving” home appliances, and everyone fully understands the importance of water resources.

The GCC countries have a long history of using oasis water and well water wisely to begin with, and even today value water, evidenced by utilizing the waste heat from power plants and taking the trouble to produce water from seawater by using membrane separation technology.

Given this background, the audience had many questions regarding the presentations in each session, and took part in active discussions with the speakers. This came as an indication of their strong awareness and

interest in the importance of water and water resources, as well as their growing concerns about environmental impacts such as of the associated water issue and effluents from refineries and plants.

The symposium reaffirmed the significant role of such symposiums, seminars and other international forums for information exchange in deepening mutual understanding and strengthening friendship between Japan and oil and gas-producing countries, and ultimately in securing a stable supply of energy for Japan.

<by Yoshiyuki Hattori, Technical Cooperation Dept.>



Kuwait Tower, which is also actually a 4,500 m³ water tower

Fiscal 2014 Regular Courses (November – February)

Introducing selected courses with photos of scenes from previous offerings
(Part 2)



[Jan. 19] IT-3 "Turnaround and Inspection" (Jan. 13 – 23)
Onsite training at Idemitsu Kosan's Chiba Refinery



[Nov. 19] TR-14 "Human Resource Management (HRM)"
(Nov. 4 – 21)
Group discussion at JCCP



[Nov. 13] TR-15 "Current Situation and Future Perspectives of
LNG Technology" (Nov. 4 – 21)
Group photo at Kobe Steel, Ltd.



[Dec. 4] TR-17 "Wide Scope of Downstream Safety
Management" (Nov. 25 – Dec. 12)
On a Shinkansen bound for Hiroshima



[Dec. 3] TR-19 "Utilization of Information and Control
Systems in the Oil Downstream (Nov. 15 – Dec. 12)
In the JCCP simulation room



[Feb. 21] TR-21 "Quality Management of Refinery Products"
(Feb. 10 – 27)
History and culture excursion to Kinkakuji Temple



[Jan. 26] TR-20 "Petroleum Distribution" (Jan. 13 – 30)
At JX Nippon Oil & Energy Corporation's Kiire Terminal



[Feb. 18] TR-22 "Advanced Process Control on DCS"
(Feb. 10 – 27)
Training on the JCCP No. 5 simulator



[Feb. 27] TR-23 "Human Resource Development (HRD)"
(Feb. 17 – March 6)
Traveling by Shinkansen



[Jan. 29] CPJ-82 "Environmental Management and Advanced
Technologies" (Jan. 27 – Feb. 5)
Enjoying the snowy landscape in Echigo-yuzawa



[Feb. 9] CPJ-83 "Refinery Maintenance Management for
Productivity Improvement" (Feb. 9 – 20)
CPJ-84 "Marketing and Trading" (Feb. 9 – 13)
Joint opening ceremony for customized programs for the
ADNOC Group



[Dec. 14] TCJ-1 "JCCP Program Seminar" (Dec. 11 – 17)
Posing with an apprentice geisha during a history and culture
excursion to Kyoto

Regular Course on Current Situation and Future Perspectives of LNG Technology (TR-15-14)

1. Background and Objective

This course was widely geared toward engineers who engage in work related to the LNG area, and provided comprehensive knowledge of the basic technologies for refining, liquefying, transporting, storing and utilizing natural gas. It covered such topics as the global LNG demand-supply trend, the exploration, development, production and economics of natural gas, future technologies that use natural gas in consideration of recent trends, as well as a general overview of natural gas liquefaction plants, LNG tankers, LNG storage facilities, pipeline technologies, consumption-side facilities and their major equipment, with hopes that such knowledge might offer the course participants hints to resolving their respective problems and issues.

In fiscal 2014, the course was implemented from November 4 to 21, 2014, with the participation of 10 participants from seven countries.

2. Course Content

(1) Training at JCCP

Before embarking on visits to various plants and facilities for onsite training, a program centered mainly on lectures was provided at JCCP Headquarters to allow the participants to sort and acquire basic knowledge in preparation for the latter part of the course. First, a lecture on “global LNG demand-supply trends” (by Japan Oil, Gas and Metals National Corporation (JOGMEC)) discussed the current status of the world’s natural gas and LNG. Then, a case example of a development project was discussed in reference to the exploration, development and production of natural gas (JX Nippon Oil & Energy Corporation), and technical aspects were covered in lectures on an overview of natural gas refining and liquefaction technologies (JGC Corporation), pipeline technologies (JFE Engineering Corporation), LNG tank technologies (Chiyoda Corporation), and future technologies that utilize natural gas (Toyo Engineering Corporation), with the objective of providing

comprehensive knowledge of various related fields.

(2) Site visits

Visits were made to the following plants of various companies that excel in their respective field, to allow the participants to actually observe, experience and verify the knowledge that was introduced in the lectures at JCCP.

- 1) At Osaka Gas Co., Ltd.’s Himeji LNG Terminal, which boasts world-class flat-bottomed vertical cylindrical LNG tanks and LNG gasification facilities for supplying city gas, the participants gained a specific image of consumption-side facilities after receiving LNG. They also gained knowledge of the properties and handling precautions of cryogenic fluid. This experience at Himeji LNG Terminal seemed to make a particularly strong impression on participants from countries in Southeast Asia that already own or have plans to construct an LNG receiving terminal.
- 2) Visits were made to the facilities of equipment manufacturers, such as Kobe Steel, Ltd.’s Takasago Works, Mitsubishi Hitachi Power Systems, Ltd.’s Takasago Works, and IHI Corp.’s Yokohama Works, to acquire knowledge of LNG vaporizers, heat exchangers, gas turbines, pressure vessels, etc. from their manufacture to maintenance. The participants expressed an interest in such basic equipment from



At Osaka Gas Co., Ltd.’s Himeji LNG Terminal

their respective standpoints, as an important field to both natural gas producers and consumers.

- 3) Mitsui Engineering & Shipbuilding Co., Ltd.'s Chiba Works provided a specific picture of the LNG ship designing and shipbuilding technologies. In a rare opportunity to visit a shipbuilding site, the participants learned how steel plates are shaped into separate units, and how those small units are ultimately assembled into a complete ship.

3. Observations

This course honed in on the natural gas field, which is

gaining strong interest in recent years, and was attended by engineers who engage in work related to LNG and natural gas areas. As they each applied themselves to the program with strong problem awareness, it is hoped that they have acquired hints and ideas for addressing their own respective problems and issues.

The participants' feedback will be taken into consideration along with both internal and external situations, so that changes can be made to the course content as appropriate to provide an even better program in the future.

JCCP extends its deepest gratitude to everyone concerned for their support and cooperation in bringing the course to a successful conclusion.

<by Toshinobu Ishikawa, Training Dept.>

Personnel
Exchange

Regular Course on Wide Scope of Downstream Safety Management (TR-17-14)

1. Background and Objectives

From November 25 to December 12, 2014, a regular course on "Wide Scope of Downstream Safety Management" was implemented with the participation of a group of 12 selected engineers in charge of HSE from 10 countries. By providing knowledge of safety management technologies that form the foundation of all companies from various angles, the course aimed to develop engineers, and ultimately potential executives, with good knowledge of a broad range of technologies related to safety. Particular focus was placed on designing a course that covers the latest design techniques for plant safety; risk assessment and management technologies; systems, organizations and framework for safety management and disaster prevention and management; safety education in Japan; laws and regulations related to safety; and maintenance and management technologies.

2. Training at JCCP

First, a lecture was given to provide an understanding

of the actual state of Japan's oil industry with reference to its history and background, the energy situation, the shares of crude oil import and product consumption, global status, trends toward deregulation and issues facing the industry, and new, non-oil businesses.

Next, lectures on "Safety-related laws and regulations in Japan" and "Prevention of behavior-based disasters and safety education" focused on laws, regulations and administration related to safety and disaster prevention in Japan. They specifically provided knowledge of security and industrial safety administration and various corporate activities that have supported Japan's economic growth, as well as their history and background.

With respect to plant design, lectures on "Plant safety design and risk management" and "Plant facility inspection and safety" discussed the principles and methods of plant safety design, and a lecture titled "Environmental management" examined the background to the Exxon Valdez crude oil spill accident that occurred in 1989 and whose ramifications are still being felt today.

On the last day of lectures, a lecture on "Safety management overview" discussed elements that are



At Idemitsu Kosan's Tokuyama Complex
(large-volume foam fire extinguisher)



At JX Nippon Oil & Energy Corporation's Negishi Refinery

necessary for safe refinery operations in Japan as a summary of all previous lectures, with reference to their relevance to the composition of the entire course.

3. Site Visits

A representative refinery and office of a major Japanese oil company were visited during the course for onsite training.

- 1) Idemitsu Kosan Co., Ltd., Tokuyama Complex: Exchanges were held regarding the office's safety management organization and self-defensive framework for disaster prevention, in addition to TPM and various safety activities, specific case examples of safety facilities such as the large-volume foam fire extinguishing facilities, and safety education.
- 2) JX Nippon Oil & Energy Corporation, Negishi Refinery: The refinery's safety management organization and framework and safety-oriented activities were examined in reference to its initiatives for promoting harmony and social contribution in the local community and activities related to environmental conservation and safety management.
- 3) Other sites
Yokogawa Electric Corporation: The company's latest DCS control system, new technologies for

reliability improvement and redundancy, safety systemization technologies, etc. were discussed.
Swing Corporation, Fujisawa Office: The company's wastewater treatment technologies and system facilities were introduced.

Sompo Japan Nipponkoa Risk Management Inc.: A broad range of technologies and information on risk assessment and management in refineries were provided from the standpoint of an insurance company.

