

# JCCP NEWS

No. 107 2010 September

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- The 18th Joint GCC-Japan Environment Symposium
- Follow-up Meeting in Saudi Arabia and Malaysia
- Follow-up Meeting in Sudan and Libya
- Commencement of a New JCCP Project with UAE
- Management Conference Held with the Iraqi Ministry of Oil
- Delegation from the Saudi Arabian Ministry of Petroleum & Mineral Resources Visits Japan
- Participation in Middle East Petrotech 2010 in Bahrain



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# The 28th JCCP International Symposium

## “Innovation of Technology and Management in Oil Downstream: For Security of Oil Supply”



*Panelists and guests of honor*

The 28th JCCP International Symposium was held on January 27 and 28, 2010, under the auspices of the Ministry of Economy, Trade and Industry (METI), and with the attendance of approximately 350 visitors.

In this year’s symposium, leading authorities from oil producing and consuming countries were invited to exchange views on management and technology innovation toward advanced utilization of oil.

### 1. Theme and Goal

The theme of this year’s symposium was “Innovation of Technology and Management in Oil Downstream: For Security of Oil Supply.” Over the medium to long term, the global balance in oil supply and demand is apt to tighten, as a result of the increase in oil consumption particularly in newly emerging economies. Amid this situation, oil producing and consuming countries must share the responsibility of mitigating inordinate increases in oil consumption by promoting advanced utilization of oil without undermining economic growth.

### 2. Overview

#### (1) First Day: Opening Ceremony (January 27)

The symposium opened with an address by Mr. Yaichi Kimura, President of JCCP, and a greeting from the guest of honor, Mr. Masaaki Kimura, Director-General of the Natural Resources and Fuel Department, METI. These were followed by keynote speeches by Mr. Nobuo Tanaka, Executive Director, International Energy Agency (IEA), and Mr. Mohammed A. Al-Omair, Executive Director, Refining and NGL Fractionation, Saudi Aramco.



*Symposium venue*

Mr. Yaichi Kimura, President of JCCP, reiterated the theme of this year's symposium—Innovation of Technology and Management in Oil Downstream: For Security of Oil Supply—and presented a perspective on the issue. He said that we have spent decades developing oil utilization technologies and mechanisms to create today's affluent society, but oil is a limited resource that we must use wisely. The extent to which we can achieve the effective utilization of oil depends on the technical and management capabilities of all of us who work in the oil industry. Mr. Kimura closed his address by emphasizing the importance of technology and management innovation in handing down the precious resource to the next generation.



Mr. Yaichi Kimura, President of JCCP, giving an opening address

Mr. Masaaki Kimura from METI spoke as follows: Oil producing countries and Japan have established friendly relationships over many years as the foundation of oil security. However, as oil demand is expected to increase mainly in emerging countries over the medium to long term, one of the priority issues of the worldwide oil industry lies in how to address such changes in the global energy situation. Therefore, in the face of anticipated



Mr. Masaaki Kimura, Director-General of the Natural Resources and Fuel Department, METI, giving a speech as a guest of honor

changes in the global oil supply-demand environment, the theme of this symposium holds great significance, as it provides an opportunity to explore how technology and management innovation in the oil downstream sector could prevent the wasteful use of oil and promote its effective utilization to the greatest possible extent as an extremely valuable resource. Moreover, since issues in the oil downstream sector are common issues to oil producing and consuming countries alike, forums such as this symposium, in which various parties assemble to discuss a common theme, are certain to contribute largely to building consensus and stabilizing the global oil supply structure. In the end, Mr. Kimura expressed his expectation that the collective wisdom of oil producing and consuming countries will expand the possibilities of the precious and superior resource called “oil,” for the future of our society.

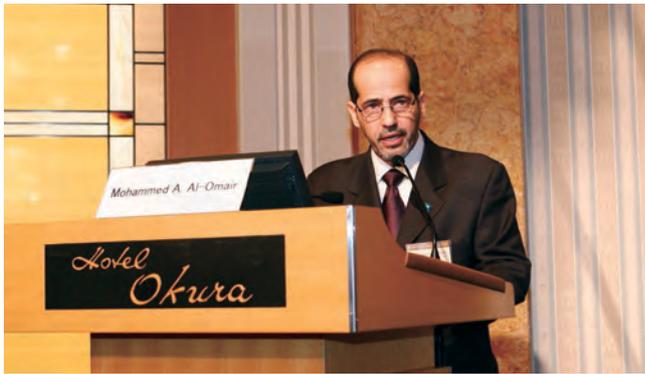
## (2) Keynote Speeches

Mr. Nobuo Tanaka from IEA gave a keynote speech as follows: Future increases in demand for oil will come mainly from non-OECD countries, or in other words, from developing countries, and oil demand will continue to grow steadily and eventually outpace the production capacity of worldwide suppliers. Inevitably, spare production capacity will become tighter than it is today. Nevertheless, the situation will not cause a sudden insecurity in oil supply as in past oil crises, but will constrict oil supplies in a gradual manner. Experts call this phenomenon “creeping oil crisis\*.” Needless to say, the best way to ensure stable supply of oil while maintaining economic growth is to realize advanced applications of oil, conserve energy, and prevent wasteful oil use.



Mr. Nobuo Tanaka, Executive Director of IEA, giving a keynote speech

\* Creeping oil crisis: an oil crisis that occurs as a result of a gradual constriction of oil supplies over time



*Mr. Mohammed A. Al-Omair, Executive Director of Saudi Aramco, giving a keynote speech*

Mr. Mohammed A. Al-Omair from Saudi Aramco also gave a keynote speech, firstly presenting an overview of Saudi Aramco's role in the global oil industry. He said that Saudi Arabia has the world's largest reserve of hydrocarbon resources. In order to assure consumers that oil will continue to be a reliable source of energy, Saudi Aramco has striven to secure stable supplies of oil as a leading oil-producing country. Ensuring oil security requires considerable investment, but Saudi Aramco has established a consistent system for the stable supply of oil, from the oilfields to consuming regions. For example, it has maintained its 12 million b/d oil production capacity through the development of oil resources, acquired the capacity to also supply oil products by strengthening its refining capabilities, and invests in Vela International Marine Limited (Saudi Aramco's wholly owned shipping subsidiary). Mr. Al-Omair also spoke about the importance of human resource development, stating that Saudi Aramco has been able to continue the difficult and challenging business of supplying oil, precisely because it is blessed with "people" who constantly pursue higher levels of technology and management. Based on the belief that "people" are the most precious asset of the company, it has spared no investment in human resource development. Saudi Aramco's success today is the result of this policy. Mr. Al-Omair said that Saudi Aramco will continue to contribute to the global stabilization of oil supplies by directing its efforts to developing human resources and achieving advanced utilization of oil based on innovating technologies and management.

### **(3) First Day: Special Lectures (January 27)**

The latter half of the symposium agenda on the first day featured special lectures by Mr. Mubarak S. Al Ketbi, Manager, Crude & Condensate Division, Marketing & Refining Directorate, Abu Dhabi National Oil Company

(ADNOC); Mr. He Zhoyun, Vice President, Economics & Development Research Institute, SINOPEC; and Mr. Pramod Kumar Karunakaran, Managing Director/CEO, Ethylene Malaysia Sdn. Bhd., PETRONAS.

Mr. Al Ketbi of ADNOC said that UAE is not only focusing on the development of renewable energy systems, but also on the development of nuclear power, and has plans to invest 40 billion dollars in nuclear power development by 2017. With the completion of a second unit at the Ruwais Refinery, clean fuel supplies will also be available. Mr. Al Ketbi stressed that UAE will endeavor to secure stable energy supply by comprehensively developing various types of energy.

Mr. Zhoyun of SINOPEC said that oil consumption is increasing in China, and particularly the consumption of automotive fuels such as gasoline and diesel fuel. The country is therefore directing its efforts to creating social systems that promote efficient utilization of oil. For example, it is focusing on developing alternative energy and technologies such as coal liquefaction, bioethanol, biodiesel, hydrogen energy and electric vehicles, and has also implemented a policy for shifting the mainstream transportation mode from automobiles to railways by developing inter-city high-speed railways and inner-city subway networks.

Mr. Karunakaran of PETRONAS spoke about the important role of the oil industry. He explained that PETRONAS commenced operations related to oil development in 1974, and has increased its corporate value and developed into a company that contributes to society by producing petroleum and petrochemical products from hydrocarbons. Although various difficult issues lie ahead, such as rising oil prices and intensifying international competition, Mr. Karunakaran said the oil industry has a responsibility to continue providing stable supplies of oil.

### **(4) Second Day: Discussion Sessions (January 28)**

#### *(i) Session 1 (morning session) "Management Innovation"*

Under the chairmanship of Mr. Takeshi Kurosaki, Executive Corporate Officer in Charge of Petroleum Refining Dept., Japan Energy Corporation, five panelists delivered presentations on management innovation at their company. The panelists included Mr. Masoud Salim Al Msalmy, General Manager, Corporate Support Division, Oman Refineries & Petrochemicals Company (ORPC); Mr. Hashem Y. Al Refaei, Manager, Marketing Research & Administration Division, Marketing

& Refining Directorate, Abu Dhabi National Oil Company (ADNOC); Ms. Nina Nurlina Pramono, Vice President, People Management of Human Resources, PERTAMINA; Mr. A. O. Oniwon, Group Executive Director, Refineries & Petrochemicals, Nigerian National Petroleum Corporation (NNPC); and Mr. Shinji Takasu, General Manager, Refining Technology, Petroleum Refining Dept., Japan Energy Corporation.

In a summary of the panelists' presentations, Mr. Kurosaki noted as follows: In this session, five panelists spoke about management innovation in their respective companies. Each company bears a large social responsibility to ensure stable oil supply, but liberalization and globalization trends have created an environment of intense international competition. Unless the companies embrace technology and management innovation and build a competitive corporate culture, they will not be able to fulfill their responsibility. In all five presentations, "people" were the common key to creating a competitive company. New technologies and management systems may be developed, but they would have no effect if "people" do not change. Therefore, it is important, above all else, for people to interact with each other beyond national and corporate boundaries and to use that experience to mutually acquire the wisdom of "human development."



Session 1 panelists

(ii) *Session 2 (afternoon session) "Technology Innovation"*

Under the chairmanship of Mr. Sei Tange, Executive Vice President and CMO, JGC Corporation, four panelists delivered presentations on technology innovation in their respective companies. The panelists included Mr. Mark G. Lawrence, Head of GTL Product Marketing, Qatar Petroleum Marketing Services (Tasweeq); Mr. Aminallah Eskandari, Managing Director and Chairman of Board of Directors, Hormoz Oil Refining Company (NIORDC);



Session 2 panelists

Mr. Asaad Ahmad Al-Saad, Deputy Chairman & Deputy Managing Director, Mina Al-Ahmadi Refinery, Kuwait National Petroleum Company (KNPC); and Mr. Takashi Yasuda, Executive Officer, Senior General Manager, R&D Division, JGC Corporation.

Mr. Tange summarized the presentations as follows: Today, we listened to presentations on measures for improving the value of hydrocarbons in four countries. A new trend seems to be emerging in both oil producing and consuming countries, to use oil in value-added applications instead of simply burning it as fuel. However, comprehensive capacity to manage diverse technologies is required to continue the trend. Oil producing and consuming countries may have their differences, but they nonetheless share the same objective of seeking more advanced uses of oil and natural gas. We hope to develop new oil energy systems through mutual cooperation.



Q&A session

### 3. Summary

In the closing ceremony, Mr. Masataka Sase, Executive Director of JCCP, summarized the discussions that took place in this year's symposium, which focused on management and technology innovation for security

of oil supply. In regard to management innovation, he indicated that all panelists identified “human resource development” as the key to innovation and raised strong awareness that no company can survive the trend of globalization unless all ranks of personnel, from top management to site workers, unite their strengths. With respect to technology innovation, Mr. Sase said the panelists gave inspiring presentations on the challenges that are being addressed in their respective countries to produce high-value products from all types of hydrocarbon resources, from methane to heavy oil. However, as each country is working independently to attain a goal that is common to both oil producing and consuming countries, Mr. Sase emphasized the significance of all countries coming together to learn from each other in an exchange of information, and

called on all participants to further strengthen their bonds of mutual cooperation in the future.

In this year’s symposium, the keynote speech delivered by Mr. Nobuo Tanaka, Executive Director of IEA, noted that we must prepare to address a “creeping oil crisis,” which distinctively differs from the oil crises of the 1970s. JCCP has consistently focused on stable oil supply as an overriding theme of our annual international symposiums, and feel that the time has come for oil producing and consuming countries to cooperate in achieving technology and management innovation based on their longstanding relationships of trust. For our part, we will strengthen our commitment to serving as a bridge between oil producing and consuming countries and creating opportunities for mutual cooperation.

*<by Hisayoshi Tanda, Administration Dept.>*

### The 28th JCCP International Symposium Program

“Innovation of Technology and Management in Oil Downstream: For Security of Oil Supply”

Date	Time	Proceedings
Jan. 27 (Wed)	14:00 – 15:45	Opening ceremony
		Opening address: Mr. Yaichi Kimura, President of JCCP
		Guest of honor speech: Mr. Masaaki Kimura, Director-General, Natural Resources and Fuel Department, Agency for Natural Resources and Energy, METI
	15:45 – 17:30	Keynote speeches: Mr. Nobuo Tanaka, Executive Director, International Energy Agency (IEA) Mr. Mohammed A. Al-Omair, Executive Director, Refining and NGL Fractionation, Saudi Aramco
		Special lectures
		(1) Mr. Mubarak S. Al Ketbi, Manager, Crude & Condensate Division, Marketing & Refining Directorate, Abu Dhabi National Oil Company (ADNOC) (UAE) (2) Mr. He Zhoyun, Vice President, Economics & Development Research Institute, SINOPEC (China) (3) Dr. Pramod Kumar Karunakaran, Managing Director/CEO, Ethylene Malaysia Sdn. Bhd. (PETRONAS) (Malaysia)
	18:00 – 20:00	Reception
Jan. 28 (Thu)	9:30 – 12:00	Session 1 “Management Innovation”
	13:30 – 16:00	Session 2 “Technology Innovation”
	16:00 – 16:10	Closing address: Mr. Masataka Sase, Executive Director of JCCP

## Keynote Speeches

Country	Organization	Name	Title
Japan	International Energy Agency (IEA)	Mr. Nobuo Tanaka	Executive Director
Saudi Arabia	Saudi Aramco	Mr. Mohammed A. Al-Omair	Executive Director, Refining and NGL Fractionation

## Guest Speeches

Country	Organization	Name	Title
UAE	Abu Dhabi National Oil Company (ADNOC)	Mr. Mubarak S. Al Ketbi	Manager, Crude & Condensate Division, Marketing & Refining Directorate
China	SINOPEC	Mr. He Zhoyun	Vice President, Economics & Development Research Institute
Malaysia	Ethylene Malaysia Sdn. Bhd. (PETRONAS)	Mr. Pramod Kumar Karunakaran	Managing Director/CEO

### Session 1: Management Innovation

**Chairman:** Mr. Takeshi Kurosaki, Executive Corporate Officer in Charge of Petroleum Refining Department, Japan Energy Corporation

Country	Company	Name	Title
Oman	Oman Refineries & Petrochemicals Company (ORPC)	Mr. Masoud Salim Al Msalmy	General Manager, Corporate Support Division
UAE	Abu Dhabi National Oil Company (ADNOC)	Mr. Hashem Y. Al Refaei	Manager, Marketing Research & Administration Division, Marketing & Refining Directorate
Indonesia	PERTAMINA	Ms. Nina Nurlina Pramono	Vice President, People Management of Human Resources
Nigeria	Nigerian National Petroleum Corporation (NNPC)	Mr. A. O. Oniwon	Group Executive Director, Refineries & Petrochemicals
Japan	Japan Energy Corporation	Mr. Shinji Takasu	General Manager, Refining Technology, Petroleum Refining Department

### Session 2: Technology Innovation

**Chairman:** Mr. Sei Tange, Executive Vice President and CMO, JGC Corporation

Country	Company	Name	Title
Qatar	Qatar Petroleum Marketing Services (Tasweeq)	Mr. Mark G. Lawrence	Head of GTL Product Marketing
Iran	Hormoz Oil Refining Company (NIORDC)	Mr. Aminallah Eskandari	Managing Director and Chairman of Board of Directors
Kuwait	Kuwait National Petroleum Company (KNPC)	Mr. Asaad Ahmad Al-Saad	Deputy Chairman & Deputy Managing Director, Mina Al-Ahmadi Refinery
Japan	JGC Corporation	Mr. Takashi Yasuda	Executive Officer, Senior General Manager, R&D Division

# The 18th Joint GCC-Japan Environment Symposium

## —Environment & Water Resources for Our Future—

The 18th Joint GCC-Japan Environment Symposium was jointly organized with Bahrain Centre for Studies & Research (BCSR), and was held over a three-day period from February 8 to 10 in Bahrain, under the theme, “Environment & Water Resources for Our Future.”

