



JCCP NEWS

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Topics

The 26th JCCP International Symposium



Participants of the symposium

The JCCP International Symposium has been held every year since JCCP's establishment. The symposium was held for the 26th time this year, from February 6 to 7, 2008, at the Palace Hotel near the Imperial Palace. Ten representatives from eight major oil-producing countries discussed the main theme of the symposium, on "The Role of the Oil Downstream Sector from the Perspective of Stable Energy Supply — The Necessity and Possibilities of International Collaboration." A keynote speech and special lectures were presented on the first day, and highly informative presentations and discussion sessions were held in two separate sessions on the second day. The symposium produced significant results, and ended in great success.

The symposium's success was made possible by the participation of leading figures from oil industries abroad, as well as by the large attendance of visitors. In addition to the presentations and discussions, the three-day event provided an ideal opportunity for members from JCCP, the Ministry of Economy, Trade and Industry, and relevant industries, to achieve a highly meaningful exchange of views with representatives from oil-producing countries, and strengthen both personal and professional ties with them.

An overview of the symposium program and participants is shown on the next page. A detailed report will appear in the next issue of *JCCP News*.

Program

<First Day, February 6 (Wed.)>

14:00–15:00	Opening Ceremony:	
	Opening Address	Mr. Akira Idemitsu, President, JCCP
	Guest of Honor Speech	Mr. Shinsuke Kitagawa, Director-General, Natural Resources and Fuel Department, Agency for Natural Resources and Energy, METI
	Symposium Proceedings	Mr. Mikio Kojima, Executive Director, JCCP
	Keynote Speech	Mr. Akira Idemitsu, President, JCCP
15:15–17:40	Guest Speeches:	
	Dr. Ken Koyama	Board Member Director, Strategy and Industry Research Unit The Institute of Energy Economics / Japan
	Mr. Waleed H. Al-Bedaiwi	General Manager, Saudi Petroleum, Ltd. / Saudi Arabia
	Mr. Sultan Al Mehairi	Director, Marketing & Refining, Abu Dhabi National Oil Co. (ADNOC) / UAE <i>(Mr. Hashem Al Refaei, Marketing Research & Administration Div. Manager, ADNOC, made a speech on behalf of Mr. Sultan Ai Mehairi who could not come to Japan.)</i>
18:00–20:00	Reception	

<Second Day, February 7 (Thu.) a.m.>

9:30–12:00	Session 1 “Management Issues in the Oil Downstream Sector for Contributing to Globally Stable Supply of Energy”	
	Chairman:	
	Mr. Isao Kusakabe	Executive Officer & General Manager International Ventures Department, Cosmo Oil Co., Ltd. / Japan
	Panelists:	
	Mr. Gigih Prakoso	Manager, Corporate Business Planning and Development PT PERTAMINA / Indonesia
	Mr. Said Waleed Qassim Al Zadjali	Manager Procurement, Contracts & Inventory Oman Refinery Company L.L.C. / Oman
	Dr. Ali Hamed Al Mulla	Manager, Corporate Environment and Sustainable Development Qatar Petroleum / Qatar
	Mr. Sultan Saeed Al Muhairi	Abu Dhabi Refinery Division Manager Abu Dhabi Oil Refining Co. (TAKREER) / UAE
	Mr. Hirohiko Kato	General Manager, International Business Department Cosmo Oil Co., Ltd. / Japan

<Second Day, February 7 (Thu.) p.m.>

13:30–16:00	Session 2 “Technological Issues in the Oil Downstream Sector for Contributing to Globally Stable Supply of Energy”	
	Chairman:	
	Mr. Keiichi Matsumoto	Director, Senior Executive Officer General Manager, Plant Engineering Center Toyo Engineering Corporation / Japan
	Panelists:	
	Mr. Amin Allah Eskandari	Director Refining Affairs, National Iranian Oil Refining and Distribution Company (NIORDC) / Iran
	Mr. Mohammed Ghazi Al-Mutairi	Deputy Managing Director, Mina Abdulla Refinery Kuwait National Petroleum Co. / Kuwait
	Engr. O. A. Anyaoku	Group Executive Director, Refining and Petrochemicals Directorate Nigerian National Petroleum Corporation / Nigeria
	Mr. A. Al-Hazmi	Superintendent, Riyadh Refinery Operation Division Saudi Aramco / Saudi Arabia
	Mr. Tomomichi Tomita	General Manager, Process Systems Engineering Division Toyo Engineering Corporation / Japan
16:00–16:10	Closing Address	Mr. Mikio Kojima, Executive Director, JCCP

Mr. Katsuo Yokoyama, Managing Director of JCCP, Visits the Middle East

Mr. Katsuo Yokoyama, Managing Director of JCCP in charge of technical cooperation projects, traveled to the Middle East twice, between October-end and November 2007, and visited a total of six countries in the region. This was Mr. Yokoyama's first visit to the Middle East, since his appointment as managing director in July 2007. He attended important ceremonies, paid calls on various counterparts to introduce himself and exchange views on future implementation of technical cooperation projects. Major details of his visits are presented below.