4. Observations

As this regular course was themed on safety management, a focus of increasing interest and needs in oil-producing countries in recent years, the course received as many as 34 applications from 18 countries. From among them, 12 participants were ultimately selected. They expressed strong enthusiasm in acquiring new knowledge from the course, and as a whole, they also displayed a high level of understanding beyond JCCP's expectations. To continue to respond to needs for safety in oil-producing countries, JCCP will make changes as necessary and strive to offer an even better program in the future.

Lastly, we extend our deepest appreciation to everyone who generously gave us their support and cooperation in bringing the course to a successful conclusion.

<Kazuhiro Wakamatsu, Training Dept.>

Regular Course on Turnaround and Inspection (IT-3-14)

This course was designed intended for mechanical engineers with at least five years' experience in plant turnaround or maintenance in a refinery. It was implemented from January 13 to 23, 2015, with the participation of 10 participants from eight countries.

1. Course Overview

The course covered the stages of turnaround in a refinery, including its planning, implementation, evaluation and review. It placed particular focus on risk and reliability-based inspection and maintenance planning at the planning stage, on work process management at the implementation stage, and on optimization based on risk management methods at the evaluation and review stages. Furthermore, it aimed to provide general knowledge for improving maintenance management by focusing on reliability improvement of facilities and equipment improvement through the latest maintenance technologies, as well as preventive and predictive maintenance.

2. Training at JCCP

A lecture on "Outline of petroleum industry in Japan" described Japan's topographical features, demographic statistics, trends in demand for oil products, development of the oil industry, the share of petroleum in primary energies in Japan and transitional changes in that share, and refineries owned by oil distributors and other distributors in Japan and the present size of such distributors. It also provided knowledge of Japan's policies for energy security, including the status of crude oil stockpiling.

Next, a lecture on "Maintenance management and facility management technologies in the refinery" introduced actual examples of turnaround maintenance in relation to the organization of refineries, laws and regulations, and maintenance activities. It placed particular focus on introducing how methods for optimization of equipment management through risk-based inspection (RBI) and reliability-centered maintenance (RCM), which have been introduced to

Japanese refineries in recent years, and equipment diagnosis for aged deterioration of devices are fully applied to the actual maintenance of a refinery that was built some 50 years ago.

3. Site Visits

(1) Non-destructive Inspection Co., Ltd.

The participants received a lecture on the latest inspection technologies and acquired hands-on inspection experience. The lecture covered technologies for the inspection of static equipment, tanks and pipes in a refinery, accompanied by a demonstration of four different inspection methods.

(2) Kobe Steel, Ltd., Takasago Equipment Plant

A lecture was given on the structure, performance and maintenance of the various types of compressors (reciprocating, screw, centrifugal) manufactured by Kobe Steel. A tour of the refinery site was also offered, and attracted the participants' strong interest with an inspection of compressors being manufactured or overhauled.

(3) Idemitsu Kosan Co., Ltd., Chiba Refinery

A lecture covered the refinery's organization and framework for maintenance, inspection and operations, inspection technologies, arrangements with repair contractors, objectives of regular maintenance and repair, and maintenance planning and schedules.

In the tour of the refinery, a seasoned operator in the instrument panel room explained the various items for turnaround and inspection in operations departments, such as the management of documents, the environment, work processes, safety and the worksite, with reference to actual inspection documents.

(4) Sankyu Inc., Maintenance Center

This lecture focused on the development of human resources related to maintenance, the implementation of turnaround maintenance in refineries, and the differences in plant maintenance between Japan and foreign countries. Also introduced were methods and systems

that strengthen employee motivation, such as long-term human resource development programs and positions and titles that are given according to skills levels.

(5) JGC Corporation, Yokohama Head Office

A lecture introduced the latest maintenance technologies and maintenance management with particular focus on information that is both necessary and useful to the participants, such as RCM (reliability-centered management), RBI (risk-based inspection), the A-MIS (advanced maintenance inspection support system) inspection management system, plan extension programs, metal spraying, and turnaround.

A demonstration of the A-MIS system captured the participants' interest by showing how inspection histories and the status of each part are displayed on device and pipe diagrams, and moreover how it allows inspection values to be input directly to the system through communication with inspection equipment.

4. Observations

Personnel who engage in maintenance in a refinery are generally extremely busy, so the short schedule of this



Inspection demonstration at Non-destructive Inspection Co., Ltd.

course was appreciated by the participants. The course also provided a good variety of visits, namely to an inspection company, equipment manufacturer, refinery, maintenance company and engineering company, which appears to be worth continuing in the future.

It is hoped that the course, as a whole, provided information that will benefit the maintenance and inspection of aging refineries and oil facilities in oil-producing countries in the future.

<by Takaya Suzuki, Training Dept.>

CPJ on Advanced Instrumentation and Control Systems in the Oil Downstream for the ADNOC Group (CPJ-81)

1. Urgent International Cooperation and Assistance Program for the UAE ADNOC Group

This customized program-Japan (CPJ) is based on an agreement between the UAE and Japanese government in 2013 to receive 250 ADNOC personnel to JCCP over the next five years. With a target of receiving 50 personnel each year, JCCP plans to implement the five most highly requested courses during this year, the first year of the agreement, upon consultation with ADNOC. The courses are: CPJ-81-14 on “Advanced instrumentation and control systems in the oil downstream”; CPJ-82-14 on “Environmental management and advanced technologies”; CPJ-83-14 on “Refinery maintenance management for productivity increase”; CPJ-84-14 on “Petroleum marketing and trading (February)”; and CPJ-85-14 on “Petroleum marketing and trading (March).” The first year’s target of receiving 50 participants is expected to be reached with these five courses.

Details of the course content and the results of implementation of CPJ-81 “Advanced instrumentation and control systems in the oil downstream” are provided below.

2. CPJ-81-14 “Advanced instrumentation and control systems in the oil downstream”

(1) Background and Objectives

As part of the FY2014 Urgent International Cooperation and Assistance Program, JCCP agreed to provide training that focuses on the advanced instrumentation and control systems for the ADNOC Group. The participants were mainly engineers who specialize in instrumentation equipment and maintenance, so training at JCCP and site visits were designed to cover topics in those fields, and a nine-day course was implemented from January 13 to 23, 2015.

(2) Program Planning

Although the course was a short-term course specifically themed on instrumentation equipment and maintenance, it incorporated practical training that utilizes relevant equipment as much as possible to maximize the uniqueness of JCCP training. The program thus featured themes that were relevant to the participants’ interests, such as themes that relate to their specialties and themes centered on the latest technologies in the instrumentation field. Additionally, it included popular hands-on training that is offered in regular courses.

- 1) Themes related to participants’ specialties
 - i) Overview and practical training in vibration sensors (onsite training at Shinkawa Sensor Technology Co.’s Hiroshima Factory)
 - ii) Overview of information systems (external lecturer: Osaka Systems Planning, Inc.)
- 2) Themes centered on the latest technologies in the instrumentation field
 - i) Practical engineering training on the latest DCS and wireless instrumentation system (onsite training at Yokogawa Electric Corporation’s Head Office)
 - ii) Overview of instrumentation devices, including online analyzers (onsite training at Yokogawa Electric Corporation’s Komine Factory)
- 3) Popular hands-on training offered in regular courses
 - i) Basics and application of control valves and their maintenance (onsite training at Azbil Corporation’s Shonan Factory)
 - ii) Process control theories and practice (PID tuning) (JCCP CAI classroom)
 - iii) Process control practice (water tank model) (JCCP No. 5 simulator)



Training at Azbil Corporation



Group photo at Yokogawa Electric Corporation

(3) Summary

1) Training at JCCP

i) Practical training in PID control and tuning and process control (water tank model)

Basic training was provided on instrumentation theories through PID control and tuning practice using a dynamic simulator in JCCP's CAI classroom and process control practice using a DCS simulator (water tank model). Although most of the participants were instrumentation engineers, the basic training received high marks from all.

ii) Latest information and control systems

An overview was given of information and control systems that are used in refineries and gas plants from both the Japanese and global perspective, and was well received by the participants, who noted that gaining an understanding of company-wide systems was highly beneficial.

2) Site visits

i) Shinkawa Sensor Technology, Inc., Hiroshima Factory

The Hiroshima Factory has the capacity to provide training in the measurement principles of vibration level instruments, sensor maintenance methods, diagnosis evaluation methods, etc. It was thus chosen as a destination for onsite training in consideration of the majority of instrumentation engineers among the participants. The lecturer (an Indian-Canadian employee) who attended to the group introduced the

company's products and took the group on a tour of the factory while providing expert technical explanations, and garnered high evaluations from the participants.

ii) Azbil Corporation, Shonan Factory

Following an overview of the company and factory, an introduction was given of the Valstaff maintenance support system for control valves produced by the company.

In the afternoon, the participants toured the control valve assembly processes, and engaged in hands-on training in the disassembly and assembly of a control valve. Mr. Omoda, the instructor of the practical training, captured the praise of the participants with his witty conversation and instruction style using whole-body language.

iii) Yokogawa Electric Corporation, Head Office and Komine Factory

At the Head Office, an introduction of the global company was followed by practical engineering training in wireless instrumentation systems, providing new knowledge that was well-received by the participants.

As a factory specializing in the production of progress gas chromatography (GC) among its various instrumentation devices, Komine Factory captured the participants' attention with its batch production system.

iv) Other

For this course, running water and basins for washing hands and feet were provided on the veranda at Shinkawa Sensor Technology, so that



Running water (hot water) and basins for washing feet and hands that were prepared by Shinkawa Sensor Technology for Muslim participants so they could practice their prayer ritual



Interaction with Japanese children at Hiroshima International Plaza

Muslim participants could practice their ritual prayer. Additionally, during a lunch at Hiroshima International Plaza, the participants happened to encounter primary school children who were also visiting the facility, and enjoyed the opportunity to interact with them by letting the children wear their ethnic Arab costume.