### Background

JCCP has held the Joint GCC-Japan Environment Symposium annually to provide a forum for information exchange among environmental experts in the GCC countries and Japan, and fiscal 2009 marked the 18th convening of the symposium.

### Overview

Some 230 participants from the GCC countries and Japan, the largest number ever, attended the opening ceremony, which was held on the 8th. They included such key figures as H.E. Dr. Mohammed J. K. Alghatam, Chairman of the Board of Trustees of BCSR; Dr. Abdulla M. Alsadiq, Secretary-General of BSCR; Dr. Eion Turnbull, Deputy Chief Executive (Refining & Marketing) of the Bahrain Petroleum Company (BAPCO), which provided special assistance in implementing the symposium by hosting a BAPCO-sponsored reception on the evening of February 8; H.E. Mr. Hideo Sato, Ambassador of Japan to Bahrain; and

Dr. Junzo Kasahara, Professor Emeritus at the University of Tokyo (and leader of the Japanese delegation). Dr. Alsadiq, Dr. Turnbull, Ambassador Sato and Mr. Morihiro Yoshida, Managing Director of JCCP, each gave an opening address.

Dr. Alsadiq thanked the guests for attending the symposium, and expressed his expectations that the symposium will provide hints for resolving water resource and climate change issues in the GCC region. He noted that, as environmental issues are a large concern to the GCC countries where water resources are limited, it is highly meaningful to have Japanese and GCC experts mutually share their knowledge and exchange views on issues of concern to the region in this symposium.

Dr. Turnbull emphasized our responsibility to seriously address environmental issues today as leaders in the field, although whether we succeed or not in doing so can only be judged by the next generation. He said he was confident that technological innovations that will be introduced in the symposium would bring us new possibilities.

Ambassador Sato noted that this environment symposium, launched in 1992 as a greening seminar and held for roughly 20 years since, provides an opportunity to address the issue of global warming, particularly in the GCC region where environmental issues have become pronounced after the Gulf War. He encouraged



*Commemorative photo at the opening ceremony*

all participants to learn and benefit from the knowledge of the Japanese and GCC experts.

Mr. Yoshida, after giving a brief introduction of JCCP and an overview of JCCP technical cooperation projects and training programs, asserted that Japan's advanced environmental technologies would be effective in addressing environmental issues that are raising widespread concern in the GCC countries, and stressed the importance of this symposium.

Three keynote lectures followed the opening speeches. On the Japanese side, Dr. Kasahara gave a lecture under the title, "An innovative method for the 4D monitor of storage in CCS (Carbon dioxide Capture and Storage) and oil and gas reservoirs and aquifers." On the Bahrain side, lectures were given by Mr. Essa G. Al-Ansari, General Manager of Major Engineering Projects at BAPCO, and Prof. Waleed Al-Zubari, Vice-President of Academic Affairs at Arabian Gulf University.

After the keynote lectures, 19 Japanese GCC experts gave presentations in four separate discussion sessions.

#### ■ February 8

Session 1: Energy and Gas Industry and Sustainability

Session 2: Water Resources and Environmental Protection

#### ■ February 9

Session 3: Climate Change and Global Warming

Session 4: Future Perspective for Energy, Water and Environment

Many of the presentations given by GCC experts focused on "water" and "the environment." This is understandable, since the symposium was originally designed as a greening seminar. However, it also indicated the GCC countries' consistently strong interest and concern in issues related to the environment and water resources.



Discussion session

A closing ceremony was held on the 9th following the final discussion session. Dr. Mohammed S. Al-Ansari, Director of the Publication & Data Warehouse at BCSR and Chairperson of the Organizing Committee of the Environment Symposium, and M. Nakamura, Manager of the Technical Cooperation Dept. at JCCP, officially closed this year's symposium after thanking all symposium participants and everyone from BCSR and BAPCO for their cooperation.

On the 10th, the Japanese delegation visited a BAPCO refinery, accompanied by many people from the Bahrain side. There they visited the Low Sulphur Diesel Production Control Center among other facilities, and recognized anew Bahrain's strong commitment to environmental conservation.

On the 7th, the day before the opening of the environment symposium, the JCCP Secretariat held a press conference at BCSR to present an overview of JCCP activities and explain details of the environment symposium. Dr. Alghatam, Dr. Alsadiq, Dr. Al-Ansari, Mr. Yukio Ishibiki, Second Secretary of the Japanese Embassy in Bahrain, and six Japanese lecturers also lent their presence to the event.

## Summary

The participants of the environment symposium engaged in active discussions in the four discussion sessions. GCC experts took particular note of the presentations on Japan's advanced environmental technologies as potential solutions to their environmental challenges.

Members on the JCCP side hope that this environment symposium has helped deepen relationships between oil-related companies and organizations in the GCC region and JCCP. Moreover, public recognition of JCCP in the GCC countries has increased, owing to local media coverage of the press conference and symposium.

*<by Makoto Nakamura, Technical Cooperation Dept.>*



Press conference

## The 18th Joint GCC-Japan Environment Symposium

No.	Country	Name	Organization
<b>Session 1: Energy and Gas Industry and Sustainability</b>			
Chairpersons: Prof. Hidenori Yahiro, Graduate School of Science and Engineering, Ehime University, Japan Dr. Mohammed S. Al-Ansari, Bahrain Centre for Studies & Research			
1	Saudi Arabia	Mr. Mohammad A. Hajri	Saudi Aramco
2	Japan	Mr. Shigeyuki Funada	Cosmo Oil Co., Ltd.
3	Bahrain	Mr. Ijaz Ashraf	The Bahrain Petroleum Company
4	Bahrain	Dr. Tarek Ghalwash	Bahrain Centre for Studies & Research
<b>Session 2: Water Resources and Environmental Protection</b>			
Chairpersons: Dr. Muhammad Al-Rashed, Kuwait Institute for Scientific Research Eng. Nassema Al-Marzouqi, Water Distribution Directorate, Bahrain			
1	Kuwait	Dr. Mohammad Al-Murad	Kuwait Institute for Scientific Research
2	Bahrain	Dr. Khaled Burashid	Electricity & Water Authority
3	Saudi Arabia	Dr. Alaadin A. Bukhari	King Fahd University of Petroleum & Minerals
4	Oman	Dr. Mahad Said Baawain	Sultan Qaboos University
5	Qatar	Dr. Kamel Mostafa Amer	Ministry of Environment
<b>Session 3: Climate Change and Global Warming</b>			
Chairpersons: Dr. Waheeb Al-Naser, University of Bahrain Dr. Ali Hamad Al-Mulla, Qatar Petroleum			
1	UAE	Dr. Sayed A. M. Marzouk	UAE University
2	Japan	Dr. Ken-ichi Fujimoto	Kitakyushu International Techno-cooperative Association
3	Japan	Ms. Hikari Egami	JGC Corporation
4	Bahrain	Dr. Mohammed S. Al-Ansari	Bahrain Centre for Studies & Research
5	Bahrain	Dr. Majeed Safar Jasim	University of Bahrain
<b>Session 4: Future Perspective for Energy, Water and Environment</b>			
Chairpersons: Eng. Ebrahim Al-Kaabi, Electricity and Water Authority, Bahrain Dr. Ken-ichi Fujimoto, Kitakyushu International Techno-cooperative Association, Japan			
1	Japan	Dr. Kayoko Tsuruga	JGI, Inc.
2	Bahrain	Dr. Waheeb Al-Naser	University of Bahrain
3	Bahrain	Dr. Nader Al-Masri	Bahrain Centre for Studies & Research
4	Japan	Prof. Hidenori Yahiro	Graduate School of Science and Engineering, Ehime University
5	Bahrain	Prof. Ibrahim Abdel Gelil	College of Graduate Studies, Arabian Gulf University



*Symposium venue*



*One of the Japanese lecturers: Ms. Hikari Egami,  
JGC Corporation*

# Follow-up Meetings Visit to Saudi Arabia and Malaysia

In a bid to strengthen relationships with oil-producing countries, Mr. Masataka Sase, Executive Director of JCCP, visited Saudi Arabia and Malaysia from February 1 to 10, 2010, and held policy dialogues with the management of counterpart organizations in the two countries.

## 1. Saudi Arabia—King Fahd University of Petroleum and Minerals (KFUPM)

On February 3, Mr. Sase paid a courtesy call on H.E. Dr. Khaled S. Al-Sultan, Rector of KFUPM. Dr. Katsuomi Takehira, Professor Emeritus at Hiroshima University, who is currently engaging in research at KFUPM under the JCCP Long-term Researcher Dispatch Program, was also asked to lend his presence to the meeting.

The relationship between KFUPM and JCCP goes back to 1992, when the two organizations sponsored the first Saudi-Japan Joint Symposium. The symposium has been held every year since then, with the 19th and most recent symposium held in November 2009.

Mr. Sase took the lead and expressed his deep appreciation for Dr. Al-Sultan's and KFUPM's generous cooperation, without which they could not have held the seminar every year for 19 years.

Dr. Al-Sultan said KFUPM is also pleased to have

held the annual seminar continuously for 19 years, and thanked JCCP for its cooperation. The most valuable achievement, he stressed, is the relationship of trust that has developed between the two organizations through long years of cooperation, because relationships like this cannot be achieved overnight, but require gradual and steady accumulation of mutual efforts.

Dr. Sulaiman S. Al-Khattaf, Director, Center of Refining and Petrochemicals – Research Institute, thanked JCCP for sending researchers to KFUPM under the Long-term Researcher Dispatch Program, and said KFUPM is privileged to welcome Dr. Hideshi Hattori, Professor Emeritus at Hokkaido University, who began providing research guidance at KFUPM in FY2007, followed by Dr. Katsuomi Takehira. Dr. Al-Khattaf asked JCCP for its cooperation in continuing the program, as a request from both him and Dr. Al-Sultan.

## 2. Saudi Arabia—Saudi Aramco Training and Career Development Department

Also on February 3, Mr. Sase paid a visit to Ms. Huda M. Al-Ghpson, General Manager, Training and Career Development, Saudi Aramco. The Training and Career Development Department is located in a central area of the company's Head Office site among top management offices. As general manager of this department, Ms.



*H.E. Dr. Khaled S. Al-Sultan, Rector of KFUPM (center)*



*At the Saudi Aramco Head Office  
Ms. Huda M. Al-Ghpson, General Manager, Training and  
Career Development (center)*

Al-Ghpson assumes an important role in planning and managing the development of human resources who support the future of the company.

Mr. Sase firstly outlined JCCP's relationship with Saudi Aramco, explaining that a fruitful exchange of Japanese technologies and management practices has developed between the two organizations through the participation of Saudi Aramco members in JCCP regular courses and through the implementation of Customized Programs-Overseas (CPO) at Saudi Aramco's refineries.

Ms. Al-Ghpson described Saudi Aramco's policy in regard to training. That is, the company firmly believes that studying corporate cultures in worldwide countries and incorporating their strengths into Saudi Aramco's management style is extremely important to the company's own future. Based on this policy, Saudi Aramco selects outstanding employees to take advantage of learning opportunities in various countries around the world while they are young, and to absorb their cultures in the language of those countries. Ms. Al-Ghpson said that JCCP courses also provide a good opportunity to experience Japanese corporate culture and study Japanese management practices, and that Saudi Aramco employees who have participated in them have brought back knowledge which has proven useful in many ways to Saudi Aramco's management. Based on this awareness, she also said that she wishes to send not only refinery staff members but also head office members to JCCP courses to study leadership and management skills.

In response, the JCCP side explained the basic concept of JCCP training programs, that they are designed so that manager-level employees can explore future management styles through visits to Japanese companies. In other words, JCCP training programs offer manager-level employees an opportunity to review and enhance their management styles and prepare to assume higher positions in the future.

### 3. Saudi Arabia—King Abdulaziz City for Science and Technology (KACST)

On February 7, Mr. Sase made a courtesy visit to H.H. Dr. Turki Saud Mohammed Al-Saud, Vice President for Research Institute of KACST.

Mr. Sase took the opportunity of his visit to KACST to express his gratitude to Dr. Al-Saud for his generous consideration of the joint technical cooperation project

on "Application of Ground Deformation Monitoring Technologies towards Preserving the Natural Resources," the signing ceremony for which is slated to take place at the end of the month.

Dr. Al-Saud said that KACST is placing large expectations on the success of the joint project, especially because the project focuses on technologies for maintaining the capacity of oil production facilities, and that he hopes to share the achievements of the project with oil companies in Saudi Arabia.

On a more personal note, Dr. Al-Saud also spoke about his visit to Japan in June 2008 under the JCCP VIP Invitation Program, recollecting how the staff members of the research institute he visited then had all lined up along both sides of his path and welcomed him with warm applause. He said he would always remember the warm hospitality he received wherever he went in Japan.

Mr. Sase stated that JCCP's exchanges with KACST through the years have had significant meaning to JCCP, and that he hopes their relationship will continue into the future. Agreeing with Mr. Sase's view, Dr. Al-Saud said he wishes to engage in even more projects with JCCP in the future and further deepen their relationship.



*H.H. Dr. Turki Saud Mohammed Al-Saud,  
Vice President of KACST (left)*

### 4. Malaysia—Petronas

As the last destination of his agenda, Mr. Sase visited the Petronas Head Office in Malaysia on February 9, and paid a call on Datuk Anuar Ahmad, Vice President, Human Resources, and Mr. Kamarudin Zakaria, Vice President, Petrochemical Business.

At the beginning of the meeting, Mr. Sase noted that



*At the Petronas Head Office  
Datuk Anuar Ahmad, Vice President,  
Human Resources (center)*

JCCP and Petronas have a long history of cooperation that dates back to the establishment of JCCP, and thanked Petronas for sending as many as 800 members to JCCP courses in the past 29 years. Agreeing that 800 is indeed a substantial number, Mr. Anuar thanked JCCP anew for its cooperation. He said that the significance of participating in a training program in Japan lies not only in learning skills and technologies, but also in acquiring first-hand experience in Japanese society. As an example, Mr. Anuar spoke about his own experiences when he came to Japan to receive training in his youth. He said his exposure to Japan's development opened his eyes to a world he had never seen before. His interaction with Japan's foreign culture and society made him want to know more about how the Japanese people engage in their work, why they have such a strong sense of responsibility, what cultural and social factors affect their behavior, and so on. Recognizing that the very experience in thinking these thoughts had a large impact on his future, Mr. Anuar emphasized the significance

of going to Japan, experiencing a foreign culture, and opening one's own perspective.

Mr. Sase, pleased to hear Mr. Anuar's high evaluation of JCCP courses, said oil-producing countries and Japan have both become stronger and more capable over the 29 years that JCCP has offered training programs, and JCCP is now seeking to evolve to a higher level to create a new type of relationship based on mutual learning. He also said he hopes JCCP and Petronas would continue to develop their ties all the same.



*At the Petronas Head Office  
Mr. Kamarudin Zakaria, Vice President,  
Petrochemical Business (center)*

The 10-day visit to Saudi Arabia and Malaysia yielded precious exchanges of views with the senior management of counterpart organizations. The fact that they regard JCCP training programs not simply as a means for technical training, but as an opportunity for manager-level employees to experience Japanese corporate culture and prepare to become future leaders, particularly reaffirmed JCCP's commitment to continuing its activities into the future.