I. Oman, Iran, UAE (October 26 – November 8, 2007)

1. [Oman] Contract Signing Ceremony with ORC <October 30, 2007>

Mr. Masoud Salim Al-Msalmy, General Manager of Oman Refinery Company LLC (ORC), and Mr. Katsuo

Yokoyama signed a memorandum of agreement (MOA) for the joint implementation of the “Study for Process and Operational Improvement in Mina Al-Fahar Refinery in Oman” (FY2007 – 2009). The study aims to enhance process and operational performance levels at the Mina Al-Fahar Refinery, so that ORC may better respond to the increasing demand for

oil in Oman. Over many years, JCCP has continued to introduce Japan's oil refining technologies to ORC, as a fundamental part of its technical cooperation activities, and has built a strong cooperative relationship with ORC. Based on this proven track record, ORC and JCCP have agreed to implement the joint study project.

The signing ceremony took place



Greetings by Ambassador Keiji Omori



Greetings by Mr. Tsuyoshi Kamiyo, Deputy Director, METI



Exchange of the MOA

Left: Mr. Masoud Salim Al-Msalmy, General Manager of ORC
Right: Mr. Katsuo Yokoyama, Managing Director of JCCP



Exchange of commemorative gifts

Center: Mr. Yasushi Hotta, President, Cosmo Research Institute Inc.
Right: Mr. Msalmy, General Manager of ORC

in a reception room at the Grand Hyatt Hotel in Muscat, Oman. H.E. Keiji Omori, Ambassador of Japan to Oman, and Mr. Tsuyoshi Kamijo, Deputy Director of the Petroleum Refining and Reserve Division, the Agency for Natural Resources and Energy, Ministry of Economy, Trade and Industry (METI), honored the ceremony with their presence, and spoke briefly on the project's significant role in strengthening the friendly relationship between the two countries and in promoting personnel exchanges. Mr. Msalmy and Mr. Yasushi Hotta, President of Cosmo Research Institute Inc., a participant company in the project, also delivered words of gratitude and expectations for the successful completion of the project, and thanked all parties concerned for their cooperation. Mr. Yokoyama delivered a greeting and extended his appreciation to all parties. The local newspaper covered news of the ceremony, and contributed to increasing public recognition of the JCCP technical cooperation project in Oman.

2. [Oman] Visits to H.E.

Dr. Mohammed Bin Hamad Bin Saif Al-Rumhy, Minister of Oil and Gas, and Sultan Qaboos University <October 31, 2007>

On the day following the signing ceremony, Mr. Yokoyama paid a visit



*MOA signing ceremony
Senior ORC officials, Mr. Nitta, Secretary at the Japanese Embassy in Oman, JCCP members, and members from Cosmo Research Institute Inc., with Ambassador Omori and Deputy Director Kamijo*

to H.E. Dr. Mohammed Bin Hamad Bin Saif Al-Rumhy, Minister of Oil and Gas, to thank him for his cooperation and ask for his continued support of JCCP activities in Oman. Dr. Al-Rumhy spoke favorably about his experience in participating in a technical cooperation project implemented by the Petroleum Energy Center (predecessor of JCCP's technical cooperation department) in 1996, when he was an associate professor at Sultan Qaboos University. He welcomed the developments that JCCP projects have made in Oman since then, and expressed his wish to maintain friendly relations with JCCP.

Dr. Al-Rumhy also explained that

he has been inviting large numbers of university students from Japan to Oman every year since the 1990s, to promote a deeper understanding of Oman. He wishes to extend this activity not only to workers in oil and gas companies in Japan, but to people in many other sectors as well. More recently, Dr. Al-Rumhy has taken strong interest in Japan's technologies for reducing CO₂ emissions, and appears to have large expectations of Japan.

Following the visit to the Ministry of Oil and Gas, Mr. Yokoyama visited Sultan Qaboos University, where he had the opportunity to meet with H.E. Dr. Saud Nasser Ali Al-Riyami, Vice



*At the Omani Ministry of Gas and Oil
Right: H.E. Dr. Mohammed Bin Hamad Bin Saif Al-Rumhy, Minister of Gas and Oil*



*At Sultan Qaboos University
Second from right, front row: H.E. Dr. Saud Nasser Ali Al-Riyami, Vice Chancellor*

Chancellor, and verify the progress of a JCCP project that is currently being implemented jointly with the university.

3. [Iran] Courtesy Call on Mr. Mohammad Reza Nematzadeh, Deputy Minister of Petroleum and President of National Iranian Oil Refining and Distribution Company (NIORDC), and Visit to National Iranian Oil Company (NIOC) <October 29, 2007>

In Iran, Mr. Yokoyama paid a courtesy call on Mr. Mohammad Reza Nematzadeh, Deputy Minister of Petroleum and President of NIORDC, and senior officials of NIORDC. Mr. Yokoyama discussed JCCP's achievements in relation to its training courses and the huge number of participants who have so far participated in them, as well as exchanged views with the NIORDC members on future NIORDC support in implementing JCCP technical cooperation projects in Iran. Mr. Nematzadeh responded in a positive manner, expressing his intentions of prioritizing human resource development as an issue of company-wide importance, based on his previous experience working at National Petrochemical Company (NPC).