(4) Observations

As part of the Urgent International Cooperation and Assistance Program, JCCP provided training that focuses on the latest instrumentation and control systems for the

ADNOC Group. With only a short preparation period from the time the implementation of the course was decided until its actual implementation, there were some difficulties in selecting participants and destinations for site visits that accord with the course theme. However, the sites that were requested to provide onsite training did their utmost within the short period of preparation they had, and contributed greatly to providing highly meaningful training.

The participants of the course, for their part, responded positively and earnestly to their JCCP and Japanese experience, and left a strongly favorable impression on all the companies they visited.

<by Takaaki Yuasa and Eiji Iwamatsu, Training Dept.>

**Personnel
Exchange**

FY2014 JCCP Program Seminar

The fiscal 2014 JCCP Program Seminar (TCJ) was held over the seven days from December 11 to 17, 2014. Organized once every year, the TCJ invites managers of JCCP counterpart departments in national oil companies in oil-producing countries to Japan to take part in a digest version of a regular course to deepen their understanding of the types of training their participants receive and what participants do while they are in Japan. Thereafter, specific discussions are held about the content of future training programs.

As a characteristic of this fiscal year's TCJ, JCCP aimed to provide specific information about

the structure of customized programs and technical cooperation projects. Thus, the scope of participation was narrowed down to a selected number of countries, JCCP counterparts were invited to attend in pairs with engineers instead of alone, and business meetings were arranged with JCCP member companies.

Invited to participate in the TCJ this fiscal year were PT. PERTAMINA and PERTAMINA University from Indonesia, which have undergone a major reorganization and changes in personnel, and Oman Refineries and Petroleum Industries Co. (Orpic), which requested cooperation for enhancing its internal training

system. From these organizations, JCCP obtained the participation of important figures with decision-making power to send participants to JCCP programs.

The seminar was organized as follows.

- (1) Japanese society and people (Prof. Kando Eriguchi, Tamagawa University)
- (2) Japan's oil industry (Mr. Shinji Marumo, JCCP lecturer)
- (3) Detailed explanation of FY2014 and FY2015 JCCP course programs (JCCP Operations Dept.)
- (4) Visit to Shimadzu Corporation, Head Office and Sanjo Works
- (5) Visit to Fuji Oil Company, Ltd., Sodegaura Refinery
- (6) Bilateral meeting with each organization
- (7) Business meeting with each organization and member company
- (8) Presentations by participants

The meetings enabled JCCP to gain an understanding of issues facing each organization and its requests of JCCP, which would prove valuable for implementing future customized programs and technical cooperation projects. They also served to provide accurate information about their changes in personnel accompanying reorganization. Particularly with respect to PERTAMINA University, JCCP learned that it is a corporate university established by the PERTAMINA human affairs department, and that it governs all training programs at PERTAMINA. All in all, the interviews provided an opportunity to discuss specific training and cooperation schemes and issues that need to be addressed toward the next fiscal year's programs.

The visits to various relevant sites in Japan were

highly favored among the participants. At the Head Office of Shimadzu Corporation, the participants gained knowledge of how human resource development and management are based on the management principles of the founder, and studied its uniquely Japanese human resource management system. As the participants were HRD managers or management-level officers with several dozen subordinates, the content of the lecture appeared to directly relate to their duties. Furthermore, as they had visited the Shimadzu Foundation Memorial Hall during their history and culture excursion in Kyoto the previous day, the in-depth preliminary knowledge they gained of the founder's spirit facilitated their understanding of the lecture given at the Head Office.

Fuji Oil Company, Ltd., Sodegaura Refinery provided an overview of the refinery and a detailed explanation of a thermal cracker, with particular details of the EUREKA vacuum residue thermal cracker that exists nowhere else in the world. The participants seemed surprised to learn that despite its operational difficulty, the first-ever unit is still steadily operating after more than 30 years since its construction.

The seven-day program provided an understanding of how people who are sent to receive JCCP training in Japan spend their days and what kinds of training they receive, and served to build a relationship of trust between the sending and receiving sides by deepening mutual understanding. JCCP hopes the counterparts will hereafter support JCCP activities in various situations as a sympathizer and partner to JCCP. For JCCP's part, evaluations and requests regarding training will be reflected in future activities, to provide training programs and technical cooperation projects that even more closely match needs in oil-producing countries.

<by Masumi Kitahara, Operations Dept.>



Touring Shimadzu Corporation's Science Plaza



At Fuji Oil Company, Ltd.'s Sodegaura Refinery

Information Exchange Program for Young Employees of Oil Companies in an Oil-producing Country (Qatar) and Oil-consuming Country (Japan)

1. Overview and Background

In May 2013, JCCP invited Mr. Abdulla Al-Abdulmalek, Executive Director-Administration, and Dr. Majid Ibrahim, Head of Learning & Development, from Qatar International Petroleum Marketing Company Ltd. (Tasweeq) to Japan to strengthen relations with Qatar. During their visit, they brought up for discussion the possibility of an information exchange program for young employees, and the two sides agreed to consider its implementation.

Thereafter, in November 2013, JCCP and Tasweeq agreed to further promote the cooperative relationship between the two organizations, and signed a memorandum of understanding to that effect. The MOU also included mention of implementing the information exchange program, and prescribed the commencement of preparations to send young personnel from Qatar (Tasweeq) to Japan over the period from December 2 to 12, 2014, and to send young personnel from Japan to Qatar over the period from January 25 to 29, 2015.

2. Results

2.1 Program for young personnel from Qatar (Tasweeq)

A total of seven employees from Tasweeq were invited to Japan. They included six young employees in charge of the export and marketing of crude oil and condensates to Japan (3 men, 3 women), with a director from the Administration Department as supervisor and leader of the group. The program, implemented from December 2 to 12, 2014, was designed to trace the “oil road” from the import and stockpiling of crude oil to consumers, and to provide knowledge of the oil supply chain and the present oil situation in Japan.

At JCCP Headquarters, lectures were given on “Overview of Japan’s oil industry” and “Japanese-style management seen in Japan’s oil industry,” and a group



Group discussion

discussion session on “Workplace issues and solutions, and personal action plans” was held together with the young Japanese personnel who were scheduled to travel to Qatar in January.

The program also included visits to a number of sites. At the Head Office of JGC Corporation, the participants gained knowledge of the company’s project initiatives in Qatar, and its risk management framework that leads to proper operations and maintenance. At JX Nippon Oil & Energy Staging Terminal Corporation (Kiire Terminal), they witnessed the unloading, loading and stockpiling of crude oil, and learned that the terminal not only stores



Tank maintenance site (Kiire Terminal)

and delivers crude oil, but also plays a role in securing a national stockpile of crude oil.

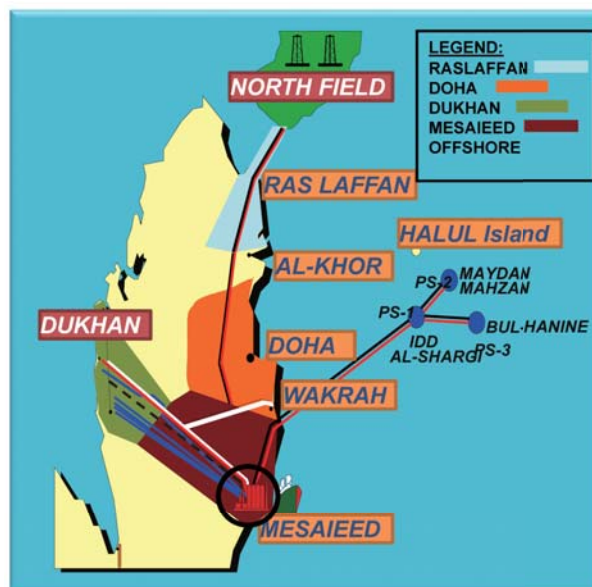
Cosmo Oil Co., Ltd.'s Yokkaichi Refinery provided a detailed overview of processes from the receiving of crude oil to the production of products, and explained the shipping schedule and system for oil products in reference to specific case examples.

Toa Oil Co., Ltd.'s Keihin Refinery introduced the crude oil refining consignment contract that makes full use of the heavy-oil treatment technology that is the refinery's strength, explaining that it is aiming to make a shift from a gasoline-oriented refinery to one that supplies chemical feedstock.

Idemitsu Kosan Co., Ltd.'s Chiba Refinery gave an overview of a combined refining and petrochemical project, and explained that it is a project being pursued by a consortium of companies toward the effective utilization of fractions produced in the oil-refining process as petrochemical feedstock. It also provided a deep understanding of the relationship between petrochemical products and their feedstock by having the participants actually touch the products in an exhibition room.

2.2 Program for young personnel from oil companies in Japan

A group of nine members (including one woman) composed of two each from JX Nippon Oil & Energy Corporation, Idemitsu Kosan Co., Ltd., Cosmo Oil Co., Ltd., and Showa Shell Sekiyu K.K., and one JCCP personnel traveled to Qatar from January 25 to 29, 2015. The program was organized by Tasweeq, with the objective of providing an understanding of the supply chain to young Japanese personnel by introducing the oil and gas industries in Qatar and taking them on a tour



Oil and gas production areas in Qatar

of relevant facilities. It also provided exposure to Qatari culture and history.

On the first day, an orientation was held at Tasweeq's Head Office. Following an opening address by Mr. Abudulla Al-Abdulmalek, Executive Director – Administration Directorate, Mr. Abdulaziz Al-Meer, Planning and Performance Director, gave an overview of the company and its role and relationship with Japan. JCCP then introduced the diverse initiatives of Japanese oil companies to continue their business in order to secure a stable, ongoing supply of energy amidst the current oil supply and demand situation in Japan and current decline in demand.

The subsequent days were spent visiting various oil facilities. First, the participants visited the Dukhan district, where crude oil and gas are produced under the administration of Qatar Petroleum (QP), and received a profile of the city in an operation center that oversees



Mr. Saad A. Al-Kuwari, CEO, Tasweeq (third from right)



In front of the Christmas tree at the first well

the vast 80 × 8 km oil field. The participants then toured the crude oil gas-liquid separating facility at Jaleha Station and inspected the gas condensate recycling and refining unit, which is the centerpiece of the degassing station. The tour provided an awareness that QP works to generate earnings not only from crude oil, but also from gas and condensate in its reservoir.