*<by Hisayoshi Tanda, Administration Dept.>*

# Follow-up Meetings Visit to Sudan and Libya

With the aim of deepening ties with oil-producing countries and promoting mutual understanding and cooperation, Mr. Masataka Sase, Executive Director of JCCP, visited Sudan and Libya and held policy dialogues with top management of state-run oil companies in the two countries and with officers of the Sudanese Ministry of Foreign Affairs.

## 1. Sudan

On July 4 and 5, visits were made to the SUDAPET Head Office, the Ministry of Foreign Affairs, and the Embassy of Japan in Sudan. The relationship between Sudan and JCCP has only recently begun in FY2009, so various views were exchanged on the outlook of the continuation and further development of JCCP activities in Sudan.

### (1) SUDAPET Head Office

In the morning of July 5, Mr. Sase visited the SUDAPET Head Office to meet with Mr. Salah H. Wahbi, President & CEO, and other officers.

Firstly, Mr. Sase was shown to a conference room for a meeting with Mr. Ali Faroug Abbas Shahin, Vice President, who greeted the delegation and expressed his pleasure at receiving the courtesy call. Mr. Sase said that JCCP highly welcomes the rapid development of ties with Sudan and wishes to continue the amicable relationship. After exchanging words of greeting, the

two leaders respectively introduced the activities of their organizations and deepened mutual understanding.

The SUDAPET side said they are strongly interested in participating in JCCP courses such as on inspection and reliability diagnosis, process control, and human resource development, particularly because the company mainly engages in crude oil processes, from production to export. They also expressed their expectation of receiving JCCP's cooperation when SUDAPET launches its plan to build a small-scale refinery/power plant in the southern part of the country.

Following the meeting with the vice president, Mr. Sase moved to the president's office to meet with Mr. Wahbi. Mr. Sase indicated that the participation of an employee from Khartoum Refinery Company Limited in a JCCP course held in October 2009 for the first time marked the beginning of relations between Sudan and JCCP, and noted that JCCP has received a total of nine Sudanese participants to its regular courses as of July 2010. Mr. Wahbi stated that SUDAPET places high priority on cooperation with Asia, and has particularly large expectations for the introduction of Japanese technologies. He also requested JCCP's cooperation in reference to SUDAPET's aspiring project for construction of a small-scale refinery/power plant.

As a conclusion of the meeting, Mr. Sase promised to continue JCCP's relationship with Sudan through JCCP training programs, and to explore new avenues for technical cooperation, such as in the construction of SUDAPET's small-scale refinery.

### (2) Ministry of Foreign Affairs

In the afternoon of July 5, Mr. Sase visited the Sudanese Ministry of Foreign Affairs and met with H.E. Mr. Rahmatalla Mohamed Osman, Undersecretary of the Ministry of Foreign Affairs.

In his words of greeting, Mr. Sase noted that the relationship between JCCP and Sudan was initiated by the visit of former Undersecretary Dr. Mutrif Siddig Ali Al Nimeiri to Japan in October 2009, and has since evolved into a friendly relationship. In return, Mr. Osman said that technical cooperation is extremely important



At SUDAPET  
Mr. Salah H. Wahbi, President & CEO (center)



*At the Ministry of Foreign Affairs in Sudan  
H.E. Mr. Rahmatalla Mohamed Osman, Undersecretary (right)*

to Sudan, and that further cooperation based on JCCP's expertise is strongly sought in the future, because technology is the accumulation of trial and error. He also informed the JCCP side that H.E. Mr. Hamza Elamin A. Baau, former Ambassador of the Embassy of the Republic of Sudan in Japan who has also visited JCCP in the past, has been appointed Auditor General, and a new ambassador is slated to take his post in Japan.

Before parting, Mr. Sase extended a warm invitation to Mr. Osman to visit JCCP when he comes to Japan.

The meeting at the Ministry of Foreign Affairs was broadcast on national television network news in Sudan, and earned an article in two newspapers the following day. This press coverage in itself indicated the high level of interest in Japanese technical cooperation in Sudan.

### **(3) Embassy of Japan in Sudan**

On July 4, Mr. Sase visited the Embassy of Japan in Sudan and met with H.E. Mr. Akinori Wada, Ambassador of Japan to Sudan.

At the onset of the meeting, Mr. Sase briefly outlined JCCP's relationship with Sudan, giving an account of the background to receiving Sudanese participants to JCCP courses and their steady increase thereafter, and noting that crude oil from Sudan is entering Japan through international markets.

Ambassador Wada, in response, supplied information about Sudan, that it is a new crude-oil producing country showing a steady increase in crude oil production volume and holding promising potential to further increase its current production capacity of 500,000 BPD in the future. He also noted that Sudan exports 100,000 BPD, or roughly 20% of its total crude oil exports to Japan, and assured JCCP that the Sudanese government is well

aware of Japan as an important export market.

On the night of July 5, a dinner was held with executive members of SUDAPET at the ambassador's residence. Mr. Wahbi, President & CEO, and three other members enjoyed an evening of pleasant conversation over Japanese cuisine. In addition to information that was presented during Mr. Sase's visit to SUDAPET in the morning, the SUDAPET members shared their views on the future perspective of their company. With Mr. Wahbi also sharing information about himself, such as his personal history and thoughts, the gathering also proved to be conducive to building personal connections.



*At the residence of the Japanese Ambassador to Sudan  
Mr. Salah H. Wahbi, President & CEO, SUDAPET  
(fifth from left)  
H.E. Mr. Akinori Wada, Ambassador of Japan to Sudan  
(fifth from right)*

## **2. Libya**

Mr. Sase spent July 7 and 8 visiting the National Oil Corporation (NOC) and the Embassy of Japan in Libya and exchanging views on the continuation and further development of JCCP programs in Libya. Libya started sending participants to JCCP regular courses in 2001, and JCCP has since received an average of 20 participants from the country every year. A technical cooperation project has also been implemented in FY2007-2008.

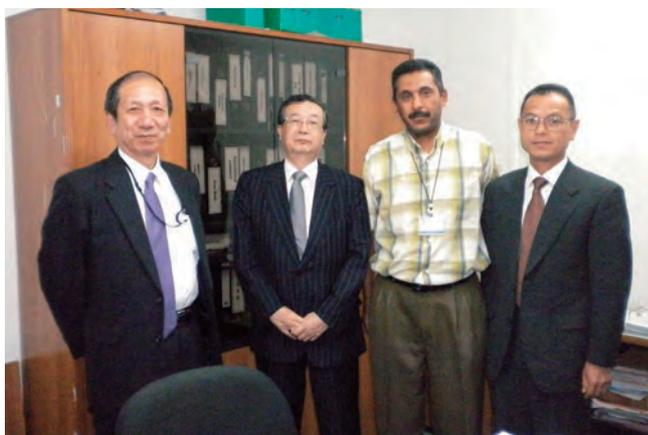
### **(1) NOC**

Mr. Sase arrived at NOC in the morning of July 8, and met with Mr. Hassan Essaid, Human Resources Cooperation Coordinator. He had just recently participated in a JCCP regular course in November 2009, so he remembered Mr. Sase well, and initiated a friendly meeting, sharing photos from his visit to Japan and recalling fond memories with JCCP lecturers.

In regard to the JCCP course he attended, Mr. Hassan

said that the organization, management, technologies, and all other aspects of the course were well planned and excellent beyond all else. Furthermore, he said that, as Human Resources Cooperation Coordinator, he hopes to extend the JCCP experience to many more NOC employees in the future.

As to future expectations of JCCP training programs, Mr. Hassan said that NOC seeks courses that would raise motivations in relation to personnel and refinery affairs, and also requested the implementation of a Customized Program-Overseas (CPO) in Libya, so that a larger number of NOC employees could participate in a JCCP training program.



*At National Oil Corporation  
Mr. Hassan Essaid, Human Resources Cooperation Coordinator  
(second from right)*

## **(2) Embassy of Japan in Libya**

In the afternoon of July 7, Mr. Sase visited the Embassy of Japan in Libya to meet with H.E. Mr. Wataru Nishigahiro, Ambassador.

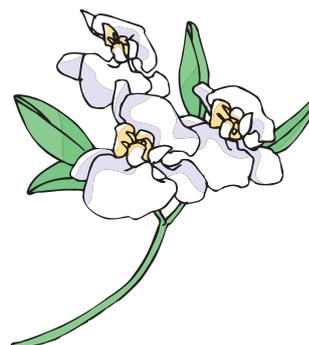


*At the Japanese Embassy in Libya  
H.E. Mr. Wataru Nishigahiro, Japanese Ambassador  
to Libya (right)*

Ambassador Nishigahiro firstly provided a general overview of the crude oil production situation in Libya. He also introduced some facts regarding Libya's modern history, explaining that a revolution occurred in 1969, and various events have led the international community to impose economic sanctions on Libya in 1992. Those sanctions have now been lifted, and a business climate is gradually emerging in Libya today.

Leaving aside any political implications, Ambassador Nishigahiro expressed his strong wish for JCCP to continue its activities in Libya. In consideration of the facts that many people in Libya are fluent in English owing to the country's geographical and historical proximity to Europe, and that NOC is placing strong emphasis on upgrading its technologies and personnel education, the Ambassador said he is convinced that Libya would benefit tremendously from JCCP training programs.

*<by Hiroaki Hara, Technical Cooperation Dept.>*



# Commencement of a New JCCP Project with UAE

## — Design and Evaluation of a Pilot Plant for the Treatment of Refinery Wastewater —

UAE is experiencing remarkable economic growth today, mainly in its oil and gas industries. However, this growth is raising concerns about environmental problems. The Abu Dhabi Oil Refining Company (TAKREER), a subsidiary of Abu Dhabi National Oil Company (ADNOC), has also been seeking to improve environmental load reduction technologies at the Ruwais Refinery and to upgrade its refinery wastewater treatment system.

In light of this situation, JCCP and United Arab Emirates University (UAE University) have carried out the Project on Development, Design and Evaluation of Advanced Refinery Wastewater Treatment Process in UAE (FY2005 – 2009) to examine efficient refinery wastewater treatment methods, and have succeeded in developing a new treatment system at the laboratory level. The new system treats refinery wastewater according to a three-step process, which includes electrocoagulation (for sulphate removal and COD reduction), bioreaction (for phenol removal), and adsorption (for COD removal).



*Signing the MOA*

Compared to the conventional system, it can efficiently treat wastewater at a higher level.

Before the new wastewater treatment system could be applied to an operating refinery, practical performance evaluation tests needed to be performed using actual wastewater discharged from a refinery. Therefore, with the objective of performing the necessary evaluation



*Principal members of the signing ceremony*

*(From the left) H.E. Dr. Maitha Salem Al Shamsi, Minister of State;  
Dr. Abdulla Saad Al-Khanbashi, Vice Chancellor of UAE University;  
Mr. Jasem Ali Al-Sayegh, General Manager of TAKREER;  
Mr. Morihiro Yoshida, Managing Director of JCCP;  
Mr. Setsuo Omori, Minister at the Japanese Embassy in UAE*

tests, JCCP will be launching a new project, the Joint Study on Design and Evaluation of a Pilot Plant for the Treatment of Refinery Wastewater in UAE, this fiscal year over a period of three years.

The project will be held jointly with UAE University and TAKREER as JCCP's counterparts on the UAE side. UAE University will be responsible for evaluating the performance and optimizing the pilot wastewater treatment unit, and TAKREER will install the unit in the Ruwais Refinery and cooperate in its operation.

After a series of discussions on the joint implementation of the project, JCCP, UAE University, and TAKREER reached a final agreement and held an MOA (Memorandum of Agreement) signing ceremony on May 17, 2010.

On the UAE side, Mr. Jasem Ali Al-Sayegh, General Manager of TAKREER, and Dr. Abdulla Saad Al-Khanbashi, Vice Chancellor of UAE University; and on the Japanese side, Mr. Morihiro Yoshida, Managing Director of JCCP, signed the MOA and exchanged

commemorative gifts, with hopes for the success of the new project.

H.E. Dr. Maitha Salem Al Shamsi, Minister of State and JCCP's counterpart for technical cooperation projects in UAE, also attended the ceremony and delivered words of gratitude for the new JCCP project and for JCCP's technical cooperation with UAE. On the Japanese side, Mr. Setsuo Omori, Minister at the Japanese Embassy in UAE, expressed his approval of the new JCCP project and articulated his hopes that it will contribute to strengthening ties between UAE and Japan. Other members on the Japanese side included Mr. Masaki Ikematsu, Executive Director, from Nippon Oil Research Institute Co., Ltd., a participating member in the JCCP technical cooperation project.

All parties concerned look forward to the successful completion of the project, and hope that the transfer of Japanese environmental countermeasure technologies and environmental improvement technologies will enhance the friendly relationship between UAE and Japan.

*<by Nobuyuki Suyama, Technical Cooperation Dept.>*

Topics

## Management Conference Held with the Iraqi Ministry of Oil

Reconstruction assistance is an issue of national importance to Iraq. JCCP, also recognizing the need to provide cooperation to the greatest extent possible by recommencing cooperation activities with Iraq, invited executive officers from the Iraqi Ministry of Oil to Tokyo last December and exchanged a memorandum of understanding (MOU) on the recommencement of training and technical cooperation activities. To discuss the future implementation of the programs in specific detail, JCCP members held a management conference with the Iraqi Ministry of Oil in Amman, the capital city of Jordan, on May 8 and 9, 2010.

Members of the conference included Dr. Kareem A. Alwan, Director Manager, Petroleum R&D Center, Mr. Jasim M. Hameed, Manager, Technical Dept., and Ms. Saba A. Yousif, Manager, Environment Dept., all from the Training and Development Directorate under the Ministry of Oil, on the Iraqi side. On the JCCP side,

T. Kubota from the Training Dept., M. Horike from the Technical Cooperation Dept., and S. Yagi, General Manager of the Middle East Office, participated in the conference.

The Ministry of Oil is one of the major institutions of the Iraqi government. Its Training and Development Directorate acts as the counterpart to JCCP. It is responsible for coordinating domestic and overseas training programs in all fields related to the upstream and downstream sectors of the oil industry, and for governing technical development.

Amman, the capital of Jordan and the venue of the recent management conference, is an important city linking Iraq with the international community. It is also home to the Japanese Embassy in Jordan, where Iraqi participants to JCCP training programs acquire their visa to study in Japan.

## 1. Training Programs

The JCCP Training Department has received Iraqi participants to JCCP initiative courses and member company courses since fiscal 1982. Their participation was suspended during the two Gulf wars, but JCCP again began receiving Iraqi participants to member company courses in fiscal 2005. In November 2009, it also recommenced the acceptance of Iraqi participants to JCCP-initiative courses, and received eight participants as of the end of March.

In the recent management conference, the JCCP side confirmed the Iraqi Ministry's desire to continue participating in JCCP-initiative courses in fiscal 2010, and the two sides agreed on the following two points.

- 1) The Iraqi Ministry of Oil will continue sending participants from the Ministry and from oil refineries in Iraq to JCCP initiative courses (regular courses), and JCCP will accept Iraqi participants with the aim of further strengthening its relationship with Iraq.
- 2) As requested by the Iraqi Ministry of Oil, JCCP will give due consideration to implementing a customized course in Japan on environmental conservation in the refinery specifically for a study group from Iraq, in fiscal 2010.

JCCP will be inviting JCCP counterpart personnel from oil-producing countries to attend a Program Seminar in July 2010, and Mr. Hameed will be one of the participants. Therefore, the two sides agreed

to continue the discussions on the implementation of training programs when Mr. Hameed visits JCCP to attend the Program Seminar.

## 2. Technical Cooperation Projects

Technical Cooperation Projects are projects in which Japanese experts cooperate with engineers and researchers of a counterpart organization in an oil-producing country to solve specific items. In fiscal 2003, JCCP and Iraq launched a technical cooperation project aimed at the permanent restoration of an LPG loading facility in southern Iraq, but the project was prematurely abandoned due to the local security situation, and remains terminated.