Mr. Yokoyama also visited National Iranian Oil Company (NIOC), a major



At NIOC
Left: Mr. S.M.A. Khatibi Tabatabai,
Vice Executive Director

producer and distributor of oil and gas in Iran, and paid a courtesy call on Mr. S.M.A. Khatibi Tabatabai, Vice Executive Director for International Affairs.

4. [UAE] Visit to Mr. Jasem Ali Al-Sayegh, General Manager of TAKREER <November 6, 2007>

In UAE, Mr. Yokoyama visited Abu Dhabi Oil Refining Company (TAKREER), to pay his respects to Mr. Jasem Ali Al-Sayegh, General Manager, as the new managing director of JCCP, and to thank him for TAKREER's cooperation in JCCP projects. Mr. Al-Sayegh expressed his appreciation of JCCP projects and his expectations of further cooperation from JCCP in developing engineers and conducting joint projects.



At NIORDC
Right: Mr. Mohammad Reza Nematzadeh,
Deputy Minister of Petroleum and
President of NIORDC



Presenting a commemorative gift from
JCCP to TAKREER
Left: Mr. Jasem Ali Al-Sayegh,
General Manager

5. Visits with Other Senior Officials <November 3 – 7, 2007>

In addition to the above figures, Mr. Yokoyama also met with senior officials and leaders of other companies and institutions in Oman and UAE, and exchanged views on their cooperation and implementation of future JCCP activities. Other gentlemen with whom Mr. Yokoyama greeted included Mr. Ahmed Mohammed Al-Haddabi, Acting CEO of Sohar Refinery Company in Oman; H.E. Dr. Hadeef Bin Jouan Al Dhahiri, Vice Chancellor, and H.E. Dr. Maitha Salem Al Shamsi, Assistant Provost for Research Affairs, of UAE University; and Mr. Ali Mohd. Al Jaber, Division Manager of TAKREER's Ruwais Refinery.

The Sixth Scientific Council Meeting with UAE University was held on November 4 and 5, during Mr. Yokoyama's visit to UAE. An article on the details of the meeting is provided in the Topics section of this newsletter.

*<by Wataru Maekawa,
Technical Cooperation Dept.>*

II. Saudi Arabia, Qatar, Kuwait (November 15 – 30, 2007)

1. Contract Signing Ceremony with King Abdulaziz City for Science and Technology (KACST) <November 19, 2007>

H.H. Dr. Turki bin Saud bin Mohammed Al-Saud, Vice President of KACST, and Mr. Katsuo Yokoyama signed a memorandum of agreement (MOA) to conduct a project on "Experimental Application of InSAR Technology in Saudi Arabia to Assess the Effect of Reservoir Activity on Surface Subsidence" (FY2007 – 2008). The signing ceremony took place at the head office of KACST in the Kingdom of Saudi Arabia.

In FY2006, JCCP conducted a preliminary study on the assessment of partial ground deformation (upthrust



MOA signing ceremony with KACST
 Right: H.H. Dr. Turki bin Saud bin Mohammed Al-Saud, Vice President
 Center right: Dr. Mohammed ibn Ibrahim Al-Suwaiyel, President
 Center left: H.E. Shigeru Nakamura, Japanese Ambassador to Saudi Arabia



Article featured in the local newspaper:
 "KACST and JCCP have signed an MOA for a joint study, with the attendance of H.E. Ambassador Nakamura"

and subsidence) in Saudi Arabia, using InSAR (interferometric synthetic aperture radar) analysis technology, which numerically analyzes InSAR data (microwave data reflected from a satellite) to assess ground deformation. As KACST has taken a strong interest in the technology, JCCP has promptly initiated a study for the creation of a system for technical transfer and data processing, and designed the study with the objective of developing and transferring technology that is capable of managing risks to oil facilities and areas caused by ground deformation in Saudi Arabia.

The signing ceremony was attended by Dr. Mohammed ibn Ibrahim Al-Suwaiyel, President, H.H. Dr. Turki bin Saud bin Mohammed Al-Saud, Vice

President, and Dr. Tariq A. Alkhalifah, Director, on the KACST side; and by H.E. Shigeru Nakamura, Ambassador of Japan to Saudi Arabia, Mr. Masanori Tsuruda, First Secretary, and Mr. Tadanori So, Second Secretary, from the Japanese Embassy in Saudi Arabia, as well as Mr. Hirokazu Kanai, Executive Director of Nichiyo Engineering Corporation, and a representative from Central Computer Services Co., Ltd. (CCS), as representatives of participant companies on the Japan side.