On the third day, the participants toured the QP Group's production gas treatment facilities in the Ras Laffan district. Due to the rigid security, the participants toured the vast site from inside a bus, but they were able to observe the facilities of Pearl GTL Plant, Ras Gas, and Qatar Gas, compare the size of the seawater intake port and pipes with those in Japan, and inspect the wastewater treatment facility, ancillary power plant, and other such facilities. Throughout the entire 30-km tour of the site, an officer from QP's Communication and Public Relations Department provided a commentary on the history of the site, details of each unit, and other relevant information.

The group then toured the natural gas shipping port. By chance, a number of LNG ships were berthed in the port, and the participants had the opportunity to observe the loading of LNG.

On the fourth day, the participants toured the Mesaieed district, which is home to QP's NGL unit, a refinery, steel company, petrochemical company, and an industrial complex of a lube oil company. An inspection of the refinery's plants was not scheduled for the tour, which specifically focused on the shipping terminal and its facilities, but a QP operations manager of the shipping terminal provided detailed explanations of the port facilities and also took the time to answer the participants' questions in detail.

On the last day, a debriefing session was held at the Tasweeq Head Office with the management of Tasweeq



At the QP Headquarters in Mesaieed



Presentation scene (Ms. Kuga, Cosmo Oil Co., Ltd.)

and young personnel from Tasweeq who had attended the first part of the program in Japan in December. Views were exchanged on the tasks and responsibilities of the young Japanese personnel, what they had acquired from their visit to Qatar, their impressions, and how they hope to apply what they have learned to future activities. The young Japanese members gave positive feedback, stating that the useful and valuable experience they gained from the program, as well as the glimpse of Qatari culture they acquired, will definitely benefit them in fulfilling their activities in the future. In summary, Mr. Al-Abdulmalek commended the success of the program and expressed his expectations of implementing it continuously next fiscal year and beyond.

3. Observations

This information exchange program for young personnel was planned and implemented for the first time with Qatar, thanks to the MOU exchanged between Tasweeq and JCCP.

The program for training in Japan aimed to give participants a first-hand understanding of the process from Japan's import of crude oil to the delivery of oil products to consumers, and of Japanese oil companies' efforts to deliver stable, safe and affordable petroleum-based energy to the Japanese people in their own characteristic ways. Thus, it was a full-agenda program that may have provided barely enough time for the participants to digest all the information presented, but many of them commented that they think the course has fully achieved its goals, and expressed a strong intention to apply the experience gained from the course to improving business activities in Qatar and at Tasweeq. Furthermore, the majority of the participants submitted a request to the Tasweeq management to offer the course again next fiscal year so that more young employees at

Tasweeq could benefit from the same experience. They also submitted a request to include additional content related to electric power companies (as principal users of natural gas), petrochemical companies (adding value to petroleum), oil product depots (physical distribution) and gas.

In the program for dispatching young Japanese personnel to Qatar, Tasweeq made preliminary arrangements with QP to facilitate the smooth implementation of the program. The participants from Japan displayed a positive attitude to engage in the

program and absorb as much knowledge as possible from it, and also commented that the program was beneficial and will be fully applied to their future activities. They also requested the inclusion of additional content related to refining process and engineering for the next program.

Incidentally, news of the program in Qatar was introduced in a local newspaper.

JCCP and Tasweeq agreed to consider implementing the program again in fiscal 2015. The requests of the participants will be taken into consideration so that an even more enhanced program can be offered next fiscal year.

<by Fumihiko Tone, Training Dept.>



Newspaper clippings:
Gulf Times, Feb. 9, 2015; Qatar Tribune, Feb. 9, 2015

JCCP Regular Courses Completed

IT-1-14 Latest Technologies for Power Plant Turbines and Boiler Systems February 24 – March 6, 2015

Lecturer: Shinji Marumo

Content: Petroleum Industry in Japan;
General Trend of Primary Energy for Power Generation;
Various Technologies for Gas Turbines;
Practical Technologies for Rotary Machinery;
Reliability Enhancement and Maintenance Management for Rotary Machinery;
Maintenance Technology and Reliability Management for Plant Pumps;
Operational Practices and Maintenance of Governors;
Instrumentation for High-efficiency Power Generation;
Water Management for Turbine and Boiler System

Site visits: Mitsubishi Hitachi Power Systems Co., Ltd. (Yokohama Works); Shinkawa Sensor Technology, Inc. (Hiroshima Factory); Torishima Pump Manufacturing Company (Takatsuki Works); Woods Corp.(Head Office and Works); Kobe Steel, Ltd.(Nadahama Power Plant)

Countries: Indonesia, Iraq, Kuwait, Myanmar, Pakistan, Sudan, Uzbekistan, Vietnam



<8 countries / 12 participants>

IT-2-14 Finance & Accounting Management September 16 – September 26, 2014

Lecturer: Masayuki Jimbo

Content: Petroleum Industry in Japan;
Crude Oil Terminal;
Refinery Shipping System of Petroleum Products;
Distribution of Petroleum Products;
Refinery Site Observation;
Workshop for Business Skill Development:
Corporate Negotiation, Financial Accounting,
Procurement, Risk Management for Marketing and Trading, Oil Derivatives, Decision Making Process of Crude Oil Buyers

Site visits: Taiyo Oil Company, Limited (Shikoku Refinery); JX Nippon Oil & Energy Staging Terminal Corp.

Countries: Bahrain, Indonesia, Kazakhstan, Kuwait, Qatar, Saudi Arabia, Thailand, UAE, Vietnam, Yemen



<10 countries / 18 participants>

IT-3-14 Turnaround and Inspection
January 13 – January 23, 2015

Lecturer: Takaya Suzuki

Content: Outline of Petroleum Industry in Japan; Maintenance Activities in Japanese Refineries; Inspection Technologies & Its Demonstration; Manufacture and Maintenance Technologies of Screw, Centrifugal, Reciprocating Compressors; Maintenance and Repair Technologies for Refining Equipment; Risk & Reliability Management and Turnaround Maintenance; Inspection Management System; Maintenance Planning & Scheduling in the Refinery; Plant Maintenance & Technologies as Contractor and Human Resource Development of Contractor



<8 countries / 10 participants>

Site visits: Non-Destructive Inspection Co., Ltd. (Headquarters); Kobe Steel, Ltd. (Takasago Equipment Plant); Idemitsu Kosan Co., Ltd. (Chiba Refinery); Sankyu Inc. (Maintenance Center); JGC Corporation (Yokohama Headquarters)

Countries: Iraq, Myanmar, Pakistan, Russia, Saudi Arabia, Thailand, Vietnam, Yemen

TR-14-14 Human Resource Management
November 4 – November 21, 2014

Lecturer: Taro Shoji

Content: Petroleum Industry in Japan; Japanese-style Human Resource Management & Development; HRM of Engineering Company; HRM of Japanese Oil Company; HRD & TPM at Refinery; Small Group Activity at Refinery; Rational Thought and Team Consensus Building; National Petroleum Stockpiling System; Renewable Energy



<13 countries / 17 participants>

Site visits: JGC Corporation (Yokohama Headquarters); JX Nippon Oil & Energy Corporation (Negishi Refinery); Idemitsu Kosan Co., Ltd. (Aichi Refinery); Cosmo Oil Co., Ltd. (Sakai Refinery); Shirashima Stockpiling Base; Kitakyushu Eco Town Center

Countries: Indonesia, Iraq, Kazakhstan, Libya, Malaysia, Myanmar, Nigeria, Oman, Saudi Arabia, Sudan, Thailand, Uzbekistan, Vietnam, Yemen

TR-15-14 Current Situation and Future Perspectives of LNG Technology
November 4 – November 21, 2014

Lecturer: Toshinobu Ishikawa

Content: Global LNG Market; Outline of Natural Gas Processing and Liquefaction Plant; Exploration and Production of Natural Gas; Steel Pipe Line Technology; Future Technology for Utilizing Natural Gas; LNG Vaporizer and Compressor Technology; Gas-Turbine Technology; LNG Storage Tank Technology; LNG Ship Technology; LNG Terminal Operation



<7 countries / 10 participants>

Site visits: Osaka Gas Co. Ltd. (Himeji LNG Terminal); Kobe Steel, Ltd. (Takasago Works); Mitsubishi Hitachi Power Systems, Ltd. (Takasago Works); IHI Corporation (Yokohama Works); Mitsui Engineering & Shipbuilding Co., Ltd. (Chiba Works)

Countries: Cambodia, Kazakhstan, Myanmar, Thailand, Uzbekistan, Vietnam, Yemen

TR-16-14 Material Problems and Their Countermeasures
November 4 – November 21, 2014

Lecturer: Masami Funayama

Content: Petroleum Industry in Japan;
Maintenance Management in Japanese Refinery;
Material of Pressure Vessels; Estimation of Remaining Life of Static Equipment;
Maintenance Activity in Japanese Refinery;
Trouble Experiences and Countermeasures;
Fundamentals of Welding; Metallurgy of Welding;
Latest Welding Technologies; Evaluating and Controlling Technology of Welding Quality;
Maintenance and Repair Technologies of Refining Equipment; Tank Corrosion and Countermeasures;
Welding Metallurgy; Welding Processes;
Mechanism and Countermeasures Related to Corrosion & Deterioration Problems of Materials in Refinery; Securing of Safety and Reliability of Aging Plant



<10 countries / 14 participants>

Site visits: The Japan Steel Works Ltd. (Muroran Plant); Idemitsu Kosan Co., Ltd. (Hokkaido Refinery); Taseto Co., Ltd. (Fujisawa); IHI Corporation (Production Engineering Center); Shinko Plantech Co., Ltd. (Head Office); Chiyoda Corporation (Head Office)