During the recent management conference, JCCP and the Iraqi side discussed the future direction of four technical cooperation project requests that were presented by the Iraqi Ministry of Oil during the conference held last December in Tokyo. Aside from these four requests, the members from the Ministry also presented a request for ten joint cooperation projects. After two days of discussions, the two sides agreed to discuss specific technical details and other matters for possible implementation of a number of these projects, and to hold a technical conference again in Amman sometime between late June and early July as a kickoff meeting.

Issues of high priority at present include the treatment of crude oil-associated water and the improvement and



*Dr. Kareem A. Alwan, Director Manager, Petroleum R&D Center (second from right), Mr. Jasim M. Hameed, Manager, Technical Dept. (third from left), and Ms. Saba A. Yousif, Manager, Environment Dept. (right)*

effective utilization of asphalt. In the next technical meeting, engineers and researchers from both countries plan to exchange views and discuss specific work proposals to formulate a concrete plan for future cooperation projects.

The Iraqi side has shown strong expectations of JCCP's cooperation. A steady number of participants



Conference in Amman

from Iraq has participated in JCCP initiative courses again this fiscal year, and those who completed their course have returned to Iraq to work actively in the oil sector and contribute to rebuilding their country. Furthermore, new proposals for technical cooperation projects presented by the Iraqi Oil Ministry at the recent management conference were based on extremely important themes in oil refining that require technologies at which Japan excels.

Opportunities for personal exchanges and technical cooperation through JCCP training programs and technical cooperation projects are expected to strengthen cooperative relations between Iraq and Japan and lay the foundation for stable energy supplies to Japan in the future. To promote these activities, Japan's advanced scientific technologies and abundant knowledge and experience in oil-related industries are essential, and the cooperation of Japan's companies, universities, and research institutions is indispensable. JCCP therefore seeks support from companies, universities, and research institutions in Japan.

*<by Tetsuji Kubota, General Manager, Training Dept., and Minoru Horike, General Manager, Technical Cooperation Dept.>*

## Delegation from the Saudi Arabian Ministry of Petroleum & Mineral Resources Visits Japan

On June 1, 2010, H.E. Yahya J. Shinawi, Director General, and Mr. Abdullah I. Al-Jof, Technical Training Coordinator, from the Eastern Province Branch of the Saudi Arabian Ministry of Petroleum and Mineral Resources visited JCCP.

The ministry's head office is located in Riyadh, and the Eastern Province Branch is located in Dhahran. While the Riyadh head office is in charge of oil policies, the Eastern Province Branch is responsible for supervising the technical aspects of Saudi Arabia's oil industry. Mr. Shinawi is the chief officer of this department.

At JCCP, Mr. Masataka Sase, Executive Director, Mr. Morihiro Yoshida, Managing Director, Mr. Mitsuyoshi

Saito, Counselor, and other executive officers welcomed the two gentlemen from Saudi Arabia.

### 1. Background to the Visit

JCCP and Mr. Al-Jof corresponded a number of times since last year about participation in JCCP's technical training programs on environmental management in the refinery. When JCCP members visited the Saudi Arabian Ministry of Petroleum and Mineral Resources last October under the Cooperation with Training Center Program, they provided an overview of JCCP courses related to environmental management and extended an

invitation to Mr. Al-Jof to visit JCCP Headquarters in Japan. Mr. Al-Jof took the occasion of Mr. Shinawi's recent visit to realize the visit to JCCP.

## 2. Environmental Management in the Refinery

Saudi Arabia has plans to construct several large-scale refineries with 400,000 b/d-level capacities in various parts of the country, and in conjunction with these plans, there is a need to assess their environmental impact and to formulate a proper environmental management plan. To facilitate the smooth implementation of the refinery construction projects, the Ministry of Petroleum and Mineral Resources is aware that it needs to explore environmental management technologies employed around the world and to formulate a plan specifically suited to the state of affairs in Saudi Arabia. It also has strong interest in Japan's environmental management technologies, and said that it would like its employees to participate in JCCP courses and hold technical exchanges in a broad range of topics.

As Saudi Arabia is an important counterpart country



*Tour of JCCP training facilities*



*H.E. Yahya J. Shinawi, Director General (front row, left), and Mr. Abdullah I. Al-Jof, Technical Training Coordinator (back row, second from left), from the Eastern Province Branch of the Saudi Arabian Ministry of Petroleum and Mineral Resources*

to JCCP, we promised JCCP's cooperation, giving an outline of the implementation of JCCP courses and taking the Saudi delegation on a tour of the training facilities in JCCP Headquarters. As a regular course on "Environmental Management for Refineries" is slated to be held in September, we also provided a detailed description of this course, as it pertains to Saudi Arabia's current issues of interest.

In Saudi Arabia, refineries essentially form an entire town. As the governing authority of refineries, the Ministry of Petroleum and Mineral Resources must not only assess the impact of refinery waste on the surrounding water, air, and soil environments, but it is also responsible for regulating the output of domestic waste from employee housing belonging to the company, as well as medical waste produced by hospitals.

We understand that the ministry hopes to systematize its environmental management technologies and incorporate them in environmental laws and regulations in Saudi Arabia in the future, and intend to do all we can to contribute to their efforts.

*<by Hisayoshi Tanda, Administration Dept.>*

# Participation in Middle East Petrotech 2010 in Bahrain

The 7th Middle East Petrotech 2010 was held over a three-day period from May 24 to 26, 2010 at the Bahrain International Exhibition & Convention Centre, and JCCP participated in the exhibition part of the event.

Middle East Petrotech is held once every two years under the auspices of Arabian Exhibition Management, and is sponsored by state-run oil companies and petrochemical companies in the Middle East region, such as Bahrain Petroleum Company (BAPCO), Kuwait Petroleum Company (KPC), Saudi Arabian Oil Company (Saudi Aramco), Qatar Petroleum (QP), Petrochemicals Industries Company (PIC), Kuwait National Petroleum Company (KNPC), and Petro Rabigh; and Western oil and petrochemical companies such as ExxonMobil, UOP, Dow Chemical, and Shell. It is the largest international event held in the Middle East, and plays an important role in the development and exchange of

technologies in the oil downstream sector. This year's conference sessions and exhibition evolved around the main theme of "Downstream Challenges: Financing, Market Changes & Technology."

## 1. Background

JCCP participated in the past three Petrotech events as a booth exhibitor, and has steadily increased its profile by introducing JCCP activities to oil-related companies and institutions from Middle East oil-producing countries. Recognizing that Middle East Petrotech provides an ideal opportunity to widely publicize JCCP activities to Middle East oil-producing countries, we have once again operated a booth at this year's exhibition.

## 2. Preparation

The JCCP booth occupied an 18-square-meter area, and featured 12 information panels. To attract as many visitors as possible to the booth and promote accurate understanding of JCCP activities within a short time, the booth was designed to make maximum use of limited space, with the following considerations.

- Group the panels according to the two main pillars of training programs and technical cooperation projects to introduce the organizational structure of JCCP while emphasizing international friendship and mutual understanding.
- Keep explanations short, use large-sized text as much as possible, and select photos that have impact and would capture visitors' interest.
- Create a sense of unity by giving all panels a common design element associated with Japan, to visually appeal to visitors.

As a result of these considerations, the booth was designed and arranged as shown in the photos below. Moreover, to promote an understanding of JCCP activities at a glance, a slogan was employed for the first time: "Connected by technology, person-to-person." Under this slogan, the booth displayed tapestries of 4 sub-themes accompanied by two explanatory posters each.



Venue of the 7th Middle East Petrotech 2010



JCCP members



Exhibition panels



JCCP exhibition booth

### 3. Visitors to the JCCP Booth

During the course of the exhibition period, executive members from sponsor state-run oil companies, including Saudi Aramco, BAPCO, QP, and KNPC, visited each of the booths. Among them was Mr. Mohammed A. Al-Omair, Executive Director, Refining & NGL Fractionation, Saudi Aramco, who also served as vice chairman of the Middle East Petrotech 2010 Executive Committee. Mr. Al-Omair, having participated in the JCCP International Symposium held in January as a keynote lecturer, visited the JCCP booth with the fondness of a close associate and expressed delight in JCCP's participation in the exhibition.

The JCCP booth received many visitors from Middle East oil-producing countries, and particularly from Bahrain's BAPCO and Saudi Aramco's Head Office and Ras Tanura Refinery, which are located within close distance to Bahrain.

Many JCCP graduates and members who have taken part in a JCCP technical cooperation project also visited

the JCCP booth upon spotting the familiar JCCP logo, to exchange news about their present situations. There were many familiar faces, from those who completed a JCCP course just recently, to those who participated in a course more than ten years ago. Some graduates noted that they continued to take an interest in JCCP activities even after completing their respective courses, and have kept track of current developments in JCCP activities through *JCCP NEWS*. Many others said they gained such a valuable experience from their participation in a JCCP course that they actively talk about it with their superiors and recommend their colleagues to also attend. Through such conversations, we reaffirmed the important role that JCCP graduates assume in spreading word about JCCP activities.

There were also many people who have never attended a JCCP course themselves but have heard about JCCP from subordinates and colleagues who have attended a JCCP course or participated in a technical cooperation project. To visitors unfamiliar with JCCP, we used the posters in the booth to introduce JCCP activities and elicited their strong interest. Many even ended up requesting more information on the types of training programs JCCP offers and how to apply for them.

Among the visitors to the JCCP booth, there were those who saw the tapestries and poster slogans and merely stopped by to find out what they mean, as well as those who were simply drawn to the booth by the keywords in and of themselves. For instance, they asked what the expression "Fostering friendship" means and what "Hands-on training" specifically refers to, and gave us the opportunity to provide an overview of JCCP and its activities and to introduce regular training courses by showing them the regular course program for the year. In other words, these interactions demonstrated that the



Mr. Mohammad A. Al-Omair, Executive Director, Refining & NGL Fractionation, Saudi Aramco (second from right)



Visitors at the JCCP booth



Visitors inquiring about participation in a JCCP training program

slogan, which was used for the first time at this event, was highly effective in drawing visitors to the JCCP booth.

In regard to JCCP training programs, the JCCP booth received many requests for participation in a course on environmental and safety issues. With respect to technical cooperation projects, visitors posed many questions concerning water, and learned that JCCP is actively providing cooperation in addressing water-related issues such as refinery wastewater treatment and treatment of crude oil-associated water. These requests and inquiries were indicative of the high level of interest in environmental issues among refineries in Middle East oil-producing countries.

By participating in the Middle East Petrotech 2010 exhibition, JCCP introduced its activities to a wide audience and received greater public recognition in the Middle East. The opportunity to communicate the essence of JCCP activities to a large number of people over the three-day period proved to be extremely beneficial, as the international event brought together diverse parties from the oil downstream sectors in the GCC countries, as well as key figures from major oil-producing countries in the Middle East. Encouraged by this experience, JCCP will seek further opportunities like Middle East Petrotech 2010 to more widely introduce JCCP activities.

<by Masumi Kitahara, Administration Dept.>



# Seminar on Energy Saving and Maintenance in the Refinery Held at SINOPEC

## 1. Background

JCCP conducted a Customized Program-Overseas (CPO) for SINOPEC on refinery efficiency and energy saving, from April 12 to 15, 2010. Mr. Wang Tianpu, President of SINOPEC, initially suggested the implementation of the program in a meeting with Mr. Masataka Sase, Executive Director JCCP, when Mr. Sase visited SINOPEC's Head Office last year. At that time, Mr. Wang noted that efficiency improvement and energy saving in the refinery will likely become important issues in the mutual cooperation between SINOPEC and JCCP, and that it would therefore be appropriate to take up these issues as a common theme to refineries in China and Japan. More specifically, the SINOPEC side requested a program that would cover a wide range of topics including energy conservation, efficiency improvement, TPM, loss prevention, and maintenance management, and we responded by designing a program that covers these topics in four separate sessions, as shown below.

- Day 1: General discussion of energy saving in Japanese refineries
- Day 2: Case examples of energy saving  
New energy-saving technologies developed in recent years
- Day 3: Implementation status of energy-saving technologies  
Kaizen activities in Japanese refineries



*Lecture scene at the seminar venue*

Day 4: Case examples of efficiency improvement in Japanese refineries (TPM, maintenance management, loss prevention, etc.)

A team of four lecturers made the trip to SINOPEC to hold the seminar. They included two lecturers from JCCP's Training Department (T. Kubota and S. Miyawaki) and two experts from JCCP member companies, Mr. Hiroshi Sano (Idemitsu Kosan Co., Ltd.) and Mr. Takeshi Koyama (JGC Corporation).

## 2. Details of the Seminar

As many as 57 people applied for the seminar, a number greatly exceeding our expectations, as an indication of SINOPEC's strong interest in the seminar. The participants were mainly management-class employees and executive-class refinery employees from the company's Head Office, Science and Technology Development Department, and nine refineries. The majority were from major refineries that are well known even in Japan, such as the Maoming, Qingdao, Tianjin, and Shanghai-Gaoqiao Refineries, with several members representing each refinery.

The seminar opened with welcome messages by Mr. Zhang Zheng, Deputy Director General, Foreign Affairs Dept., and Mr. Jiang Zheng Hong, President of the Zhenhai Refinery. They thanked JCCP for its implementation of training programs over many years since its establishment, and also expressed their expectations of the seminar, recognizing it as an important event involving a significant number of participants from the Zhenhai Refinery and other major refineries under SINOPEC.

Mr. Zhang and his staff, Mr. Rong Qi and Ms. Yang Ailing, Director and Deputy Director, respectively, of the Cooperation Division, Foreign Affairs Bureau, have long engaged in SINOPEC's overseas businesses, which began to expand in the late 1900s, and possess a network of personal connections in the Japanese government, JCCP, and other oil-related institutions in Japan. They



Q&A session

were thus ideal coordinators of the seminar's successful implementation. JCCP thanked the SINOPEC side for its warm reception and for their wide-ranging cooperation from the planning stage of the seminar, particularly because this seminar was the first CPO to be held at SINOPEC in almost ten years (the last CPO was held in 2000 at the Qilu Refinery).

The program commenced with an introduction of the Zhenhai Refinery. The refinery commenced operations in 1975 as the Zhejiang Refining & Chemical Company, and was thereafter brought under the management of SINOPEC. Today, it has a crude oil processing capacity of 23 million tons/year, and ranks 17th in the world in terms of crude oil processing capacity by a single refinery. Its sea berth has the capacity to handle 45 million tons/year of crude oil and crude oil products.

The lecture on case examples of energy saving in the refinery elicited numerous questions from the participants concerning efficiency improvement and the latest energy-saving technologies. Among the explanations that were given, the introduction of a new energy-saving distillation system (divided wall column for separating three components, etc.) captured the participants' strong interest. We gathered from this response that SINOPEC might perhaps be aiming to apply and introduce said technology to energy-consuming petrochemical plants that are attached to most of the state-of-the-art refineries under SINOPEC.

During the latter half of the program, each lecturer introduced broad-ranging technology improvement initiatives of many refineries, in relation to themes covered in the first half of the program (TPM, maintenance management, etc.). These presentations also drew forth many detailed questions from the audience, mainly in regard to new technologies. The participants' intense

interest in new technologies appears to stem from the top runner system employed in SINOPEC's refineries. As SINOPEC manages more than 40 refineries throughout the country, it makes sure that new energy-saving technologies are fully disseminated to all of its refineries by initially introducing them to outstanding top-class refineries, such as those represented by the participants of the seminar, and sequentially applying them to the conventional smaller refineries under its management.

### 3. Summary of the Seminar

The Zhenhai Refinery, located in close proximity to the seminar venue, has just commenced operations of a new ethylene plant built to increase the value of its products. SINOPEC also has plans to renovate and install new facilities in existing plants, to improve refinery efficiency in the future. Due to these initiatives, participants displayed, throughout the seminar, strong commitment to acquiring the latest energy-saving technologies and to preventing operational loss. Additionally, given the diversity of members from various departments, including head office personnel and engineers from oil refining departments who will be in charge of engineering the new facilities under consideration, SINOPEC's firm stance toward advancing the above improvement initiatives by acquiring new energy-saving and loss-prevention technologies was also evident in all aspects of their conduct. Even in the closing statement of the seminar, there was mention of the fact that the program provided many practical and important case examples of efficiency and improvement measures in the refinery, and that these and other reality-based presentations were highly helpful in raising cost awareness among the seminar participants. Such official stamps of approval from the hosting party of the seminar came as a reward to the efforts of the Japanese lecturers who took the podium in each of the sessions, and encouraged them to bring the seminar program to a successful close.