Firstly, Dr. Al-Suwaiyel expressed his appreciation and his sincere wishes for the success of the project and for the further deepening of the cooperative relationship between JCCP and KACST. Dr. Al-Saud also expressed his gratitude for the implementation of the "extremely

significant technical project," and conveyed his expectations of its successful completion as well as his hopes that it will lead to the implementation of many other cooperation projects in the future. Ambassador Nakamura stressed the significance of Saudi-Japan technical cooperation as declared by then Prime Minister Shinzo Abe during his visit to Saudi Arabia in spring 2007, and expressed his hopes for the successful implementation of the project, as well as thanked all parties concerned for their cooperation. Mr. Yokoyama, after delivering a few words of greetings as



Exchange of commemorative gifts
 Right: H.H. Dr. Turki bin Saud bin Mohammed Al-Saud, Vice President
 Center: H.E. Shigeru Nakamura, Japanese Ambassador to Saudi Arabia



At the signing ceremony
 Center: Dr. Mohammed ibn Ibrahim Al-Suwaiyel, President

the new managing director of JCCP, pronounced his commitment to the project, and thanked KACST for its continued cooperation over many years. On behalf of the participant companies, Mr. Kanai from Nichiyo Engineering Corporation expressed his firm resolve to carry out the project with success and steadily transfer the InSAR technology to KACST.

After both leaders of the project signed the agreement, presentations were given on example applications of the InSAR technology. KACST reported on an effective application of the InSAR technology in capturing ground deformations caused by an earthquake that had previously struck the northwestern part of the country. The representative from CCS used actual case examples to show how the InSAR technology could be used to capture deformations of the ground surface. The ceremony ended on a successful note, and was covered by local newspapers. Implementation of the project is expected to promote further understanding of JCCP activities in Saudi Arabia.

2. Visits to JCCP Counterparts in Saudi Arabia, Qatar, and Kuwait

(1) King Fahd University of Petroleum and Minerals (KFUPM)

<November 20, 2007>

Mr. Yokoyama met with H.E. Dr.



Attendees of the meeting with KNPC

Center: Mr. Sami F. Al-Rushaid, previous Chairman of KNPC (current Chairman of KOC)

Second from left: Mr. Fahed Fahhad Al-Ajimi, Deputy Managing Director

Third from left: Mr. Asa'ad Ahmad E. Al-Saad, Deputy Chairman

Khaled S. Al-Sultan, Rector, and Dr. Sahel N. Abdul-Jauwad, Vice Rector, and thanked KFUPM for its past cooperation in JCCP activities. The Rector stated that "the university has participated in the HS-FCC project, so investigating the commercialization of the HS-FCC technology is a welcome development, from which the university expects great results."

(2) Saudi Aramco

<November 21, 2007>

Mr. Yokoyama met with Mr. Isam A. Al-Bayat, Vice President, and Dr. Omar S. Abdul-Hamid, Manager, to thank them for their long years of cooperation in JCCP activities, and to seek further development of the cooperative relationship between Saudi Aramco and JCCP. Saudi Aramco thanked JCCP for

its generous support and cooperation, and exchanged views on future technical cooperation projects.

(3) Kuwait National Petroleum Company (KNPC)

<November 28, 2007>

Mr. Yokoyama first paid a visit to KNPC and exchanged views on technical cooperation projects with Mr. Sami F. Al-Rushaid, previous Chairman of KNPC, Mr. Asa'ad Ahmad E. Al-Saad, Deputy Chairman, and Mr. Fahed Fahhad Al-Ajimi, Deputy Managing Director.

(4) KNPC's Mina Abdulla Refinery (MAB)

<November 29, 2007>

Mr. Yokoyama met with Mr. Mohammad Ghazi Al-Mutairi, Deputy



Exchange of commemorative gifts
Left: H.E. Dr. Khaled S. Al-Sultan, Rector



Exchange of commemorative gifts
Left: Mr. Isam A. Al-Bayat, Vice President



Attendees of the meeting at KNPC's Mina Abdulla Refinery Center: Mr. Mohammad Ghazi Al-Mutairi, Deputy Managing Director
Second from left: Mr. Ousama H. Shammās, Manager



Attendees of the meeting at KISR
Second from left: Dr. Nader Al-Awadhi, Deputy Director General
Right of Mr. Yokoyama: Ms. Marafi, Manager
Third from right: Dr. Abdulhameed Al-Hashem, PRSC Director

Managing Director, and Mr. Ousama H. Shammās, Manager, and exchanged views on the progress, issues, and future strategies of the “Development Study of Residue Hydrocracking to Distillate in KNPC ARD Units (Phase II),” a three-year project that KNPC and JCCP launched in FY2005.

(5) Kuwait Institute for Scientific Research (KISR)
<November 28 & 29, 2007>

Mr. Yokoyama met with Dr. Nader Al-Awadhi, Deputy Director General, and Dr. Abdulhameed Al-Hashem, Director of the Petroleum Research & Studies Center (PRSC), and thanked them for KISR’s long years of cooperation in JCCP activities. Drs. Al-Awadhi and Al-Hashem outlined future issues that KISR, including the PRSC, needs to address in the future, and exchanged views on various cooperation issues. They also expressed

their deep appreciation for the technical cooperation they have received from JCCP to date.