Countries: Iraq, Kuwait, Myanmar, Qatar, Saudi Arabia, Sudan, Thailand, Uzbekistan, Vietnam, Yemen

TR-17-14 Wide Scope of Downstream Safety Management
November 25 – December 12, 2014

Lecturer: Kazuhiro Wakamatsu

Content: Safety Regulations and Disaster Prevention;
Safety Consideration for Plant Design and Risk Management; Safety Management for Plant Maintenance; Safety Management for the Refinery;
Waste Water Treatment;
Case Study and Discussion



<10 countries / 12 participants>

Site visits: Sompo Japan Nipponkoa Risk Management Inc. (Shinjuku Head Office); Yokogawa Electric Corporation (Mitaka Headquarters); Idemitsu Kosan Co., Ltd. (Tokuyama Complex); Swing Corporation (Fujisawa Research Center); JX Nippon Oil & Energy Corporation (Negishi Refinery)

Countries: Ecuador, Iraq, Kuwait, Myanmar, Pakistan, Qatar, Saudi Arabia, Thailand, UAE, Vietnam

TR-18-14 Inspection and Reliability Evaluation
November 25 – December 12, 2014

Lecturer: Takaya Suzuki

Content: Maintenance Management in Japanese Refinery; Maintenance Management of Static Equipment; Trouble Experiences and Countermeasures; Material Characteristics of Pressure Vessels and Quality Control; Material Characteristics of Pipes & Tubes and Quality Control; Advanced Non Destructive Inspection Technologies; Inspection Training; Reliability Activities in the Refinery; Trouble Experiences and Countermeasures; Maintenance and Repair Technologies of Refining Equipment; Maintenance and Repair Technologies of Refining Equipment; Water Management and Corrosion and Fouling Control for Petroleum Refining Plants; Safety and Reliability of Aged Plants; Group Discussion



<8 countries / 11 participants>

Cooperation: Taiyo Oil Co., Ltd. (Shikoku Operations); Kobe Steel, Ltd. (Takasago Equipment Plant); Nippon Steel & Sumitomo Metal Corporation (Steel Tube Works); Non-Destructive Inspection Co., Ltd. (Head Office); Toa Oil Co., Ltd. (Keihin Refinery); Shinko Plantech Co., Ltd. (Head Office)

Countries: Ecuador, Indonesia, Kuwait, Myanmar, Saudi Arabia, Thailand, Uzbekistan, Vietnam

TR-19-14 Utilization of Information and Control Systems in the Oil Downstream
November 25 – December 12, 2014

Lecturer: Eiji Iwamatsu

Content: System Configuration in Refinery; Latest Information System; PID Tuning Methods; Distributed Control System (DCS); Hands-on Training of Process Control; Alarm Analysis; Operation Support System; Advanced Process Control; Process Optimization; Modernization of Instrumentation; Safety Instrumented System; Fieldbus; Wireless System



<9 countries / 11 participants>

Cooperation: Yokogawa Electric Corporation (Mitaka Headquarters); Azbil Corporation (Shonan Factory); JX Nippon Oil & Energy Corporation (Marifu Refinery); Idemitsu Kosan Co., Ltd. (Chiba Refinery); Emerson Japan, Ltd. (Chiba Solution Center)

Countries: Ecuador, Iraq, Kazakhstan, Myanmar, Qatar, Saudi Arabia, Pakistan, Thailand, Vietnam

TR-20-14 Petroleum Distribution
January 13 – January 30, 2015

Lecturer: Masayuki Jimbo

Content: Petroleum Industry in Japan; Management by Rational Thinking Process; Jet Fuel Facilities & Refueling to Airplane at Airport; Petrol Dispensing Pump Manufacturing; Transportation of Oil Products; Shipping System & Maintenance at Refinery; Production & Maintenance of Pipelines; Stockpiling, Loading & Unloading at Oil Terminal; Distribution System at the Head Office of Oil Company; World Energy Situation & Challenges



<10 countries / 11 participants>

Cooperation: San-ai Oil Company (Haneda Branch Office); Tatsuno Corporation (Yokohama Plant); JX Nippon Oil & Energy Corporation (Negishi Refinery); JFE Steel Company (West Works); JX Nippon Oil & Energy Staging Terminal Corporation (Kiire Base); Cosmo Oil Company (Head Office)

Countries: Brazil, Cambodia, India, Iraq, Kazakhstan, Malaysia, Myanmar, Russia, Thailand, Vietnam

The 24th Saudi Arabia-Japan Joint Symposium

The Saudi Arabia-Japan Joint Symposium on oil refining and petrochemical catalyst technologies was held on December 1 and 2, 2014 at King Fahd University of Petroleum and Minerals (KFUPM). The symposium has been held annually at the university, hosted jointly by KFUPM and Japan Petroleum Institute (JPI). This year marked the 24th holding of the symposium.

The two-day symposium began with an opening ceremony, followed by 18 presentations in six sessions on topics such as hydroprocessing, gasoline/diesel upgrade, high-performance catalysts, CO₂ separation and utilization, novel catalysts, and catalyst design. Three of the six members of the JPI delegation presented the results of their nanotechnology research, which they specifically pursued with their sights set on this particular symposium.

As many as 132 visitors and participants registered in advance, including 69 members from KFUPM, 36 from Saudi Aramco, two from King Abdulaziz City for Science and Technology (KACST), two from Saudi Basic Industries Corporation (SABIC), and 23 from the petrochemical company Al-Razi, Ibn Sina, University of Dammam, King Saud University and other respectable institutions. Added to this were seven members from JPI, four members from JCCP, KFUPM officers (Rector and Vice Rectors) and members of the KFUPM secretariat, making the total turnout around 150 people.

On December 1, the symposium began with an opening ceremony. Dr. Khaled Al-Sultan, Rector, gave an opening address, in which he mentioned that KFUPM ranks 20th among the world's universities for the number of U.S. patents acquired in 2013. He concluded that the

achievement is the result of unrelenting research since the university's founding in 1955, and expressed his hopes to pursue even more advanced research in the future and expand globally together with JPI.

In response to Dr. Al-Sultan's speech, Mr. Eiji Hiraoka, Special Counselor, JCCP, noted that JCCP is presently undertaking five joint projects in Saudi Arabia in addition to providing assistance to Saudi Arabian Oil Company (Saudi Aramco) through human resource development, long-term dispatch of Japanese researchers and symposia. He closed his address by saying that KFUPM and JCCP's partnership in implementing this joint symposium over many years has contributed to promoting technical exchanges between the two countries.

Lastly, Dr. Mikio Miyake, the head of the JPI delegation (professor, Japan Advanced Institute of Science and Technology), spoke about the meeting that took place between Prime Minister Shinzo Abe and H.R.H Salman bin Abdulaziz Al-Saud, then-Crown Prince (assumed the throne in January 2015), during the Crown Prince's visit to Japan in February 2014, in which the two leaders agreed to strengthen exchanges between the two countries in the future. Dr. Miyake said he believes the successful result of the joint symposia that have been implemented by KFUPM, JPI and JCCP over many years has contributed to the materialization of this agreement for promoting personal and academic exchanges between the two countries.

The presentation sessions featured a total of 18 presentations with themes on the latest oil-refining and petrochemical production technologies related to catalysts. On the Japanese side, JPI gave six



Audience at the opening ceremony



Dr. Khaled Al-Sultan, Rector, giving an opening address



JPI delegation touring the KFUPM Research Institute laboratory

presentations, and on the Saudi Arabia side, KFUPM gave six presentations and Saudi Aramco, three. Presentations were also given by two representatives from Spain (Prof. Avelino Corma and Prof. Luis Oro) and one from the Czech Republic (Dr. Jiří Čejka).

The presentations by KFUPM included reports by

Dr. M. Mozahar Hussain, who engaged in research at Hokkaido University in FY2010 under the JCCP Researcher Invitation Program; Dr. Oki Muraza and Dr. Nabil Al-Yassir, who also engaged in research at Hokkaido University under the same program as Dr. Hussain in FY2011/FY2012 (Dr. Oki Muraza) and FY2011 (Dr. Nabil Al-Yassir), respectively. The last presenter, Dr. B. Rabindran Jermy, is a researcher presently receiving guidance from Dr. Sachio Asaoka, a Japanese professor participating in JCCP's Long-term Researcher Dispatch Program.

News of the symposium appeared in three local Arabic newspapers (*Al-Yaum*, *Al-Mnatiq* and *Al-Riyadh*) and the English-language *Saudi Gazette*.

The symposium closed with a strong sense of awareness that, through its presentations and discussion, it provides a forum for researchers in Saudi Arabia and Japan to exchange and share effective information and will eventually play a large role in strengthening technical cooperation between the two countries.