Today, the Chinese automobile industry is growing into the world's largest producer of automobiles, even exceeding the United States, and SINOPEC and other state-run oil companies are pushing ahead with plans to construct new refineries in response to the explosive trend of motorization (drastic increase in the consumption of automotive fuels). Amid this fast pace of change and transformation, the Zhenhai Refinery and

other major refineries are operating at rates far exceeding 90%. Especially to refineries with such high operating rates, loss prevention, efficiency improvement, and stable operations are fast becoming issues of primary concern.

Based on conscious awareness of the above situation, seminar participants fulfilled their responsibilities as executive employees of SINOPEC's head office and refinery departments. The fervor with which they pursued an accurate understanding of each case example based on Japanese experience during the Q&A sessions

left a strong impression on the JCCP lecturers.

JCCP feels that identifying future directions that would benefit both JCCP and SINOPEC through such forums as this seminar would come to have even greater meaning in the framework of cooperative development in the East Asian economic community, as the community is showing rapid growth in recent years. In this respect, we believe that the successful completion of this seminar as originally planned, with the cooperation of various departments, is a meaningful achievement in and of itself.

*<by Shintaro Miyawaki, Training Dept.>*



*Seminar participants*



# Seminar on Refinery Maintenance Management and TPM Held at Saudi Aramco



*JCCP-side lecturers with the management of Southern Area Oil Operations and participants of Part 2 of the seminar*

Saudi Aramco is currently implementing improvement and reform activities with a focus on safety management and preventive inspection, with the aim of upgrading facility inspection technologies in Saudi Arabia. To complement its efforts, it sought JCCP's cooperation in learning about the current state of improvement activities such as Total Productive Management (TPM) and the latest maintenance management techniques employed by Japanese refineries. In response to this request, JCCP and Saudi Aramco have begun to hold a Customized Program-Overseas (CPO) on a regular basis.

This year's seminar was divided into two parts and held at two different venues. Part 1 was held at Yanbu NGL Fractionation Department from April 22 to 30, 2010, and Part 2 was held at the North Ghawar Producing Department (Southern Area Oil Operations) from May 1 to 5, 2010. Part 1 has been held in turn among four refineries and two NGL fractionation departments, and was held for the third time this year. Part 2 was held this year as a result of a request made by a participant who attended a TPM seminar in fiscal 2008 for implementation of the seminar in his department.



*With the management of Southern Area Oil Operations*



*Part 1 lecture session: Mr. Keisuke Suzuki from Idemitsu Kosan*



*Part 1 presentation of group discussion results*



*Part 2 presentation of group discussion results*

Four Japanese lecturers conducted the seminar. They included a lecturer from JCCP's Training Department (F. Tone) and three external experts (Mr. Akio Higashi from Showa Shell Sekiyu K.K.; and Messrs. Yoshisumi Tamao and Keisuke Suzuki from Idemitsu Kosan Co., Ltd.). A carefully selected group of 27 participants from Saudi Aramco's four refineries and two NGL fractionation departments attended Part 1 of the seminar, and 36 participants from departments related to Southern Area Oil Operations attended Part 2.

As the seminar was to be held at Southern Area Oil Operations for the first time, Part 2 was held with the attendance of Mr. Saad A. Turaiki, Vice President, and all management employees of the North Ghawar Producing Department. The Southern Area Oil Operations' strong expectations of the seminar were also evident in the opening speech given by Mr. Abdullah Al-Helal, Manager, North Ghawar Producing Department. Mr. Al-Helal spoke about Saudi Aramco's company-wide maintenance activities launched in 2005 and their relationship to JCCP training programs, and also introduced the historical relationship between Saudi Arabia and Japan.

The seminar program was designed in consideration of the fact that the majority of the participants in both Parts 1 and 2 of the seminar were maintenance engineers. On the first day, a lecture provided an outline of the history and present state of maintenance management in Japanese refineries. The second day's lecture introduced maintenance management issues that Japanese refineries have confronted and resolved, and discussed the necessity, purpose and aim of TPM activities. The third day's lecture provided greater understanding of TPM by presenting case examples of improvement measures taken by two refineries which introduced TPM in advance of other refineries in Japan and faced various frustrating experiences in the process of its introduction. On the fourth day, participants engaged in group discussions, which were particularly well received in previous TPM seminars, to provide an awareness of the significance of small-group activities. As typical of TPM activities, the participants divided into small groups and discussed various issues to gain conscious awareness of the actions they take in order to solve a problem.

In the performance exercise on "workplace issues and solutions," each group discussed the gap (problem) between their ideal images of the workplace and reality, and presented the results of their discussions with the other groups.

Specific discussion themes for the group in Part 1 of the seminar were "the handing down of technical experience," "fire-extinguishing water control system," "employee capability," and "refinery margin." In Part 2, they were "experienced employees," "generational gap in experience," "employee morale," "reliability of rotary equipment," and "manpower." As can be seen from these themes, the handing down of technologies across generations and the quality of engineers are



*With participants of Part 1 of the seminar*

main issues of concern, as they are also in Japan. To prevent the groups from identifying problem areas without careful consideration, or from trying to deny personal involvement by simply dismissing the issue as a management problem, the lecturers guided the direction of discussions by asking “why, why, why” over and over again.

We noted some noteworthy changes in this year’s discussions. For one, the discussion on the theme of “refinery margin” indicated that cost awareness has also begun to spread throughout the operational field. Another major change from last year’s discussions is that younger employees have begun taking a more assertive role in addressing and seeking improvement in employee-related issues. The early retirement of long-time employees in their 50s was raised as a common issue in the discussions on “employee capacity” in Part 1 and on “experienced employees” and “employee morale” in Part 2. The participants claimed that this is one of the factors relating to the handing down of technology. Moreover, the recognition that a large generational gap exists, with employee age distribution peaking in the 50s and 20s age groups, underscored the issue of how to hand down experience and knowledge from the older to younger generations and prevent the decline of employee technical skills as a whole. This also happens to be an issue of concern in Japan, but the difference is that the under-16 population accounts for 40% of the total population in Saudi Arabia. Saudi Aramco is addressing the issue by expanding job categories (increasing

equipment capacities, constructing new refineries) to increase employment, but the company is still facing a dilemma, due to the large difference in the motivation levels of long-time employees and younger employees. Even during group discussions, the younger employees accurately assessed the issue of their poor motivation as stemming from early retirement, and actively sought to improve the situation.

Judging by the lively group discussions and the many comments we received that the course was extremely helpful, we feel we have accomplished the expected goal of the seminar, for the most part. However, as some of the younger employees noted that they desire a deeper technology-oriented program, some changes might be needed to respond to differing needs among participants of different age groups. Some other participants suggested providing comparisons with the situation in Japan, premised on the lecturers’ preliminary efforts to understand the situation at Saudi Aramco. As these opinions seem to indicate, perhaps it is time to reassess and review the future direction of the seminar in reference to Saudi Aramco’s needs.

We intend to maintain close communications with the seminar staff on the Saudi Aramco side, to more accurately grasp the needs of each department at Saudi Aramco and implement as meaningful a seminar as possible in the future. A strong partnership is especially important, in order to respond swiftly to policy changes that occur when personnel changes are made every two to three years at Saudi Aramco.

*<by Fumihito Tone, Training Dept.>*



Article of the seminar in the Arabian Sun (June 16, 2010)

# Information Exchange and Training for Young Engineers in Japan and Saudi Arabia

As a new undertaking, JCCP has implemented a training program intended to contribute to human resource development in oil-producing countries and Japan through information exchange among young engineers. Selected young engineers visit refineries and oil-related facilities in the counterpart country to assess training needs at the field level and to seek and discover mutual knowledge of technologies, business operations, the background to those operations, and solutions to common issues. Through this interaction, they are also encouraged to share future visions, form friendships, and strengthen relations between oil-producing and consuming countries.



*With young engineers from Japan and Saudi Arabia*

## 1. Young Japanese Engineers Dispatched to Saudi Aramco

### 1-1. Objective

Under the program, five young engineers from Japan visited Saudi Arabia from May 12 to 20, 2010, to exchange information and establish relationships of trust with young engineers at Saudi Aramco. The five engineers were Mr. Hidetaka Morishige (Safety and Environmental Protection Section, Aichi Refinery, Idemitsu Kosan Co., Ltd.), Mr. Masaya Hashimoto (Maintenance & Engineering Section, Sakaide Refinery, Cosmo Oil Co., Ltd.), Mr. Gakushi Yamagishi (Petroleum Refining Department, Japan Energy Corporation), Mr. Tomohito Shimpo (Technological Section, Showa

Yokkaichi Sekiyu Co., Ltd.), and Mr. Masahiro Suzuki (Planning Group, Negishi Refinery, Nippon Petroleum Refining Co., Ltd.). They were accompanied by F. Tone from JCCP's Training Department.

### 1-2. Destinations and Overview

#### (1) Ras Tanura Refinery, Saudi Aramco

The Ras Tanura Refinery sends many participants to JCCP training programs. For this exchange program, the refinery's training division provided generous cooperation in recommending departments that the young engineers from Japan should visit at Saudi Aramco, and in providing advice and making appointments.

After a staff member introduced the Ras Tanura Refinery to the Japanese group, Mr. Khalid Al-Mutairi, Training Unit Supervisor, explained that the Training Unit has the responsibility not only to teach skills, but also to develop human resources capable of contributing to Saudi development with the goal of elevating Saudi Arabia to a leadership role in the Middle East region. Mr. Al-Mutairi also said he would like the Japanese engineers to take advantage of the exchange program and gain a good grasp of Saudi Aramco's present situation.

After the warm welcome from Mr. Al-Mutairi and his staff, an employee (Mr. Mohammed Saeed Al-Shahrani) who participated in JCCP's Safety Management Course (TR-9-09) last year gave a tour of the refinery's North and South Oil Operation Divisions and their respective



*With management personnel at the Ras Tanura Refinery*

control rooms. In both control rooms, Saudi operators greeted the Japanese group with warm handshakes, which resonated in the hearts of the Japanese engineers. The engineers also met with the maintenance manager and operations manager of the refinery, and received a request for revamping JCCP's training course programs and other precious advice.

## (2) Ras Tanura Terminal

In cooperation with OSPAS (mentioned later), this terminal receives crude oil that is sent from the oilfields via pipeline to shipping stations located in Ras Tanura and Juaymah, and transfers it to tankers and other vessels, as well as receives and transfers oil products produced in the Ras Tanura Refinery and the Juaymah NGL Fractionation Plant. It is also responsible for managing tanks and guiding tankers to shipping berths. As the terminal essentially operates a tank farm, staff members here expressed interest in learning about tank accident cases in Japan, and requested a course on tank inspection and management.



*View of the South Terminal (from the Saudi Aramco website)*

## (3) Dhahran Shop Division

This division was established for the purpose of supporting the stable supply of crude oil by providing inspections of rotary and other equipment, when there were no major equipment manufacturers in Saudi Arabia. Today, it operates three plants in Dhahran, Juaymah, and Yanbu, and specializes in the repair of motors, pumps, steam turbines, heat exchangers, and gearboxes. Engineers undergo training at the Training Unit for the first two years after they join the company and receive on-the-job training (OJT) once they are assigned to this department. They are also given opportunities to receive training at foreign manufacturing companies (in the US, UK, etc.) to strengthen their technical skills. Since the

department was unfamiliar with JCCP courses until this time, the JCCP members promised to maintain close contact in the future.

## (4) Oil Supply Planning and Scheduling Center (OSPAS)

OSPAS is the oil supply center of Saudi Aramco. It monitors and controls the operation, production, and transportation data of all oil and gas operations in Saudi Arabia. A large screen displays five different categories of data: Refining Network, Terminal Planning & Scheduling, Crude Oil Network, Gas & NGL Network, and Electric Network. As it is difficult even for Saudi Aramco employees to visit OSPAS, the Japanese engineers felt both honored and humbled at the opportunity and were impressed to no end by all its trappings.



*Giant screen in the OSPAS control room (from the Saudi Aramco website)*

## (5) North Oil Operation Division

The North Oil Operation Division operates a crude oil processing plant which commenced operations in 2004 with a capacity to supply 500,000 BD of AL (Arabian light) crude oil, 300,000 BD of AM (Arabian



*At the Qatif crude oil processing plant*

medium) crude oil, and 40,000 BD of condensate. The Qatif Oilfield, discovered in 1945, is spread over an area of 50km × 10km. The Japanese group was unable to visit the actual oil wells, but they were allowed inside a plant that transports crude oil from the oil wells to the processing facility. Members of the division expressed interest in all JCCP regular courses, and requested JCCP to implement the same TPM course that was previously implemented at Abqaiq in the north region.

#### **(6) Ras Tanura Laboratory Division**

Here the Japanese group received an overview and tour of the facility from staff members who participated in a JCCP course in the past. As Saudi Aramco exports oil products worldwide, the laboratory performs various tests and activities to increase the integrity of quality control data. Staff members noted that many of them have participated in a JCCP course, and are now producing significant results in bringing improvements to the workplace. In fact, it was evident throughout the facility that hints and ideas acquired from visits to oil-related facilities in Japan during the courses were applied to the laboratory with successful results.

#### **(7) Exchange of views with young engineers**

The young engineers from Japan held a deep and meaningful exchange of views with five young engineers at Saudi Aramco after introducing themselves and sharing their expectations and impressions of this program.

Here are a few of the main Q&As that took place.

Question from the Saudi side: “There is an extremely large number of refineries in Japan. Why are there so many, and how efficient are they?”

The JCCP side explained as follows: “Refineries with small capacities tend to lag behind in terms of efficiency. In the past, there were many more refineries throughout Japan, but their numbers were reduced through consolidation and amalgamation. For this reason, competition is severe, and there is an extremely high level of awareness concerning operational improvement in Japan.”

Question from the Saudi side: “There are many oil companies in Japan, but do these companies actively exchange information with each other?”

The JCCP side explained as follows: “Exchanging information among different companies is not necessarily common practice, but active exchanges of technical information take place in technical conferences that are held in regard to specific unit categories. In addition to

the exchange of technical information, discussions on trouble cases, process issues and their countermeasures are also held at these conferences.” The Saudi engineers indicated strong interest in the fact that there are forums for sharing technical information in Japan, and appeared to want to participate in them if at all possible.

In regard to JCCP training programs, there were opinions that hands-on training is essential to programs related to maintenance themes, and that the 11 to 18 days that are currently allotted to hands-on training should be expanded to 2 to 3 months. Other opinions noted that an evaluation system is needed to assess participants’ degree of understanding. The JCCP side replied that it will give due consideration of these opinions.



*Young engineers of Saudi Aramco*



*With the JCCP participants, after holding an exchange of views*

### **1-3. Summary**

This program was the first of its kind, but thanks to the cooperation of Saudi Aramco and its various departments, we feel it was a meaningful program that produced substantial results. The young engineers from Japan came into the program with a forward-looking and assertive attitude as representatives of the companies they belong to, and inquired about many aspects of Saudi Aramco’s operations with the aim of understanding the differences between their companies and Saudi Aramco.

One of the main objectives of the program was to collect views about JCCP’s training programs, but we received

proposals and ideas far surpassing our expectations, which underscored the importance of implementing this type of program on a continuous basis. Included were proposals for courses in which veteran employees (management) and young employees can mutually engage in discussions, technical courses specifically designed in reference to the equipment configuration and future plans of the participant company, courses that analyze failure cases relevant to engineers, and courses on analysis of failure cases intended for operators.