A contract signing ceremony with Qatar Petroleum (QP) was held on November 26, during Mr. Yokoyama’s visit to Qatar. An article of the ceremony is provided in the Technical Cooperation Section of this newsletter.

*<by Takeyoshi Haishima,
Technical Cooperation Dept.>*

Topics

Seminar on “Energy Saving at the Refinery” Held in Kuwait

1. Background

From October 22 to 29, 2007, a JCCP team visited Kuwait to hold a seminar on “Energy Saving at the Refinery” (ES-20-07) under the Expert Service (ES) scheme. The team was comprised of Mr. Shigenobu Takahashi and I, Shinichi Satake, lecturers from JCCP’s Training Department, and Mr. Hisato Aoyama from JGC Corporation and Mr. Tsuyoshi Inoue from the Cosmo Group, as experts in the field.

One of JCCP’s recent priority issues

has been the promotion of country-specific programs that are specially tailored to meet the respective needs of oil-producing countries in the Middle East, in addition to regular courses that are open to participation by various countries. Based on this policy of promoting tailor-made programs, a JCCP promotion mission visited several countries in the Middle East, including Kuwait, in April 2007. In response to themes and implementation drafts proposed by the JCCP mission, Kuwait National Petroleum Company

(KNPC; a subsidiary of Kuwait Petroleum Company (KPC) in charge of oil refining) readily consented, and formally requested a number of ES and ST programs. The recent seminar on “Energy Saving at the Refinery” was the first such seminar to be implemented following the JCCP mission’s promotion campaign.

As though to mark the fresh start of JCCP’s enhanced ES/ST programs, prior communications and preparations for the seminar proceeded more smoothly than ever before. To finalize



At the KNPC Head Office

details of the seminar, we lecturers met three times for discussions, prior to making the trip to Kuwait. We designed the program to include lectures on “global warming countermeasures” and “advanced process control for energy saving,” which are not offered in regular courses, enriched the content of other lectures, and unified the English translations of technical terms. KNPC’s Human Resources Department also worked with outstanding efficiency, and notified us about pre-printing, the list of participants, and the detailed agenda of the seminar, well in advance, via e-mail communication. After our arrival in Kuwait, they attended to us with kind consideration and efficient professionalism, and greatly contributed to the successful implementation of the seminar.

2. Overview of the Seminar

On the day we arrived in Kuwait, we paid a visit to KNPC’s Human Resources Department in the Head Office. We met with Mr. Waleed Al-Hamad (Deputy Director), Mr. Ali Abdullah (Team Leader, Career Development), and Ms. Haifa Al-Youha (Specialist, Career Development), and discussed the details of the seminar schedule, as well as reconfirmed our commitment to promoting the friendly relations between the two organizations.

The seminar was held from the following day, over a period of four days, with the participation of 13 members from KNPC’s three refineries (7 from the Shuaiba Refinery, 3 from the Mina Abdulla Refinery, and 3 from the Mina Al-Ahmadi Refinery). The attentive attitude of the participants as a whole, greatly contributed to making the seminar a substantive event. Following Arabic custom, the seminar was held each day from 8 o’clock in the morning to 2 o’clock in the afternoon, without lunch break. This style was effective in maintaining concentration in the seminar throughout the day’s presentations.

3. Seminar Program

On the first day of the seminar, Mr. Takahashi and I showed a video

presentation on “Introduction to JCCP,” and lectured on “Overview of Japan’s Oil Industry,” “Oil Alternative Energies,” and “Energy Saving Activities in Japanese Refineries.”

On the second day, Mr. Inoue from the Cosmo Group gave a presentation on “Refinery Energy Saving 1,” and introduced actual examples of energy saving activities through operational improvement and small capital investments. Following Mr. Inoue’s lecture, Mr. Aoyama from JGC Corporation gave a brief introduction of “Pinch Technology,” an energy saving measure for heat exchange systems, and Mr. Takahashi lectured on “Global Warming Countermeasures,” which was specially included in this program. As the final speaker on this day, Mr. Jasem Al-Muhanna from KNPC spoke on “Energy Saving Activities in KNPC.” This included a description of a company-wide energy-saving campaign that a 14-member project team carried out over a period of six months from April 2007 (raising air-conditioning temperature settings from 19 to 23°C, turning off unnecessary lights, etc.). Apparently, however, full-scale energy conservation activities (efforts to improve energy consumption rates) are yet to be initiated by the refineries. Moreover, power generation by refineries is still beyond their territory at present, because the power generation sector is controlled by the government (Ministries of Electricity and Water).