<by Sadao Wada, Counselor, Technical Cooperation Dept.>

Day One: Monday, December 1, 2014

Opening Remarks Session

<Chairperson: Dr. Sulaiman Al-Khattaf>

8:15 *Registration & Coffee Break*

8:30 *Opening Remarks*

- *H.E. Dr. Khaled S. Al-Sultan, Rector of KFUPM*
- *Mr. Eiji Hiraoka, Special Counselor, JCCP*
- *Prof. Mikio Miyake, Head of Japanese Delegation, JPI*

Session 1: Hydroprocessing

<Chairperson: Dr. Mohammed Ba-Shammakh>

9:00 1. **Hydrocracking Catalyst Development and Commercialization**

Dr. Omer R. Koseoglu, Saudi Aramco R&D Center, Dr. Kenji Nita, JGC Catalysts & Chemicals, Japan

9:30 2. **New Approach to Active Sites Analysis as a Specific Illustration of HDS and HDN**

Prof. Masatoshi Nagai, Tokyo University of Agriculture & Technology, Japan

10:00 *Coffee Break*

Session 2: Gasoline/Diesel Upgrade

<Chairperson: Dr. Masatoshi Nagai>

10:30 3. **SuperButol™ Technology to Produce Superior Gasoline Blending Oxygenate from Low Value C4 Refinery/Petrochemical Streams**

Mr. Kareemuddin Shaik, Saudi Aramco R&D Center

11:00 4. **Synthesis Strategies in the Design of Superior Hierarchical USY Zeolites for Upgrading Polynuclear Aromatics**

Dr. Nabil Al-Yassir, KFUPM-CRP

11:30 5. **Experimental Study of Gas-Phase Pyrolysis Reaction of Benzene to Investigate the Early Stage of Coke Formation**

Dr. Akihiro Kousoku, Mitsubishi Chemical, Japan

12:00 *Prayer & Lunch Break*

Session 3: High-performance Catalysts

<Chairperson: Dr. Omer Koseoglu>

- 13:00 6. **Plasmonic Nanocatalysts for Efficient H₂ Production from Ammonia Borane under Visible Light Irradiation**
Prof. Hiromi Yamashita, Osaka University, Japan
- 13:30 7. **Recent Development of Catalyst for Heavy Oil Upgrading**
Dr. Oki Muraza, KFUPM-CENTICHE
- 14:00 8. **New Strategy for High Performance Catalysts, Novel Effects of Organic Surface Modification Agents on Pt Nanoparticle as Electrocatalysts for Fuel Cell**
Prof. Mikio Miyake, JAIST, Japan

14:30 *Day One Ends*

Each presentation includes a 5-minute Q&A

Day Two: Tuesday, December 2, 2014**Session 4: CO₂ Utilization**

<Chairperson: Dr. Jiří Čejka>

7:45 *Registration & Coffee Break*

- 8:00 9. **High-selectivity Y₂O₃ Doped-SiO₂ Nanocomposite Catalytic Membranes for Gas Separation in Steam at High Temperature**
Dr. Md. Hasan Zahir, CoRE Renewable Energy, KFUPM
- 8:30 10. **In-situ Gasification and Combustion of Biomass in a CLC Process**
Dr. M. Mozahar Hussain, KFUPM-Chemical Engineering
- 9:00 11. **Direct Reaction of CO₂ with C-H Bond Activation of Methane to Produce Chemicals**
Dr. Emad Shafie, Saudi Aramco R&D Center, Dhahran
- 9:30 12. **CO₂ Utilization**
Dr. Mohammed Ba-Shammakh, KFUPM-Chemical Engineering

10:00 *Coffee Break*

Session 5: Novel Zeolites

<Chairperson: Dr. Hiromi Yamashita>

- 10:30 13. **Novel Zeolites with Continuously Tuneable Porosity**
Dr. Jiří Čejka, J. Heyrovský Institute Physical Chemistry, Czech Republic
- 11:00 14. **Development of ZSM-5 Catalyst with the Location of Al Atoms in the Pores Controlled and its Catalytic Properties**
Dr. Toshiyuki Yokoi, Tokyo Institute of Technology, Japan
- 11:30 15. **Catalytic H/D Exchange in Olefins Mediated by Rhodium N-Heterocyclic Carbene Complexes**
Prof. Luis Oro, Zaragoza University, Spain

12:00 *Prayer & Lunch Break*

Session 6: Catalyst Design

<Chairperson: Toshiyuki Yokoi>

- 13:00 16. **New Challenges in FCC for Processing Heavy Crudes**
Prof. Avelino Corma, ITQ-CSIC-Polytechnical University of Valencia, Spain
- 13:30 17. **Advanced Catalyst Design Concept with Nanotechnology**
Dr. Takaki Mizuno, JGC Catalysts & Chemicals, Japan
- 14:00 18. **Bi-Ni-O/ γ -alumina Catalyst for n-Butane Oxidative Dehydrogenation to Butadiene**
Dr. B. Rabindran Jermy, KFUPM/CRP

14:30 *Closing Remarks, Symposium Ends*

Each presentation includes a 5-minute Q&A

The 16th Kuwait-Japan Joint Symposium

The 16th Kuwait-Japan Joint Symposium was held on January 13 and 14, 2015 at Jumeirah Beach Hotel Kuwait, jointly hosted by Kuwait Institute for Scientific Research (KISR), Kuwait National Petroleum Company (KNPC) and Japan Petroleum Institute (JPI), together with JCCP. The symposium has been held annually in Kuwait, initially with only KISR as partner, but KNPC joined as a participant from the 5th symposium and as a co-organizer from the 11th symposium. Owing to these developments, the symposium has become an unparalleled forum that covers a broad scope of issues, from catalyst research to refinery operations.

The Japanese side captured the interest of the Kuwaiti side with presentations of technical papers and practical knowledge such as the troubleshooting of actual corrosion cases in processing facilities in the refinery and procedures for operational optimization.

On the first day of the symposium, Mr. Faisal Al-Qattan from Mina Abdullah Refinery, KNPC, Dr. Meena Marafi, Executive Director of KISR, and Mr. Shigeru Yamamoto, First Secretary at the Japanese Embassy in Kuwait, gave opening addresses as the guests of honor, followed by words of greetings from Mr. Masaya Tsukidate, General Manager of the Technical Cooperation Department at JCCP, and Dr. Wataru Ueda, Chairman of JPI.

The symposium featured 18 presentations—two keynote speeches and 16 presentations—in five sessions. Total attendance, including the speakers, reached 120 people.

The names of the Japanese speakers and their presentation themes are shown below (in random order).

- (1) Dr. Wataru Ueda, Department of Material & Life Chemistry, Kanagawa University
Presentation title: “Catalytic selective oxidation and its mechanism over high dimensionally structured Mo_3VO_x ”
- (2) Prof. Atsushi Muramatsu, Institute of Multidisciplinary Research for Advanced Materials, Tohoku University
Presentation title: “MFI Zeolites Synthesis with Different Acidic Properties for DTO Reaction”
- (3) Dr. Shinichi Takasaki, Venture Academia
Presentation title: “Evaluations of Neutralizing



Dr. Meena Marafi, Executive Director of KISR, and Dr. Wataru Ueda, Chairman of Japan Petroleum Institute

- Amines for Corrosion Control in the Overhead of Crude Distillation Units”
- (4) Mr. Taku Maeda, Central Technical Research Laboratory, JX Nippon Oil & Energy Corporation
Presentation title: “Development of catalyst system for aromatics production from fuel oil”
- (5) Mr. Eiki Nagashima, Engineering Technology Division, Engineering Unit, Toyo Engineering Corporation
Presentation title: “Trend of Corrosion Under Insulation (CUI) Assessment and Application to a Commercial Plant”
- (6) Mr. Eiji Kawai, Refinery, Petrochemical & New Energy Process Engineering Unit, Chiyoda Corporation
Presentation title: “SPH (Slurry Phase Hydrocracking) Process as a cutting-edge upgrader — for upcoming diesel demand in not-too-distant future”

News of the symposium was distributed worldwide in English and Arabic via Kuwait News Agency (KUNA), and was also featured in seven local Arabic newspapers (*Al-Anba*, *Al-Shahid*, *Al-Wasat*, *An-Nahar*, *Ar-Ray*, *As-Sabah* and *As-Siyasah*).

The symposium underlined the awareness of Kuwait’s strong interest and expectations for Japan’s technologies, and of the role of JCCP activities in cooperative ties established with Kuwait through the concerted efforts of various Japanese institutions.

<by Sadao Wada, Technical Cooperation Dept.>

9:00 – 9:45

Opening Addresses

Mr. Faisal Al-Qattan, Mina Ahmadi Refinery, Kuwait National Petroleum Company
 Mr. Shigeru Yamamoto, Commercial Attaché, The Japan Embassy in Kuwait
 Dr. Wataru Ueda, President, Japan Petroleum Institute
 Mr. Masaya Tsukidate, General Manager, Technical Cooperation Department, JCCP
 Dr. Meena Marafi, Executive Director, Kuwait Institute for Scientific Research

9:45 – 10:30

Keynote Presentation 1: "Corrosion and Equipment Failures in Refinery Units – General Prospective," **Dr. Abdul Hameed Al-Hashem**, KISR

10:30 – 10:45

Coffee Break

Session 1: Failure Investigation

<Chairperson: Dr. Hassan Al-Rabiah, KISR>

10:45 – 11:10

Presentation 1: Corrosion Challenge in ARD Fractionator Overhead System, **Laxma Reddy Kethireddy**, KNPC, MAA

11:10 – 11:35

Presentation 2: "External Corrosion of Tubes in Hydrocracker First Stage Reactor Effluent / H2S Stripper Feed Breech-Lock Heat Exchanger," **Mansour Al-Ghanem**, KNPC, MAB

11:35 – 12:00

Presentation 3: "Failure of Vessel Trim Line Due to Under Deposit Corrosion in Atmospheric Residue Desulfurization Unit," **Nishant Kumbhare**, KNPC, MAB

12:00 – 12:25

Presentation 4: "Assessment of Methanator Vessel In Hydrogen Manufacturing Unit After Temperature Excursion," **Bader Al-Harbi**, KNPC, MSH

12:25 – 1:15

Prayer & Lunch Break

Session 2: Corrosion Management & Control

<Chairperson: Dr Hanaa Al-Mazeedi, KISR>

1:15 – 1:40

Presentation 5: "Evaluations of Neutralizing Amines for Corrosion Control in the Overhead of Crude Distillation Units," **Dr. Shinichi Takasaki**, Venture Academia

1:40 – 2:05

Presentation 6: "Trend of Corrosion Under Insulation (CUI) Assessment and Application to a Commercial Plant," **Eiki Nagashima**, Toyo Engineering Corporation

2:05 – 2:30

Presentation 7: "Challenges in Corrosion Management in Ageing Petroleum Refineries," **Naser Al-Sebaili**, KNPC, MSH