## 2. Invitation of Young Engineers from Saudi Aramco to Japan

### 2-1. Objective

A group of six young engineers from Saudi Aramco were invited to Japan for the period between June 8 and 18, 2010, to gain an understanding of Japan's oil industry and strengthen ties of information exchange and trust with young engineers in Japanese oil companies. With the cooperation of a number of oil companies in Japan, they observed the import, transfer, storage system and the operational, safety, and maintenance management systems in Japanese refineries, and gained an understanding of uniquely Japanese activities such as TPM activities, and the market situation in Japan.

### 2-2. Companies and Overview

At JCCP, we provided an outline of the present state of the oil industry in Japan through lectures on the "Present State and Issues in Japan's Oil Industry," "Safety Management in the Refinery, the Creation and Activities of a Safety Culture," and "Energy Saving for Profitability Improvement."

#### (1) Chiba Refinery & Anesaki Oil Station, Idemitsu Kosan Co., Ltd.

The arrival of the group of engineers from Saudi Aramco coincided with the early-morning shift change at the Chiba Refinery. They therefore experienced the shift-change process, performing the "radio exercise" that begins each workday, observing safety confirmation activities and the TBM (Tool Box Meeting) activity, and taking part in the "point and call" (pointing with a finger and calling out for confirmation) of safety slogans. The Saudi engineers said the experience was valuable, and that they wish to introduce the activities to Saudi

Aramco. In the control room they acquired knowledge about TPM activities, and in the field they examined various improvement measures, some of which they felt were applicable to their refineries. Furthermore, they visited a gasoline station located in front of the Chiba Refinery and inspected the tires, lubricating oils, and servicing tools sold in the station. They also observed with interest service station staff receiving training on window wiping and car washing, and reflected on the level of services in Saudi Arabia.



*Taking part in the "radio exercise"*

#### (2) Kiire Terminal, Nippon Oil Staging Terminal Co., Ltd.

The group of Saudi engineers were ferried to a berth where a VLCC was actually docked, and received an explanation of the crude oil discharging task. They also inspected the control room from where all terminal operations are controlled, and gained a general understanding of the system that controls and manages the process of discharging crude oil and loading it onto domestic vessels, through detailed explanations. In the tank yard, the group inspected the tanker vapor recovery (TVR) unit that was independently developed by Nippon Oil Staging Terminal. As vapor emissions that are released when loading crude oil to a VLCC are simply burned as flare gas at Saudi Aramco, the Saudi engineers took an interest in the explanation that vapor recovery could lead to an increase in profit, and seemed impressed with its environmental management and cost management aspects.

#### (3) Sakaide Refinery, Cosmo Oil Co., Ltd.

The training at Sakaide Refinery focused on maintenance management, and the group from Saudi

Aramco examined the operational management system in the integrated control room and toured the refinery site. Mr. Masaya Hashimoto, Maintenance & Engineering Section, who was one of the members of the group of young Japanese engineers to Saudi Aramco, explained the importance of preventive maintenance through a comparison of daily maintenance and periodic maintenance activities. The importance of diagnosis technologies in addressing aging facilities was also discussed.

#### **(4) Yokkaichi Refinery, Showa Yokkaichi Sekiyu Co., Ltd.**

The focus of the training at Yokkaichi Refinery was on providing an understanding of the upgrading processes of heavy oil in Japanese oil companies. The Saudi engineers visited the control rooms of various units and received detailed explanations about diverse technologies. For example, in the control room of the heavy oil processing unit, a miniature model of the facility that was created at the detailed design stage was used to explain how the initial design was revised after confirming the ideal equipment layout for routine rounds and inspections and the role of engineers. Since designs are confirmed using a 3D simulation model in most cases today, the Saudi engineers seemed to recognize anew the important role of physical models in facilitating understanding. Mr. Tomohito Shimpo, Technological Section, who was one of the members of the group of young Japanese engineers to Saudi Aramco, explained the upgrading process of heavy oil in Japan in detail, and engaged the Saudi engineers in a discussion on technologies related to RFCC risers and catalyst regeneration columns and technologies related to catalyst direct desulfurization.

#### **(5) JGC Corporation World Operations Center**

At JGC Corporation, one of the most prominent

engineering companies in Japan, the group of Saudi Aramco engineers received an inspiring practical lecture on project management based on the lecturer's own experience. They were also given a presentation on A-MIS (Advanced Maintenance Inspection Supporting System), a system for estimating maintenance and inspection periods from inspection logs and time changes observed in static equipment, and actively discussed the technology from various angles. The lecture on equipment life prediction technology for turnaround maintenance, however, was highly technical and a challenge to fully comprehend for some members.

#### **2-3. Group Discussions**

The young engineers from Saudi Aramco took part in group discussions with the young engineers from Japan who earlier visited Saudi Arabia, to compare issues of concern and future challenges of young engineers, seek points in common to both countries, and deepen mutual exchanges. Divided into three groups composed of both Japanese and Saudi engineers, they were instructed to come up with a topic related to the theme of "workplace issues and countermeasures, and personal action plans" by having each person share issues that he perceives, contemplates or faces daily, and discussing common issues and their priority as a group. As a result of discussions, each group happened to select an issue related to the disparity between veteran and young employees or to the handing down of knowledge and skills. Not only Saudi engineers but also Japanese engineers took an active part in sharing their thoughts, and helped move the discussions along by initiating the analysis of causes and summarizing the key points. Each group examined the causes from various angles and proposed solutions. In the analysis of causes, the groups did not go beyond identifying such general factors as



*At Showa Yokkaichi Sekiyu*



*Engineers engaged in discussion*



*Presentation of group discussion results*

the superficial system, management method, and the responsibility of superiors. As solutions, they articulated their wishes without proposing specific measures, and in the final analysis they were unfortunately unable to create personal action plans for taking voluntary action. However, their discovery that young engineers in both Saudi Arabia and Japan share the same issues was an achievement in itself. We hope that these engineers will take the opportunity of their group discussions to keep in contact with each other and develop a relationship of friendly competition.

#### **2-4. Observations of the Program**

To design a completely new type of program, we realize we may have made some challenging demands of companies we visited, but we are simply grateful that they more than came through for us, providing training in locations that are not accessible in regular courses and giving lectures in the greatest detail. Judging by the responses of the participants, they also appreciated the experience to a great degree. However, some noted that they would have liked to experience an actual site of training implemented by refineries and case-based training backed by scientific facts. Some others said that the program might have been even more helpful if it included training at an equipment or device manufacturer. We will take these opinions into consideration in future programs. As this was the first attempt at implementing this program, we only invited the participation of oil companies, but we hope to expand the scope of the program more widely in the future.

The overall evaluation of the program was that it was beneficial to the respective duties of each participant. Some of the practices and qualities of Japanese

companies the participants discovered and wished to apply to their workplaces were the following: good teamwork, mutual trust and respect, large collective office spaces that promote communication and facilitate the dissemination of discussion results, and energy-saving initiatives. In regard to the composition of participants, many opinions indicated that a mixed group of young engineers from a multiple number of countries would be ideal, so that various views could be exchanged among engineers of different countries and not only with Japanese engineers. In a sense, we feel that this type of request is also characteristic of a JCCP program.

The engineers who participated in this program were consciously aware that they are officer candidates at Saudi Aramco, and that they were selected for this program to represent the company. Their questions were always to the point, and they engaged in discussions with such active and open minds that even the lecturers and member company staff members were duly impressed.

As this program was the first of its kind to be implemented, many factors need to be considered, to upgrade the program next year. For example, we need to consider including an element in the program that would satisfy participants' desire to learn about Japan as a country, respond to their strong request for training at an equipment manufacturer (in consideration of the fact that they are engineers and the equipment they operate is mostly Japan-made), develop an idea for providing a look at how training is implemented in Japan, and explore the validity of extending the program by a few days and inviting the participation of young engineers from several countries at a time.

### **3. General Summary**

This program was planned and implemented for the first time this year, with the objective of deepening mutual understanding and creating a foundation for new relationships among young engineers in Japan and Saudi Aramco. Given its recent completion, we wish to interview the superiors of the young Japanese and Saudi engineers who participated in the program, as well as staff members who were in charge of the training units, to obtain their evaluations of the program, and their opinions, suggestions, and requests for continuation of the program in the future. In addition to their input, we will also consider designing an exchange program for young engineers from multiple countries, in planning next year's program.

*<by Fumihito Tone, Training Dept.>*

# Report on the Cooperation with Training Centers Program

—Saudi Arabia, Qatar, UAE, Oman—

A two-member delegation from JCCP, consisting of A. Yamanaka, General Manager, Operations Department, and K. Kojima, Lecturer, Training Department, visited Saudi Arabia, Qatar, UAE and Oman from February 18 to March 1, 2010 under the Cooperation with Training Center Program.

The main objectives of the visits were to introduce and promote the FY2010 JCCP regular course programs, explain and discuss in detail the implementation of customized programs, and exchange views with JCCP counterparts in those countries.

## Saudi Arabia

The JCCP delegation visited Saudi Aramco's Ras Tanura Refinery on February 20 and held a meeting with Mr. Mohammed A. Al-Omair, Executive Director, Refining & NGL Fractionation, and his staff. Mr. Al-Omair is responsible for overseeing all refineries operated by Saudi Aramco.

After expressing his appreciation of JCCP training programs and technical cooperation projects, Mr. Al-Omair noted that he has recently begun requiring participants to submit a report after completing their training courses at JCCP. He also put forth a request for a Customized Program-Japan (CPJ) in fiscal 2010.

JCCP proposed the implementation of an information exchange program between young employees of Saudi

Aramco and Japanese oil companies. As the training of young employees is an important issue at Saudi Aramco, the proposed program, which focuses on training young employees, was well-received by Saudi Aramco. To JCCP, the program would provide a means for assessing new training needs in oil-producing countries.

Following the meeting, the delegation was shown Saudi Aramco's impressive laboratory, meticulously managed to ensure safety and health.

## Qatar

On February 22, the JCCP delegation visited Qatar Petroleum (QP) and met with Mr. Mohamed Normarzuki Bin Yaacob, Senior Supervisor, Short Tech., Corporate Training, and his staff.

Mr. Yaacob thanked JCCP for its cooperation through training programs and technical cooperation projects, and then mentioned a few points in regard to QP's future participation in JCCP regular courses. He explained that QP was unable to send many participants overseas last year due to the outbreak of the H1N1 influenza virus, but plans to increase its participation this year, given the improved situation. He also said he will consider QP's participation in JCCP training programs comprehensively, in reference to JCCP member company courses as well.

On February 23, the delegation visited the



Meeting with Mr. Mohammed A. Al-Omair, Executive Director (center), at Saudi Aramco's Ras Tanura Refinery



Meeting at the QP Head Office



*Meeting at the TASWEEQ Head Office*

Qatar International Petroleum Marketing Company (TASWEEQ) and met with Mr. Anton Bray, Marketing Director, Condensate & Refined Products, and his staff. TASWEEQ is wholly owned by the Qatari government, and mainly engages in the export and sales of petroleum products. This was the first visit made by a JCCP delegation.

The delegation introduced JCCP and its activities, gave an overview of the FY2010 regular course program and customized training program. They also explained and requested TASWEEQ's participation in the FY2010 JCCP Program Seminar (TCJ) that is scheduled to be held in Japan this July for JCCP counterpart personnel.

Mr. Bray said he would need to discuss the possibility of customized programs with other officers of TASWEEQ, but wishes to implement several Customized Programs-Japan (CPJ) and Customized Programs-Overseas (CPO) on separate occasions during the year. He also said he would like the CPJ to be designed mainly for Qatari personnel, in consideration of the number of participants the program could accommodate and the duties of the participants, and the CPO, for all employees.

## UAE

On February 24, the JCCP delegation visited Abu Dhabi Oil Refining Company (TAKREER) to meet with Mr. Ja'afar Salem Al-Jaberi, HR & Administration Division Manager, Mr. Ahmed Herzallah, Senior Career Development Officer, HR & Administration Division, and other staff members.

TAKREER thanked JCCP for its support through training programs and technical cooperation projects, and talked about several topics, such as the fact that officers at the president's assistant level were reshuffled

to better implement the capacity increase project planned for the Ruwais Refinery, that TAKREER wishes to send a member to participate in the FY2010 TCJ program, and that they are thinking positively about the next VIP invitation of JCCP.

Following the visit to TAKREER, the delegation visited Abu Dhabi National Oil Company (ADNOC), and met with Mr. Hashem Y. Al Refaei, Marketing Research & Administration Division Manager, Marketing & Refining Directorate, who participated in last year's JCCP International Symposium, and his staff.

Mr. Al Refaei expressed his appreciation of JCCP training programs and technical cooperation projects, and said he wishes to continue sending ADNOC employees to participate in JCCP's FY2010 regular courses. He also thanked the JCCP members for their proposal for a CPJ on oil marketing and physical distribution, and promised to make the necessary internal arrangements to realize the program.

After the meeting, the delegation had the opportunity to inspect a large-scale service station complex operated by ADNOC.



*At the TAKREER Head Office*



*Meeting at the ADNOC Head Office*

## Oman

In Oman, the JCCP delegation visited Oman Refineries and Petrochemicals Company (ORPC) on February 28, and met with Mr. Mohammed Rabia Al Ghailani, General Manager Corporate Support, and his staff.

Mr. Al Ghailani has only recently been appointed to his present position, but on welcoming the JCCP delegation, he promptly expressed his appreciation of JCCP training programs and technical cooperation projects. Because ORPC was founded by a merger between the former Oman Refinery Company (ORC) and the Sohar Refinery, Mr. Al Ghailani showed strong



*With Mr. Mohammed Al Ghailani, General Manager, at the ORPC Head Office (center)*

interest in the merger and consolidation of Japanese oil companies.

The delegation introduced JCCP activities, thanked ORPC for its participation in JCCP training programs and technical cooperation projects, gave a rundown of Oman's past record of participation in JCCP training programs, presented an overview of FY2010 JCCP regular courses and customized training programs, and explained and requested ORPC's participation in the FY2010 TCJ program.

The delegation learned from its recent visits that countries and organizations with a steady record of participation in JCCP training programs and technical cooperation projects, such as Saudi Arabia and UAE, have stronger interest not only in JCCP regular courses but also in CPO and CPJ programs, and more specific requests of JCCP training programs. JCCP takes this as a testament to the achievements and relationships of trust that it has established over its history of close to 30 years.

In recent years, JCCP has been concentrating its efforts on providing even more practical training programs than ever before, but the recent visits made the delegation renew their awareness of the significance of meeting and exchanging frank views with JCCP counterparts.

*<by Kazuo Kojima, Training Dept.>*



# FY2010 JCCP Program Seminar

The FY2010 Program Seminar (TCJ-1-10) was held over an eight-day period, from July 7 to 14, 2010. The seminar invites JCCP counterpart managers from oil companies in oil-producing countries to spend about a week in Japan to personally experience a JCCP regular course and interact with Japanese culture and history. It also allows JCCP to individually exchange views on JCCP activities with each counterpart personnel to benefit future training programs.



*Seminar participants and JCCP staff*

## 1. Participants

A total of 12 participants from 8 countries attended the seminar. There were participants from the Middle East, representing Iraq, Oman, and Yemen; from Africa, representing Sudan; from Asia, representing Indonesia, Malaysia, and Vietnam; and from Kazakhstan, and included managers of JCCP counterpart departments and top officers in human affairs and training departments in their respective organizations.

## 2. Seminar Content

### (1) JCCP Regular Course Experience

The program seminar was designed to provide a general idea of what JCCP participants usually experience. The orientation session, opening ceremony and administrative guidance that are provided at the beginning of each regular course, and the closing ceremony were held in the same manner as a regular course, and lectures, site visits, and field trips were also provided just like in a regular course.

### (2) Lectures and Site Visit on Total Productive Maintenance (TPM)

In response to increased requests for training on TPM and small-group activities that have essentially created Japanese corporate culture, this year's program seminar provided lectures on "Japanese Experience of Income Doubling in 10 Years Policy" and "TPM Activities in Oil Companies." It also provided first-hand knowledge of

small-group activities that are implemented in a refinery, at Cosmo Oil Co., Ltd.'s Sakaide Refinery. During the site visit, the participants asked many questions based on the preliminary knowledge they gained from the JCCP classroom lectures. Through the questions and answers exchanged, they were able to verify and deepen their understanding of corporate culture in Japanese oil companies.