The third day’s lectures were



At the Hilton Kuwait Resort Hotel, the seminar venue



Presenting JCCP completion certificates



*Closing ceremony
(third from left: Mr. Hideyuki Urata, First Secretary at the Japanese Embassy in Kuwait)*

essentially the highlights of the seminar. In “Refinery Energy Saving 2” (Mr. Inoue), “New Energy Policies in Japan” (Mr. Takahashi), and “New Technologies for Energy Saving” (Mr. Aoyama), the three lecturers discussed the rearrangement of heat exchangers, direct charging systems, APH installation, and many other examples of large-scale capital investments, as well as introduced a variety of new energy saving technologies, such as internal separation-type distillation columns, regenerative furnace burners, new heat exchangers that provide higher heat-transfer efficiency, and their implementation examples. The information-filled lectures and active discussions made for an exciting and fulfilling day.

On the fourth and last day of the seminar, the four of us respectively gave lectures on “IPP at a Refinery,” “Utility Optimization,” “Estimation of Energy-Saving and Promotion,” and “Advanced Process Control for Energy Saving.” In the lecture on advanced process control, which was specially included in this seminar, the participants showed strong interest in learning that model-based predictive control (MPC), real time optimizer (RTO), and other such new process control technologies play a significant role in energy conservation.

After the final lecture, a closing ceremony was held with the attendance

of Mr. Waleed Al-Hamad, Mr. Ali Abdullah, and other members from the HR Department. We presented completion certificates that had been prepared in advance in Japan to each participant, and took a commemorative picture with the entire group.

Evaluation forms filled out by the participants indicated that the seminar was satisfactory and well-received by all. Furthermore, the attendance of Mr. Hideyuki Urata, First Secretary at the Japanese Embassy in Kuwait, at the third day’s program and the fourth day’s closing ceremony, despite the short duration of the seminar, was appreciated by the KNPC side. It also inspired strong motivation on the part of us lecturers. During free periods before, during, and after the seminar, we took the opportunities to visit the KPC Training Center, the Mina Abdullah Refinery, the Kuwait Office (Japan Desk) of the Japan Cooperation Center for the Middle East (JCCME), and the Kuwait International Fair, which was being held at Kuwait’s largest exhibition center. Through these visits, we were able to acquire precious information that could contribute to further enhancing JCCP activities in the future.

4. Summary

To the relief of all parties concerned, the first seminar in the Middle East that was conducted under JCCP’s new

policy of promoting tailor-made courses in response to specific needs in oil-producing countries was completed in success. Unlike regular courses that are offered in Japan, such tailor-made programs are attended by members from a certain counterpart organization only, and lectures can focus on issues specific to the relevant country, in line with requests from the counterpart. Therefore, the transfer of technical information and discussions between the lecturers and participants are held efficiently, and are highly meaningful to both sides. As things stand, the selection of participants is placed entirely in the hands of the counterpart organization, but in the future, an even more careful selection of suitable participants with sufficient knowledge and experience is expected to enhance the quality and significance of these programs. JCCP also intends to routinely upgrade its lectures and win the trust of its counterparts, to continuously improve its tailor-made programs.

An ST program on energy saving for KNPC engineers is scheduled to be implemented next February, based primarily on practical training in Japan. JCCP is extremely pleased to have such opportunities of technical exchange with Kuwait, a country with one of the richest oil resources in the Middle East, and is strongly committed to strengthening and developing this important bond.

<by Shinichi Satake, Training Dept.>

Seminar on “Advanced Process Control” Held in Kuwait

1. Background

From October 28 to 31, 2007, JCCP held a joint seminar on advanced process control (APC) with Kuwait National Petroleum Company (KNPC), at a bijou resort hotel near the Head Office of KNPC and its 3 refineries. As with the KNPC seminar on “Energy Saving at the Refinery” that is introduced on pages 8-10 of this newsletter, this “Advanced Process Control Seminar” has also been implemented in response to proposals made by a JCCP promotion mission visiting the Middle East last April.

With the cooperation of Messrs. K. Nishioka from Nippon Oil Corporation and Y. Noguchi from JGC Corporation, Mr. Yuji Nito and I, Keiichi Saegusa, from JCCP organized and implemented the seminar in Kuwait.

2. Focus of the Seminar

We were aware that KNPC had already introduced advanced process control to its refineries, because there have been KNPC participants to JCCP-



With seminar participants

initiative courses on advanced process control. We therefore designed the seminar as a forum for sharing the control experiences and practices of Kuwait and Japan. Specifically, as shown below, the seminar featured case studies of refineries in the two countries, a Q&A session on development, introduction, maintenance, and training issues, a detailed explanation of model predictive control (MPC), which is the mainstream control method today, and key points for the implementation of control projects.

Day 1 (Oct. 28)

- Opening ceremony
- Introduction of JCCP
- Outline of Advanced Process Control

Day 2 (Oct. 29)

- Outline of Model Predictive Control
- Outline of Real Time Optimizers

Day 3 (Oct. 30)

- Example of Advanced Control Applications from Japan

Day 4 (Oct. 31)

- Example of Advanced Control Applications from Kuwait
- Discussion about APC-related Items

3. Overview of the Seminar

The seminar was attended by a total of 13 engineers in charge of APC, instrumentation, operations, and technical services in KNPC’s three refineries (the Mina Al-Ahmadi, Mina Abdulla, and Shuaiba Refineries). Unfortunately, not all participants were able to attend the seminar in full, due to their busy schedules, but there were consistently about five to seven participants to each session.