2:30 – 2:55

Presentation 8: "A Novel Rig for Investigating the Susceptibility of Metals/Alloys to Stress Corrosion Cracking in Flowing Fluid," **Dr. Rihan Omar Rihan**, KISR



KISR, JPI and the symposium secretariat

Session 3: Green Initiatives in Refining Industry <Chairperson: Prof. Atsushi Muramatsu, Tohoku University>

- 9:00 – 9:25 Presentation 9: "Investigations on Parameters Controlling the Production of Diesel Fuel," **Dr. Abdulazim Marafi**, KISR
- 9:25 – 9:50 Presentation 10: "SPH (Slurry Phase Hydrocracking) Process as a cutting-edge upgrader — for upcoming diesel demand in not-too-distant future," **Eiji Kawai**, Chiyoda Corporation
- 9:50 – 10:15 Presentation 11: "Crossflow Microfiltration of Synthetic Oily Effluent using Multi Channel Ceramic Membrane," **Dr. Yousef Alanezi**, PAAET, Kuwait
- 10:15 – 10:30 Coffee Break

Session 4: Advancements in Catalyst Development <Chairperson: Mr. Faisal Al-Qattan, KNPC>

- 10:30 – 11:15 Keynote Presentation 2: "MFI Zeolites Synthesis with Different Acidic Properties for DTO Reaction," **Prof. Atsushi Muramatsu**, Tohoku University
- 11:15 – 11:40 Presentation 12: "Role of Catalyst Preparation and Support Composition on Hydrodesulfurisation," **Dr. Mohan Rana**, KISR
- 11:40 – 12:05 Presentation 13: "Development of catalyst system for aromatics production from fuel oil," **Taku Maeda**, JX Nippon Oil & Energy Corporation
- 12:05 – 1:15 Prayer & Lunch Break

Session 5: Oxidative Refining Processes <Chairperson: Dr. Mohan Rana, KISR>

- 1:15 – 1:40 Presentation 14: "Catalytic selective oxidation and its mechanism over high dimensionally structured Mo_3VO_x ," **Prof. Wataru Ueda**, Kanagawa University
- 1:40 – 2:05 Presentation 15: "CO and CH_4 oxidation of unsupported and supported CuCeO_2 ," **Dr. Ali Bumajdad**, Kuwait University
- 2:05 – 2:30 Presentation 16: "Current Research Progress in Oxidative Desulfurization of Oil Fuels Using Peroxides," **Dr. Muhieddine A. Safa**, KISR
- 2:30 Closing Remarks



JPI delegation in front of Kuwait Towers

Wrap-up Ceremony for the Demonstration Project of PV System with TAKREER

On January 11, 2015, JCCP held a wrap-up ceremony at Abu Dhabi Oil Refining Company (TAKREER) in UAE to confirm the results of the joint project on Demonstration of PV System that was completed this fiscal year (FY2014).

The ceremony was attended by a total of 25 members. On the TAKREER side, they included Mr. Jasem Ali Al Sayegh, CEO, and 10 others. On the Japanese side, they included H.E. Mr. Kenji Hirata, Minister and Deputy Chief of Mission, Embassy of Japan in UAE; Mr. Masaya Tsukidate, General Manager, Technical Cooperation Dept., JCCP; Mr. Makoto Abe, Executive Officer, Showa Shell Sekiyu K.K.; and 15 others. The success of the project was verified through speeches and presentations of results by the members, followed by congratulations all around.

Mr. Al Sayegh also expressed his appreciation for the project's success, as well as for all TAKREER-JCCP joint projects that have been implemented to date, such as those for TAKREER Research Centre (TRC), Flare Gas and Water Supply.

1. Project Overview

- Name of project: Study and application of the possible PV system introduction in petroleum company-related facilities in UAE
- Duration: 4 years (from FY2011 to FY2014)
- Counterpart: TAKREER
- Participating company: Showa Shell Sekiyu K.K.

2. Results and Future Development of the Project

(1) FY2011 results

- Initiatives were launched with TAKREER for the development of infrastructure to introduce a photovoltaic power generation system to TAKREER's refinery facilities.
- APV test facility was built at the BeAAT industrial waste treatment facility located near the Ruwais Refinery, and was commissioned at the end of December 2011.



*Speech by Mr. Jasem Ali Al Sayegh, CEO (center)
H.E. Mr. Kenji Hirata, Minister and Deputy Chief of Mission,
Japanese Embassy in UAE (left), and
Mr. Masaya Tsukidate, General Manager,
Technical Cooperation Dept., JCCP (right)*

(2) FY2012 results

- BeAAT PV system
 - Annual power generation: 63,902 kWh (60% more than Japan)
 - Annual insolation: 2,179 kWh/m²
 - Average temperature: 27.8°C
- No clean-array: The DC-PR (Direct Current Performance Ratio) began a long-term decreasing trend in April and reached 45% seven months later. Regular cleaning is thus essential. (As a result of reporting the results of the BeAAT demonstration test to TAKREER and proposing the installation of a small PV facility in the refinery, a 41 kW system was agreed to be installed on the roof of the new electric room at TAKREER.)
- The explosion-proof trial solar panels passed the explosion-proof criteria in an explosion test.

(3) FY2013 results

- BeAAT annual power generation: 66,236 kWh (previous year: 63,902 kWh)
 - This is 65% more than the average annual generation in Japan.
 - Annual insolation: 2,088 kWh/m² (previous year: 2,179 kWh/m²)
 - Average temperature: 27.2°C (previous year: 27.8°C)
- Operational performance recorded a DC-PR value of 86.8%, and surpassed the 80% average DC-PR value in Japan.

- A 41 kW PV system was planned to be installed on the roof of the new electric roof at TAKREER, and was completed in February 2014.

(4) FY2014 (final year) results

- The PV system installed at TAKREER is steadily generating power and is generating the same amount of power as BeAAT. It is operating without any problems as an integral part of the refinery's facility power supply system.
- The following demonstration tests were implemented as a countermeasure for the decline in power generation due to dust, which is a major issue in the Middle East.
 - Automated cleaning (introduction of an automatic cleaning robot to verify its effect in comparison with manual cleaning): Work time is expected to be reduced by around 40%.
 - Anti-fouling paint (comparison of dust effect on painted and unpainted arrays before and after applying the paint, to verify and reduce the amount of dust accumulation): The arrays were painted at BeAAT in June, and the effects of anti-fouling paint are being examined.

[Summary of Results]

1. It was found that Showa Shell Sekiyu (Solar Frontier)'s CIS thin-film solar cell delivers high power generation performance and operates smoothly even in the hot and humid environment of Abu Dhabi.
2. An annual average power generation amount roughly 1.7 times greater than that in Japan was recorded as a difference in solar radiation time.
3. However, as the decline in power generation caused



*Presentation of a commemorative gift
Mr. Jasem Ali Al Sayegh, CEO (right); Mr. Makoto Abe,
Executive Officer, Showa Shell Sekiyu K.K. (left)*

by dust poses an issue unique to the Middle East, follow-ups need to be made of the effects of the cleaning robot and anti-fouling paint that have been introduced as countermeasures to the issue.

[Future Development of the Project (plans)]

1. Follow-up of the countermeasures to the decline in power generation amount caused by dust
The anti-fouling paint, in particular, needs to be re-examined to mitigate dust effect and to improve the disadvantages of applying the paint (as the film is opaque, power output drops → introduction of a transparent film).
2. More data will be collected and analyzed hereafter, to establish a method for the evaluation of installation sites that ensure optimum power generation under hot temperatures and a dust environment.

<by Hironao Naganuma, Technical Cooperation Dept.>

Technical Conference with OAPEC Held in Bahrain

JCCP co-hosted a technical conference titled “Options for Energy Conservation in the Oil Refining Industries” from February 3 to 5, 2015 at Sheraton Bahrain Hotel, with the cooperation of the Organization of Arab Petroleum Exporting Countries (OAPEC) and National Oil and Gas Authority (NOGA). H.E. Dr. Abdul Hussain bin Ali Mirza, Minister of Energy, and H.E. Mr. Kiyoshi Asako, Ambassador of Japan to Bahrain, graced the event, which was attended by some 110 guests.

In addition to the two above-mentioned guests of honor, H.E. Mr. Abbas A. Naqi, Secretary General of OAPEC, and Mr. Eiji Hiraoka, Special Counselor, JCCP, also gave speeches at the opening ceremony. From their respective standpoint, they each noted the timely significance and importance of the conference’s theme of energy conservation during today’s fall in global oil prices, and thanked the countries and organizations concerned for their efforts and cooperation in organizing the event.

Mr. Hiraoka focused mainly on introducing JCCP activities and JCCP’s relationship with OAPEC, noting that this is the third time for OAPEC and JCCP to hold a joint conference.

1. Background and Objectives of Cooperation Projects with OAPEC

JCCP’s relationship with OAPEC dates back to May

2009, when the OAPEC Secretariat approached JCCP regarding the possibility of mutual cooperation. After a series of discussions, the two organizations agreed to enter into a cooperative relationship and signed a Letter of Intent (LOI) to that effect in 2010 in Tunisia, in the presence of Mr. Akihiro Ohata, Minister of Economy, Trade and Industry, and H.E. Mr. Amre Moussa, Secretary General, the League of Arab States. Based on this agreement, JCCP is actively strengthening its cooperative ties with the multinational institution, as well as its friendly relations with OAPEC member countries through technical and personal exchanges based on Japan’s accumulation of knowledge and experience in the oil downstream sector.

(OAPEC member countries (10): Kuwait, Saudi Arabia, Libya, UAE, Bahrain, Qatar, Algeria, Iraq, Syria, Egypt)

2. Technical Sessions

The technical sessions that took place on February 3rd and 4th featured 19 presentations, including five Japanese speakers, divided into four tracks. An active Q&A followed each presentation, with the audience displaying strong interest in the topics presented.