*At Cosmo Oil Co., Ltd., Sakaide Refinery*

### (3) Information Exchange on Human Resource Development Programs

The 12 participants from 8 countries gave a 20-minute presentation per organization on "Human Resource Development in Our Country and Our Expectations of JCCP's Program." JCCP member companies were invited to attend this presentation session so that exchanges of

views could be held not only among the participants and JCCP personnel, but also with members of other companies who are involved in corporate training.

Many of the participants said that the presentations stimulated their interest in human resource development systems and programs in other countries and organizations, and provided an ideal opportunity to exchange valuable information.

We JCCP members also benefited from the presentations, by acquiring knowledge of human resources programs in counterpart. While many expectations were placed on JCCP, we were also made aware of various matters that need improving. We will take these views to heart and address them to enhance our activities in the future.



*Individual discussions with participants*

### 3. Summary

We extended our invitation to this year's program seminar to a number of countries for the first time, in consideration of the growing significance of Japan's relationship with oil-producing countries besides the Middle East countries, and received their acceptance.

Engaging in face-to-face exchanges of views with JCCP counterparts was highly meaningful, in the sense that we were able to listen in more detail to needs and the situations behind those needs in each country and to discuss in specific terms the proposals and details of customized programs that are implemented based on requests from each country.

Most of the counterparts had requests for programs on such topics as environmental management and safety management and inspection, as is the global trend. One of our future issues will be to consider how we might reflect these topics into our programs and offer them as JCCP regular courses.

Lastly, the participants showed quick understanding and strong interest in the management of JCCP programs, perhaps because they are officers belonging to human affairs and training departments and have personally experienced the challenges of planning and managing training programs. We especially appreciated the cooperative spirit they displayed at all times, which greatly facilitated the smooth implementation of the program.

We would also like to extend our appreciation to the staff at Cosmo Oil's Sakaide Refinery for making the time to give us their cooperation, and to everyone else who supported the implementation of the program in diverse ways.

*<by Mieko Onai, Operations Dept.>*



*Participants listening to a presentation*



*Presentation session*

#### (4) Overview and Discussion of Future JCCP Training Program

We created opportunities to engage in individual discussions with each participant, to provide an overview of JCCP regular courses and customized programs for this fiscal year and the next, to listen to detailed requests from the counterparts, and to also convey JCCP's requests.



### Refinery Management

(TR-7-09: June 1 – June 15, 2010)

**Mr. Asim Murtaza Khan (Deputy Managing Director, Pakistan Petroleum Ltd.)**

I am honored to express my sentiments and views of the TR-7-10 Refinery Management course on behalf of the group of 14 participants from 11 countries who attended the course. Our delightful stay in the remarkable country of Japan has left lasting impressions on our professional, personal and social lives.

The initial orientation session provided basic information about commuting, the Japanese language and Japanese cuisine, and dispelled our worries about staying in a land foreign to us. We soon found ourselves in a welcoming environment in a land that no longer felt so foreign. Short of an economics study module, an excellent easy-to-understand lecture provided insight into the Japanese economy and facilitated our understanding of life in Japan.

Visits to JGC Corporation in Yokohama, Nippon Petroleum Refining Company, and Japan Energy Corporation's Mizushima Refinery, where we were welcomed with warm hospitality, complemented the JCCP lectures and provided new dimensions of energy saving, safety, and environment protection. We learned that Japan's precious land area necessitated optimum use of space and led to the construction of compact plants and refineries, from which distinct operations and maintenance management techniques evolved. This background knowledge could not have promoted a better understanding of the oft-heard concept of Kaizen. Though we may use Kaizen elements in different forms and under different names, we renewed our awareness of the significance of applying the concept—of making continuous improvement through human observation and behavior—to our respective spheres of work.

In the lecture on Management by Rational Thinking Process, we acquired, through practical group exercises, simple but unique tips on organizing thinking and communication processes, which are the basis of successful management.

The tours to Yokohama, Kurashiki, Mizushima, and Hiroshima were perfectly planned. Kubota-san and Takahashi-san, who coordinated the tours, took care of every detail, and made us feel like family. We are grateful to these gentlemen for going beyond their personal capacities to make our tours memorable.

In fact, the entire program was precisely designed, well organized, and implemented to cater to participants of diverse professional backgrounds. It rewarded us with much more than an augmented understanding of the technical

aspects of the petroleum refining industry, and allowed us to gain first-hand knowledge of Japanese management, culture, customs, history, and lifestyle. By sharing this common experience with fellow participants and lecturers, we were able to cultivate personal and professional friendships transcending national borders.

We congratulate JCCP for its successful performance in strengthening cooperation between Japan and our respective countries in the petroleum sector, and hope continuous efforts will be made to provide even greater cooperation, beyond the walls of lecture rooms. For our part, we will continue to seek greater industrial investment and technology transfer from Japan.

We found Japan unique in several respects. Work is performed in a highly systematic and organized manner; courtesy and politeness, which are basic values of human beings, are found in abundance; and exceptional value is placed on time and punctuality. These characteristics were paramount factors that boosted Japan to outstanding success. Although we saw and experienced exemplary Japanese courtesy, hospitality, culture and Japanese architecture, we were eager to see more people wearing the lovely traditional Japanese dresses!

The sights in Hiroshima touched our hearts deeply and cast a shadow of sorrow over us. At the same time, we glimpsed the greatness of the Japanese nation in its efforts to come out of the devastation with courage and determination to resolute peace.

*Domo Arigato Gozaimashita*, JCCP management and staff members, for taking us on a journey through wholesome learning.



Group presentation: Rational Thinking Process

## JCCP Regular Courses Completed in February – July 2010

### TR-19-09 Energy Saving for Profitability Improvement February 9 – February 26, 2010

Lecturer: Kazuhiro Kamijyo

Content: Energy Saving of Refineries; Simulator Practice; Pinch Technology; Recent Energy Saving Technology; Energy Management System and Major Energy Conservation; Evaluation Methods and Examples of Activities; Steam Trapping & Energy Conservation through Condensate Recovery; Boiler & Burner; Steam Turbine; Desalination & Solar Power

Site visits: Nippon Petroleum Refining Co., Ltd. (Negishi Ref.); Toa Oil Co., Ltd. (Keihin Refinery); TLV Co., Ltd. (Kakogawa); Mitsubishi Heavy Industries, Ltd. (Nagasaki Shipyard & Machinery Works)

Country of participants: China, Indonesia, Iran, Iraq, Kuwait, Libya, Malaysia, Nigeria, Saudi Arabia, Sudan, Thailand, Vietnam



<12 countries / 14 participants>

### TR-20-09 Inspection and Reliability Evaluation February 9 – February 26, 2010

Lecturer: Kenji Saito

Content: Inspection and Maintenance of Static Equipments; Corrosion and Fouling Control and Inhibitor; Actual Trouble Cases of a Japanese Refinery & Their Countermeasures; Reliability Activities and Typical Problems and Countermeasures; Stainless Steel Piping Manufacturing Process and Its Quality Control; NDT Inspection Technology and Newly Developed NDT; Quality Control of The Pressure Vessel and Observation of Manufacturing Process; Repair Technology of Tanks and Material Testing; Material, Corrosion and Inspection of Refinery Equipment

Site visits: Showa Yokkaichi Sekiyu Co., Ltd. (Yokkaichi Refinery); Sumitomo Metal Industries, Ltd. (Osaka Steel Works); Non-Destructive Inspection Co., Ltd. (Osaka Division H.Q.); Cosmo Oil Co., Ltd. (Sakaide Refinery); Kobe Steel, Ltd. (Takasago Works); Shinko Plantech Co., Ltd. (Isogo Factory); Chiyoda Corp. (Head Office)

Country of participants: Colombia, Indonesia, Iran, Iraq, Kuwait, Libya, Nigeria, Saudi Arabia, Sudan, Vietnam



<10 countries / 12 participants>

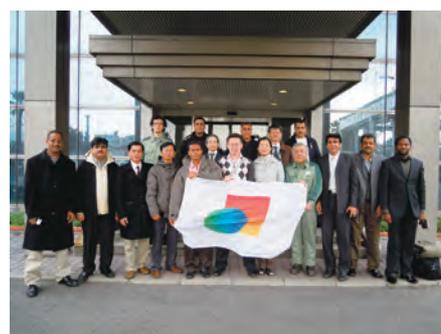
### TR-21-09 Advanced Process Control on DCS February 9 – February 26, 2010

Lecturer: Teruhiko Sasaki

Content: Basic process control theories with practice using computer simulator and miniature-plant with applied to DCS; Advanced process control theories with practice; Engineering practice of control design, controller drawing and operation support system using DCS; Latest DCS related technologies; Application examples of advanced process control in Japanese refineries

Site visits: Yokogawa Electric Corp. (Mitaka H.Q.); Japan Energy Corp. (Mizushima Refinery); Seibu Oil Co., Ltd. (Yamaguchi Refinery)

Country of participants: China, Indonesia, Iran, Iraq, Kazakhstan, Kuwait, Libya, Nigeria, Pakistan, Sudan, Vietnam, Yemen



<12 countries / 13 participants>

**TR-1-10 Petroleum Marketing**  
**April 6 – April 23, 2010**

**Lecturer: Kazuo Kojima**

**Content:** Petroleum Industry in Japan; Energy Situation in the World; Oil Market in Asia; LNG Situation in the World; Refueling System & Operation of Jet Fuel; Transportation System & Safety Driving; Development of New Automobile Fuel & New Business; Purchase & Transportation of Crude Oil, Petroleum Products Marketing and Sales Strategy; Shipping System of Petroleum Products & Site Observation; Sales Policy and Strategy; Management by Rational Thinking Process

**Site visits:** Cosmo Oil Co., Ltd. (Head Office); Nippon Petroleum Refining Co., Ltd. (Mizushima Refinery); Cosmo Oil Co., Ltd. (Hiroshima Branch Office); San-ai Oil Co., Ltd. (Haneda Office); Uyeno Kosan Ltd. (Kawasaki Office); Nippon Oil Corp. (Head Office)

**Country of participants:** Bahrain, Indonesia, Iran, Iraq, Kazakhstan, Mexico, Saudi Arabia, Sudan, UAE, Vietnam, Yemen



<11 countries / 14 participants>

**TR-2-10 Upgrading Processes of Heavy Oil**  
**April 6 – April 23, 2010**

**Lecturer: Shigeyoshi Takahashi**

**Content:** Hydrotreating and Hydrocracking Catalyst; Thermal Cracking Process; IGCC Technology and Selection of Heavy Oil Upgrading Process; FCC & Resid-FCC Process Technology; Hydrotreating and Hydrodesulfurization Process Technology; FCC Catalyst Reaction Theory; Thermal Cracking ( Delayed Coker ) Unit and FCC Unit; Operation and Trouble Shooting and Decreasing Effect in Heavy Oil Production; Developed HDS & FCC Catalyst and its Theory; Process and Characteristics of RFCC and VRHDS unit; Evaluation Technology and its Results for HDS Catalyst & FCC Catalyst, Linear Programming and Production Planning

**Site visits:** Nippon Petroleum Refining Co., Ltd. (Marifu Refinery); JGC Catalysts & Chemicals Industries Co., Ltd. (Kita-Kyushu Operation Center); Nippon Petroleum Refining Co., Ltd. (Negishi Refinery); Cosmo Oil Co., Ltd. (Research & Development Center)

**Country of participants:** Indonesia, Iran, Iraq, Kazakhstan, Kuwait, Libya, Qatar, Russia, Saudi Arabia, Sudan, Vietnam



<11 countries / 14 participants>

**TR-3-10 DCS Fundamentals and Applications**  
**April 6 – April 23, 2010**

**Lecturer: Kazuhiro Suzuki**

**Content:** Petroleum Industry in Japan; Outline of Distributed Control System (DCS); Latest DCS; Process Control Theory; Hands-on Training of Process Control; Engineering Practice on DCS; Outline of Alarm Management; Modernization of Instrumentation

**Site visits:** Idemitsu Kosan Co., Ltd. (Tokuyama Refinery); Yamatake Corp. (Fujisawa Technology Center & Shonan Factory); Yokogawa Electric Corp. (Mitaka H.Q.)

**Country of participants:** Indonesia, Iran, Iraq, Kazakhstan, Kuwait, Libya, Mexico, Pakistan, Saudi Arabia, Vietnam, Yemen



<11 countries / 15 participants>

**TR-4-10 Human Resource Management (HRM)**  
**May 11 – May 28, 2010**

**Lecturer: Akio Hoshino**

**Content:** Transition & Status-quo of Japanese-style Human Resource Management; HRM of Oil Company; HRM of Engineering Company; HRM of Oil Transportation Company; HRM & TPM; Kaizen General & Kaizen Examples; HRM of Catalysts & Chemical Company; Rational Thought and Team Consensus Building

**Site visits:** Nippon Petroleum Refining Co., Ltd. (Negishi Refinery & Mizushima Refinery); JGC Corp.; Uyeno Kosan Ltd.; Idemitsu Kosan Co., Ltd. (Aichi Refinery); JGC Catalysts & Chemicals Industries Co., Ltd. (Kita-Kyushu Operation Center)

**Country of participants:** China, Indonesia, Iran, Iraq, Kazakhstan, Libya, Malaysia, Pakistan, Russia, Saudi Arabia, Thailand, Uzbekistan, Vietnam, Yemen



<14 countries / 18 participants>

**TR-5-10 Essential Petroleum Refining for Process Engineers**  
**May 11 – May 28, 2010**

**Lecturer: Yoshiaki Ueno**

**Content:** Safety Management; Quality Control; Environment Management; Energy Saving for Refinery; Process Technology; Refinery Information/Control System; Process Simulator Practice (CDU & FCC); Heavy Oil Upgrading; Production Planning by LP

**Site visits:** Idemitsu Kosan Co., Ltd. (Tokuyama Refinery); Nippon Petroleum Refining Co., Ltd. (Negishi Refinery); JGC Catalysts & Chemicals Industries Co., Ltd. (Wakamatsu Factory)

**Country of participants:** Indonesia, Iran, Iraq, Kuwait, Libya, Nigeria, Pakistan, Russia, Saudi Arabia, Thailand, UAE, Vietnam



<12 countries / 15 participants>

**TR-6-10 Diagnostic Techniques and Maintenance for Rotary Machinery**  
**May 11 – May 28, 2010**

**Lecturer: Shintaro Miyawaki**

**Content:** Vibration Measurement of Rotary Machinery; Rotating Machinery Vibration Monitoring Equipment and Control System; Maintenance of Rotary Machines; Process Pumps and Steam Turbines; Gas Turbines; Screw/Centrifugal/Reciprocating Compressors; Governor Technology; Reduction Gears; Mechanical Seals

**Site visits:** Shin Nippon Machinery Co., Ltd. (Kure Works); Shinkawa Sensor Technology Inc. (Hiroshima Factory); Japan Energy Corp. (Mizushima Refinery); Mitsubishi Heavy Industries, Ltd. (Takasago Machinery Works); Kobe Steel Ltd. (Takasago Works); Woods Corp. (Tomisato Plant); Eagle Burgmann Japan Co., Ltd. (Gosen Works); Hitachi Nico Transmission Co., Ltd. (Omiya Plant)

**Country of participants:** China, Indonesia, Iran, Iraq, Kazakhstan, Libya, Myanmar, Nigeria, Pakistan, Saudi Arabia, Thailand, Vietnam, Yemen



<13 countries / 13 participants>

**TR-7-10 Refinery Management**  
**June 1 – June 15, 2010**

**Lecturer: Tetsuji Kubota**

**Content:** Kaizen General; Oil industry in Japan; Maintenance Management; Project Management; Safety Management; Rational Thinking Process Management; Energy Conservation; Productivity Improvement Activity; Environmental Management; Human Resource Management; Upgrading Process; Presentation and Discussion by Participants "Special Topics on the Job"

**Site visits:** JGC Corp.; Nippon Petroleum Refining Co., Ltd. (Mizushima Refinery); Japan Energy Corp. (Mizushima Refinery)

**Country of participants:** Indonesia, Iran, Iraq, Kuwait, Libya, Myanmar, Pakistan, Saudi Arabia, Sudan, Thailand, Vietnam



<11 countries / 14 participants>

**TR-8-10 Safety Management for Refineries**  
**June 22 – July 9, 2010**

**Lecturer: Yoshiaki Ueno**

**Content:** Safety Management; Environmental Control; Safety Regulations and Disaster Prevention; Safety Consideration for Plant Design and Risk Management; Safety Management for Plant Maintenance; Case Study and Discussion

**Site visits:** Nippon Petroleum Refining Co., Ltd. (Negishi Refinery); Idemitsu Kosan Co., Ltd. (Chiba Refinery); Sompo Japan Insurance Inc.; Yokogawa Electric Corporation; Shirashima Oil Storage Base (JOGMEC)

**Country of participants:** Indonesia, Iran, Iraq, Kazakhstan, Kuwait, Libya, Mexico, Nigeria, Saudi Arabia, Thailand, Vietnam



<11 countries / 16 participants>

**TR-9-10 Maintenance Management**  
**June 22 – July 9, 2010**

**Lecturer: Kenji Saito**

**Content:** Philosophy & Function of Maintenance Activities; Risk Management and Maintenance Management; M M by TPM and Project Management Activities; Maintenance Activities of Static/Rotary Equipments; Process Management by Rational Thinking; Case Study and Discussion; Trouble Experience and Maintenance Works; Project Management & Operation/Maintenance; Quality Control and Material Selection of the Pressure Vessels; Characteristics of Special Stainless Steel and Factory Observation; Life Cycle Engineering

**Site visits:** Toa Oil Co., Ltd. (Keihin Refinery); JGC Corp. (Yokohama World Operations Center); Cosmo Oil Co. Ltd. (Yokkaichi Refinery); Kobe Steel, Ltd. (Takasago Works); Sumitomo Metal Industries, Ltd. (Amagasaki Steel Tube Works)

**Country of participants:** Indonesia, Iraq, Kuwait, Libya, Nigeria, Pakistan, Saudi Arabia, Sudan, Thailand, Vietnam



<10 countries / 13 participants>

\* All company names listed under Site visits are the names at the time the visits were made.