The seminar underscored the fact that both Kuwait and Japan have a



*At the Mina Al-Ahmadi Refinery
Center: Mr. Asa'ad Al-Saad (Deputy Managing Director)
Far left: Mr. Mohammad Al-Mutairi (Manager, Operations)*



At the Mina Al-Ahmadi Refinery
Meeting with refinery staff members



Seminar scene

proven record in the introduction of APC, and that the application of APC to various types of equipment has produced significant results. KNPC has participated in the Solomon Survey, and has even been ranked among the top groups in the area of APC performance. One of Japan's concerns is that maintenance tends to be neglected during personnel transfers among development staff members, but Kuwait does not seem to be affected by this issue. The seminar also revealed some differences in management styles between the two countries. In Japan, a head office department that governs all refineries exercises control over production plans, facility expansion/remodeling plans, and all other company-wide plans. At KNPC, the head office does not have an organization for governing the technology sector, but instead, each refinery is held responsible for its own operations.

With questions ranging from basic questions concerning control to advanced technical questions on property estimation, the seminar covered a wide range of issues. Also through presentations of implementation case examples, KNPC members and we were able to share common experiences and engage in a constructive exchange of technical information.

4. Visits to Relevant Facilities

On the day following the completion of the seminar, we visited the Mina Al-Ahmadi Refinery, where Mr.

Mohammad Al-Mutairi (Manager, Operations) hosted a presentation session on the history of the refinery and an introduction to its refinery operation training system (unified management of operation manuals, emergency response training for all types of emergency situations, etc.), which illustrated the refinery's committed stance on ensuring safety. We then received a tour of the facility. Despite the wide array of equipment that filled the site, the vast refinery was well-organized and clean, and showed no trace of oil or steam leaks. Additionally, all the equipment and piping were free of rust, and appeared to be properly maintained. There are plans to expand the refinery, which is hardly an issue, considering the wide open land still remaining around the present refinery grounds. Mr. Asa'ad Al-Saad (Deputy Managing Director) generously spared some time from his busy schedule, which included an inauguration ceremony for the new KNPC chairman, to greet us and join

us for lunch.

In the afternoon, we visited the Petroleum Training Center (PTC) of Kuwait Petroleum Corporation (KPC), and was introduced to the training center's programs by Mr. Fouzi Al-Qassar (Team Leader, General Training). The PTC boasts a huge building, and offers 360 different types of programs in response to the needs of each KPC subsidiary company.

We wish to acknowledge the support and assistance of Mr. Ali Abdullah (Team Leader, Career Development) and his staff, in making careful arrangements for the seminar and above visits. We would also like to extend our special appreciation to Ms. Haifa Al-Youha (Specialist, Career Development), for attending to us throughout our stay in Kuwait. JCCP extends its deepest gratitude to them; the successful completion of the program could not have been possible without their support.

<by Keiichi Saegusa, Training Dept.>



At the Petroleum Training Center
Second from left: Mr. Fouzi Al-Qassar (Team Leader, Training)

Study Tour for Qatar Petroleum on “Maintenance Management in Japanese Refineries” Held in Japan

1. Background

As with the two seminars held in Kuwait, this study tour on “Maintenance Management in Japanese Refineries” (ST-20-07) came to be implemented in response to a proposal by a JCCP promotion mission that visited the Middle East last April, following a series of discussions with the JCCP counterpart in Qatar. The program was designed for personnel in the maintenance department at Qatar Petroleum (QP), and was held over a period of 10 days (8 days excluding the weekend), from October 31 to November 8, 2007.

In recent years, long-term and continuous safe/stable refinery operations, maintenance cost reductions, and environmental conservation have become common issues throughout the oil industry worldwide. As a means of responding to this situation, QP requested a training program on maintenance management, and JCCP consented. JCCP and QP mutually designed and organized a course that features an introduction of new maintenance strategies for achieving safe refinery operations that are based on proper maintenance management,



Participants of the study tour at JCCP

and practical training on *kaizen* activities and creative teamwork for improving organizational performance. This was the first time that a study tour specifically designed solely for Qatar had been held, and marked a new phase in Qatar-JCCP relations.

2. Structure of the Program

2.1 Training at JCCP Headquarters

Firstly, JCCP lecturers presented an overview of Japan’s oil industry,

by discussing the share of petroleum among the primary energies in Japan, the demand and supply of crude oil, the changes in global competition that have occurred as a result of increasing globalization and deregulation, and the trend toward corporate consolidation and business alliances. These perspectives not only provided a representative view of today’s oil situation in Japan, but also underscored the significance of Qatar’s role and its meaning to Japan.