The names and titles of presentations by the Japanese speakers (commissioned speakers) are as follows (in random order; honorifics omitted).



Opening ceremony
H.E. Dr. Abdul Hussain bin Ali Mirza, Minister of Energy (second from right);
H.E. Mr. Kiyoshi Asako, Ambassador of Japan to Bahrain (third from right);
H.E. Mr. Abbas A. Naqi, Secretary General of OAPEC (far right);
Mr. Eiji Hiraoka, Special Counselor, JCCP (far left)

- 1) Dr. Kazuo Matsuda (Chiyoda Corporation; session chairman)
“Energy saving by Pinch technology – From single site to multiple sites”
- 2) Mr. Hiroyuki Yagita (Mitsubishi Hitachi Power Systems Engineering Co., Ltd. (MHPS); session chairman)
“Energy Efficiency for Petroleum Industries by MHPS Technologies”
- 3) Mr. Takeshi Honda (JGC Corporation)
“Energy Saving by Process Optimization”
- 4) Mr. Masaaki Kuwahara (Cosmo Research Institute)
“Operational Improvement of Diesel Hydro-Desulfurization (DHDS) Unit”
- 5) Mr. Kazuhisa Osawa (Toa Oil Co., Ltd.)
“Refinery energy management and energy saving by steam compressor”

3. Other

On the final day, the conference members toured a refinery facility operated by the Bahrain Petroleum Company (BAPCO).

<by Hironao Naganuma, Technical Cooperation Dept.>



Japanese speakers (from the left): Mr. Honda, Mr. Kuwahara, Dr. Matsuda, Mr. Yagita, Mr. Osawa



Conference venue

Technical Cooperation

Joint TRC Workshop Held in UAE

The Fifth Annual Joint TRC-JCCP/Idemitsu Workshop was held at TAKREER Research Centre (TRC) in Abu Dhabi, UAE on February 11 and 12, 2015. The research center functions as the R&D department of Abu Dhabi Refining Company (TAKREER), a refining subsidiary of Abu Dhabi National Oil Company (ADNOC).

1. Background and Overview of the Project

Seeking to develop capabilities of resolving technical issues related to oil refining, as well as to accumulate technical expertise and to develop engineers in UAE, TAKREER embarked on a project to establish a research center, and implemented Phase I of the project over the four years from FY2006 to FY2009 and Phase II over the

following three years, with the participation of Idemitsu Kosan Co., Ltd.

The TAKREER Research Centre (TRC) building was completed at the end of April 2009, and was subsequently outfitted with a pilot plant and other research facilities. The framework of the center has been augmented by employing new engineers, and the center’s research facilities have come to be utilized effectively. Further on this foundation, TAKREER and JCCP have agreed to launch a new stage of the project this fiscal year as the “Joint Project for Advancement of TAKREER Research Centre, Phase III.”

Phase III will support the advancement of TRC by placing emphasis on the following five areas: 1) establishment and further acquisition of catalyst evaluation technology; 2) promotion of efficient operations through technical assistance to TAKREER’s

refineries; 3) establishment of a cooperative framework with research institutions inside and outside of UAE; 4) development of UAE engineers with a focus on TRC staff; and 5) international-level TRC publicity activities through academic presentations and other such forums.

2. The Fifth Workshop

On the first day, the workshop opened with a grand ceremony attended by Mr. Jasem Ali Al-Sayegh, CEO, and 20 other executives from TAKREER; Mr. Sultan Al Mehairi, Director, Marketing & Refining, and others from ADNOC; H.E. Mr. Yoshihiko Kamo, Ambassador of Japan to the UAE; and Mr. Itaru Matsuhiko, Executive Officer, and others from Idemitsu Kosan Co., Ltd. It featured speeches by representatives of each organization and the guests of honor, an exchange of commemorative gifts, and a keynote presentation.

In his speech as a guest of honor, Mr. Al-Sayegh first thanked JCCP and Idemitsu Kosan for their cooperation in the TRC project over the past several years. He then spoke about TRC's contribution to improving the efficiency of TAKREER's refining business, which is strategically important and is on a path toward expansion, and the importance of collaboration among industries, as symbolized by the workshop.

Ambassador Kamo said the TRC project's long years of achievement and the awareness that it represents a best practice in the cooperative relationship between UAE

and Japan has led to the strengthening of the friendly relationship between the two countries, and expressed his expectations of seeing further development of the project in the future.

Mr. Hiraoka introduced JCCP activities that have been implemented to date, and promised JCCP's continued support for the TRC project, which is also important in the fact that it gives concrete shape to the fundamental value of developing friendship through technical exchanges.

The keynote speech that followed also introduced a case in which cooperation across the borders of industry, academia and government is the driving force behind the introduction of the latest technologies and the promotion of innovation.

The workshop thereafter segued into 33 sessions on seven themes, with a total attendance of roughly 200 people over the two-day event.

3. Summary

In its fifth year, the workshop saw not only a further increase in turnout over the previous year, but also a regional expansion of participating countries, and provided a strong awareness of the widespread promotion of collaboration based on the cooperative relationship between TRC, JCCP and Idemitsu Kosan.

JCCP hopes that Japan's relationship with UAE will further develop through technical cooperation programs.

<by Nobuyuki Nakajima, Technical Cooperation Dept.>



Group photo

Announcements

Please Help Us Update Our Roster

Thank you for reading *JCCP NEWS* as always.

JCCP has reached a significant milestone in its history and celebrated 30 years of operations in 2011. In commemorating this achievement, we extended 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 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.

Please Send Us a Message as Alumni

Future issues of *JCCP NEWS* will feature a new section for messages from alumni. Please send us the latest news about what you are up to or photos that you wish to share with others. The Planning & Public Relations Group looks forward to hearing from you.

Thank you for your cooperation.

Registration Form for JCCP Course Graduates

Please fill in the form below and return it to JCCP.

Please contact us if you wish to obtain the form in MS Word format.

E-mail: planning@jccp.or.jp or FAX: 81-3-5396-6006

1. Full Name			
2. Country (Current place of residence)			
3. Nationality			
4. Name of Organization/ Company			
5. Refinery/Department/Section			
6. Title/Position			
7. Mailing Address			
8. Telephone		9. Email	
10. Fax		11. Telephone (mobile)	
12. Date of Birth (This is necessary to eliminate redundant registrations)			
13. JCCP Course you have attended in the past	Course No.:	Year:	
	Course Title:		

Signature _____ Date _____

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If there have been changes in your mailing address, affiliation or any other contact information, or if you wish to cancel your subscription, please fill out the following form and return it by FAX or E-mail to JCCP's planning and Public Relations Group.

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Personnel Changes

Outgoing Personnel

Incoming Personnel

Operations
Dept. /
Training Dept.



Koichi IO
(March 8, 2015)

Training Dept.



Teruhiko SASAKI
(March 31, 2015)

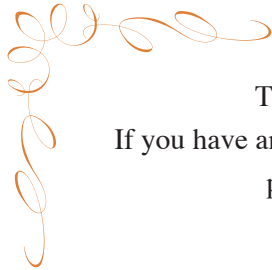
Technical
Cooperation
Dept.



Masatoshi YOKOTSUKA
(March 31, 2015)



Seiki KISAMORI
(April 1, 2015)



Thank you for reading *JCCP NEWS*.

If you have any comments or feedback about this newsletter,
please free to contact us by e-mail.
Your feedback is appreciated.

Planning & Public Relations Group, Administration Department
E-mail: planning@jccp.or.jp



Editorial Postscript

I am pleased to bring you the latest issue of *JCCP NEWS*.

A large portion of this issue is devoted to the many major events that took place between December and January, including the 23rd GCC-Japan Environment Symposium held in Kuwait, the 3rd JCCP Alumni Meeting held in Abu Dhabi, UAE, and the 33rd JCCP International Symposium held in Tokyo at the Prince Park Tower Tokyo. We have also published articles that enthusiastically introduce JCCP activities to the outside world, such as the visits made by Mr. Tsuyoshi Nakai, CEO, to national oil companies in Asia to hold dialogues with the leaders of those companies and his presentation at the HSE Seminar in Kuwait.

Please also note that the JCCP website (<http://www.jccp.or.jp/>) has changed slightly this year to introduce JCCP's usual activities with greater frequency mainly through photos. We invite you to visit our website if you haven't already done so. You can directly access the website via the QR code provided below

Yoshishige Tsujimura
Planning and Public Relations Group
Administration Dept.





Japan Cooperation Center, Petroleum (JCCP)

Headquarters

Sunshine 60 Building 58F, 3-1-1 Higashi-Ikebukuro, Toshima-ku, Tokyo 170-6058, Japan

- | | | |
|------------------------------------|----------------------|----------------------|
| • Administration Department | TEL. +81-3-5396-6000 | FAX. +81-3-5396-6006 |
| • Operations Department | TEL. +81-3-5396-6001 | FAX. +81-3-5396-6006 |
| • Training Department | TEL. +81-3-5396-6909 | FAX. +81-3-5396-6006 |
| • Technical Cooperation Department | TEL. +81-3-5396-8021 | FAX. +81-3-5396-8015 |

Overseas Offices

- | | |
|---|---|
| • Middle East Office | • Riyadh Office |
| #904, Al-Ghaith Office Tower, Hamdan St., | Al Oula Building, 5th Floor, Flat No.508 |
| P.O. Box 51828, Abu Dhabi, U.A.E. | Al Mohamadiya, King Fahad Road |
| TEL. +971-2-627-4410 FAX. +971-2-626-2166 | P.O. Box 61356, Riyadh 11565, Kingdom of Saudi Arabia |
| | TEL. +966-11-207-9540 FAX. +966-11-207-9539 |

URL: <http://www.jccp.or.jp> E-mail: webmaster@jccp.or.jp