# Agreement Signing Ceremony for a New Project in Saudi Arabia

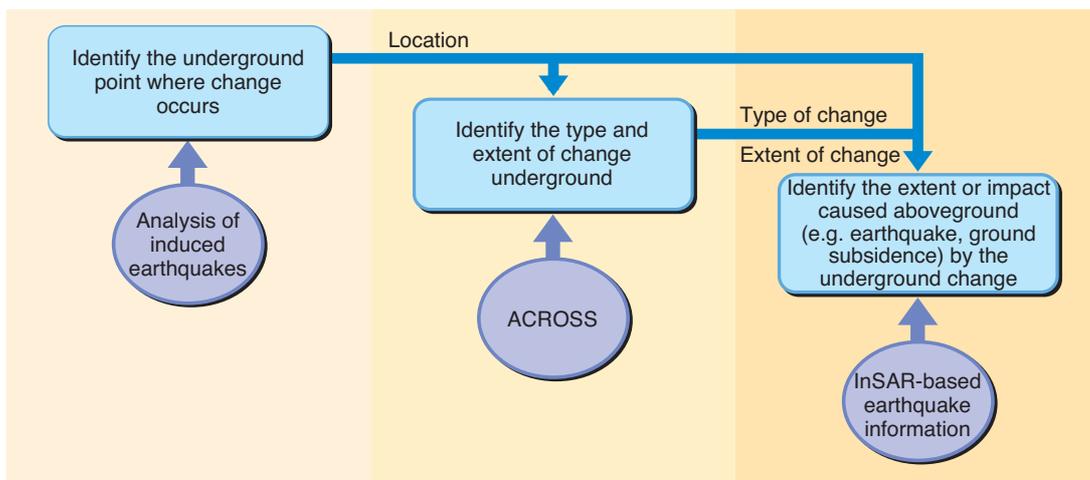
On February 21, 2010, JCCP and King Abdulaziz City for Science and Technology (KACST), a state-run research institution in Saudi Arabia, held an agreement signing ceremony for the project on “Application of Ground Deformation Monitoring Technologies towards Preserving the Natural Resources Infrastructure’s Potential.” The ceremony took place at KACST.

The project aims to survey and develop comprehensive ground deformation monitoring technologies that would prevent ground subsidence and induced earthquakes in oil fields from impacting oil facilities (refining equipments, pipelines, etc.), and to ultimately transfer those technologies to KACST. On the Japanese side, NTT Data CCS Corporation and Nippon Mining Research and

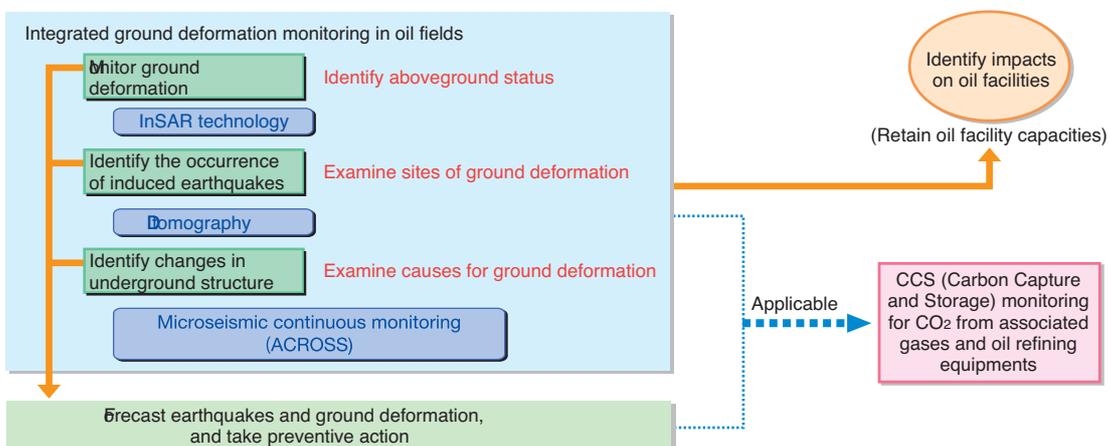
Technology Co., Ltd. are participating in the project.

In oil fields, pressure and stress inside the reservoir can be changed by oilfield operation. This leads to ground subsidence. In order to preserve the production potential in the oil fields, it is necessary to identify the status and causes of ground deformation and also forecast and prevent further deformation. To this end, it is important to introduce monitoring technologies enabling the observation within reservoirs to determine the causes as well as status of ground deformations.

Pressure changes inside the reservoir may cause stress imbalance, which could trigger earthquakes (induced earthquakes). Although the scale of an induced earthquake is normally minimal, it is reported that the magnitude



Interrelationship between ground deformation monitoring technologies



Integrated ground deformation monitoring in oil fields

sometimes exceeds 3. Because the source depth of such induced earthquakes is shallow, its aboveground motion is relatively large, which may impact on oil production facilities directly. In fact an earthquake that occurred in northern Haradh in September 2007 was relatively small on a Japanese scale, with a magnitude of 4.2 and a depth of 33 kilometers (the maximum acceleration was estimated at about 12.5 Gal). Nevertheless, all oil well equipments were shut down in the Hawaiyah oil refinery. In the Haradh oilfield, some 300 induced earthquakes occurred in two months, including minimal ones.

For comprehensive ground deformation monitoring technologies, the project will investigate and develop the InSAR (Interferometric Synthetic Aperture Radar) remote sensing technology, the Double-Difference Tomography (DD tomography) and the ACROSS system (Accurately Controlled Routine-Operated Signal System) technology. The InSAR technology monitors ground surface change in oilfields using satellite data. The DD tomography analyzes induced earthquakes and identifies the accurate locations where ground change is likely to occur. The ACROSS system monitors microseismic waves on a continuous basis to identify the type and extent of stress change in ground change locations. The project will apply these technologies to creating a risk management system.

The signing ceremony was held with the attendance of

H.E. Dr. Mohammed ibn Ibrahim Al-Suwaiyel, President, and H.H. Dr. Turki bin Saud bin Mohammad Al Saud, Vice President, on the KACST side; and H.E. Mr. Shigeru Endo, Ambassador of Japan to Saudi Arabia, Mr. Tatsuo Baba, Executive Officer at NTT Data CCS Corporation, and Mr. Morihiro Yoshida, Managing Director of JCCP, on the Japanese side. The press were also present to report on the commemorative event.

With Dr. Al-Suwaiyel presiding over the ceremony, representatives from the participating companies each gave a speech. KACST members, in particular, expressed their pleasure in the fact that the mutual relationship of cooperation between JCCP and KACST has continued for so many years, and said that the new project is an extremely important undertaking that they expect will be fruitful.

Following the speeches, Dr. Al Saud and Mr. Yoshida affixed their signatures to the agreement, and members from the two countries gave a technical overview of the project. Active questions and answers, including some highly professional ones, were exchanged, and demonstrated KACST's extremely strong interest in the project.

We feel that the signing ceremony was instrumental in promoting mutual awareness of the significance of implementing the project in Saudi Arabia with Japanese technical cooperation.

*<by Haruhiko Oshima, Technical Cooperation Dept.>*



*Signing of the agreement*

*(Front row) H.H. Dr. Turki bin Mohammad Al Saud, KACST Vice President (left)  
Mr. Morihiro Yoshida, Managing Director of JCCP (right)*  
*(Back row) H.E. Dr. Mohammed ibn Ibrahim Al-Suwaiyel, KACST President (left)  
H.E. Mr. Shigeru Endo, Ambassador to Saudi Arabia (center),  
Mr. Tatsuo Baba, Executive Officer at NTT Data CCS (right)*

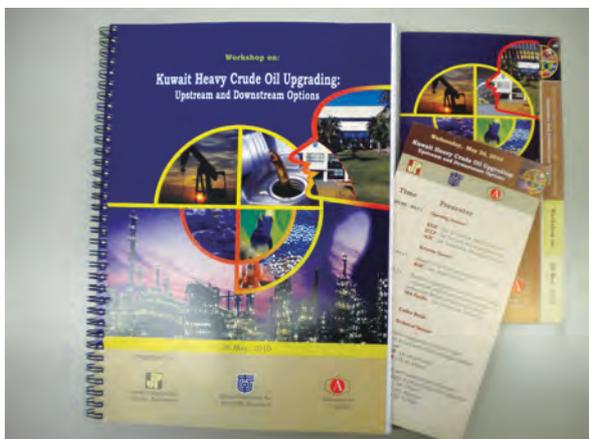
# Workshop on Kuwait Heavy Crude Oil Upgrading

On May 26, 2010, a workshop was held at the Petroleum Research & Study Center (PRSC) of Kuwait Institute for Scientific Research (KISR) in Kuwait, to report on the results of the joint JCCP-KISR technical cooperation project on “Heavy Crude Oil Upgrading in Kuwait Using Thermal Cracking Process.” More than 50 participants from various companies and organizations attended the workshop and participated in active Q&A sessions following each presentation. The participants were from various oil companies in Kuwait, including Kuwait Petroleum Corporation (KPC), Kuwait Oil Company (KOC), and Kuwait National Petroleum Company (KNPC), and from institutions such as the Organization of Arab Petroleum Exporting Countries (OAPEC) and Kuwait University.

## 1. Overview of the Workshop

The project aims to create a business model for making practical use of Kuwait’s large quantities of high-sulfur heavy crude oil by converting it to more useful light, low-sulfur crude oil using Japanese upgrading technology (Eureka process), and to ultimately examine its potential for commercialization.

Candidate sites for construction of the upgrading facility include at the foot of an oil well or near a refinery. The scale of the facility would be relatively small in the case of the former and large in the case of the latter. The project’s potential for commercialization



*Preliminary proceedings and pamphlets of the workshop*

will be evaluated based on a comprehensive assessment of factors such as the relationship between the properties of Kuwait heavy crude oil and thermal cracking reaction, and market studies of reformed crude oil. Due consideration will also be given to the intentions of KOC, the authority for Kuwait heavy crude development.

## 2. Workshop

The workshop opened with an opening address by Dr. Meena Marafi, Manager, PRSC KISR, followed by brief messages from Dr. Abdulhameed Al-Hashem, Director, PRSC KISR, Mr. Morihiro Yoshida, Managing Director of JCCP, and Mr. Yoshio Yokoyama, Director of Arabian Oil Company, Ltd.



*Dr. Meena Marafi, Manager, PRSC KISR, delivering the opening address*

As keynote speakers, Dr. Alenezi from KOC gave a speech on the development of Lower Fars heavy crude oil in Kuwait, and Mr. Ronald L. Dickenson, President of SFA Pacific Inc., spoke about various technologies for developing of heavy crude oil. Mr. Dickenson mentioned the Ivanhoe HTL process, a coker process that requires short retention time, has begun to draw attention as a field upgrader, although operational results have only been obtained from a prototype so far. He also mentioned that the slurry residual oil hydrocracking process which uses nano catalysts is a promising new process, and that a 23,000B/D plant is under construction at a refinery operated by Eni S.p.A. The Eureka process, Mr. Dickenson noted, is an extremely innovative thermal cracking process.

In the technical session which followed the keynote speeches, Dr. Mamun Absi-Halabi, Principal Research Scientist, PRSC, spoke on the direct reforming of heavy crude oil, and Mr. Omori from Arabian Oil Company and Messrs. Shimizu and Uchida from Chiyoda Corporation introduced the Eureka thermal cracking unit and explained its technical advantages. The Eureka process is similar to the coker process, but differs greatly in that its thermal cracking residue is liquid pitch, where it is solid coke in the coker process. The Japanese researchers explained that the liquid state of the residue from the Eureka process makes the process ideal when combined with a gasification process, and also emphasized the potential of Eureka as a field upgrader.

After a brief lunch break, Dr. Faisal Alhumaidan, Associate Research Scientist, PRSC KISR, reported on the results of a vacuum residue thermal cracking test conducted on three different types of heavy crude oil (Ratawi, Lower Fars, and Eocene) using a pilot vacuum residue thermal cracking unit installed in PRSC last fiscal year. The results indicated that vacuum residue from Eocene is relatively easier to crack compared to the other types of crude oil. He also presented interim results of an analysis of thermal cracking speed. Next, Dr. M. Ramadhan gave a presentation on the results of



*Dr. M. Ramadhan giving a presentation*



*Mr. Morihiko Yoshida, Managing Director of JCCP, delivering an opening speech*

a market survey of heavy crude oil and synthetic crude oil, and lastly, Mr. Hayashida from Arabian Oil Company discussed the economic advantages of operating a Eureka unit. Mr. Hayashida noted that if a Eureka unit is installed at the foot of an oil well as a field upgrader, the Eureka pitch could be used to produce steam and the steam used in the production process of heavy crude oil. The economic efficiency of the process, he explained, would be extremely high, delivering an IRR of 30 – 40%, both when Eureka is used in a large process combined with gasification and when it is used as a small field upgrader.

The workshop came to a close with a proposal to install a pilot Eureka plant in the Mina Al Shuaiba Refinery, which is one of three refineries in Kuwait.

We feel that the true meaning of technical transfer lies in the commercialization of the technology after completion of the JCCP technical cooperation project, and that this may be achieved by going beyond the scope of a debriefing session with the counterpart organization and widely disclosing information of the project to the entire oil sector in Kuwait, recognizing it as the future owner of the project. It can be said that one of the reasons why this workshop was successful was because KISR shared this awareness with strong conviction.

*<by Hiroshi Iida, Technical Cooperation Dept.>*

## Personnel Changes

### Training Department

#### Outgoing Personnel



Shinichi SATAKE



Kazuhiro KAMIJYO



Kazumasa NAKAZAWA

#### Incoming Personnel



Takaaki YUASA



Bunsuke KARIYA



Hiromitsu SAITO



### Japan Cooperation Center, Petroleum (JCCP)

#### Headquarters

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

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| • Operations Department            | TEL. +81-3-5396-6001 | FAX. +81-3-5396-6006 |
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#### Overseas Offices

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|---|--|
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