With respect to the theme of the



Orientation (JCCP)



Group discussion



At the Idemitsu Kosan Chiba Refinery



At Sumitomo Metal Technology, Inc., Kansai Division

course, “Maintenance Management,” case studies of major plant accidents that have occurred in Japan’s oil-related industries were introduced and their causes and social effects explained, to present a general picture of the present and future directions of maintenance management in Japanese refineries. The fundamental principles of “reliability management,” which are now being adopted by many refineries to ensure safe and stable operations, was also introduced through a lecture on the necessity and importance of maintenance management and Japanese refineries’ initiatives for accident prevention.

A lecture on “creative teamwork,” a management method unique to Japan, was also given, and effectively explained why, despite the lack of resources, Japan has been able to achieve such remarkable growth. Owing to the lecturer’s speaking skills and a captivating content, the lecture was well-received by all participants.

2.2 Onsite training

Following the lectures at JCCP headquarters, the participants visited various oil-related companies in Japan to see for themselves the concrete maintenance management measures employed by the respective companies, and the actual state of their maintenance management systems.

At the Idemitsu Kosan Chiba Refinery, staff members of the

Operation Department explained their voluntary maintenance efforts based on TPM (Total Productive Maintenance) activities, by showing an actual activity board in the operation control room. This lecture provided the participants with a detailed overview of the efficiency and actual state of quality management, as well as examples of operational improvement, at the refinery. Furthermore, by observing the status of activities inside the refinery units, the participants were able to get a first-hand feel for the actual achievements made by the maintenance activities. The participants especially appreciated the lecturers’ active response to their many questions.

At the Nippon Oil Refining Company Osaka Refinery, the participants were introduced the maintenance management system that Nippon Oil Corporation employs at all its refineries. The system seemed to particularly interest a participant who is in charge of systems at QP, so much so that he was observed asking many difficult, concrete questions about the details of the system. A lecture was also given on how TPR activities are effective in allowing operators to prevent accidents and failures before they occur, as well as in increasing reliability.

At the Mitsubishi Heavy Industries, Ltd. Takasago Machinery Works, the participants received a detailed lecture on gas turbine maintenance, supplemented by various case studies.

They also had the opportunity to step foot inside a modernized plant, where special heat-resistance metal components of gas turbines are processed, and turbines, blades, and other parts are manufactured. The participants seemed overwhelmed by the sheer enormity (the huge variety and large scale of production equipment, etc.) and dominating atmosphere of the plant.

Finally, at the Kansai Division of Sumitomo Metal Technology, Inc., the participants observed a state-of-the-art, automated stainless pipe production line for the very first time, and received a lecture on the characteristics of stainless steel, damage cases, and their countermeasures.

3. Participants’ Evaluation and Impressions of the Program

According to the evaluation forms filled out by the participants at the end of the course, they all felt that the course was highly useful with regard to their jobs. There were opinions that some portions of the onsite training sessions were irrelevant to the maintenance management topic. However, after listening to the views of the JCCP side, all participants realized that knowing first-hand what type of materials are used and how they are processed to manufacture the components of a unit, including the tower, tank, and pipework,

will be indispensable in creating future maintenance management plans, and that no part of the training sessions should be considered at all irrelevant. This is a good example of frank interaction providing a basis for deepening mutual understanding, and is in a way another significant achievement of the course.

If any improvement is to be made, it should be in providing a thorough explanation of the reasons for selecting the destinations for onsite training and their relevance to the study tour, at the beginning of the program. Had that been done, misunderstandings such as that mentioned above may not have occurred. We shall take heed of this matter, to enhance future courses.

<by Fumihito Tone, Training Dept.>



My Impressions of the Study Tour

Mr. Salem Al-Wadaani

(Manager, Operations Engineering, Qatar Petroleum / Qatar)

On behalf of QP and my colleagues, I would like to express our deepest thanks and appreciation to the JCCP Executive Director and all staff members for their excellent organization of this course, and for their kind cooperation and coordination during our stay in Japan. We are especially grateful to our course coordinators Tone-san and Nakazawa-san, who have devoted much care and attention to us. We have received warm hospitality at the companies we visited during the course. In fact, we have received only kindness and friendliness from the Japanese people, since our arrival in Japan.

The course was well organized, and the presentation and discussion sessions gave us the opportunity to share our experiences, in addition to learning about maintenance management.

Once again, I would like to extend my appreciation to all JCCP staff for their time and effort in organizing such a meaningful and successful course. Please keep up the good work. We wish good luck to you all.

Domo Arigato Gozaimashita.

Topics

Study Tour for Russia (LUKOIL-Inform) on "Refinery Computerization" Held in Japan

1. Background

During the past few years, JCCP has been exploring opportunities to broaden its relations with Russia and the countries of Central Asia, as they are major suppliers of oil and energy. Therefore, when JCCP received a request for an Expert Service (ES) and Study Tour (ST) program from LUKOIL-Inform, JCCP readily assented.

Lukoil operates four refineries in Russia and three more outside of Russia. LUKOIL-Inform is a subsidiary of Lukoil, in charge of the construction and maintenance of communications facilities, information systems in general, and instrumentation systems for the entire Lukoil Group. It is presently working to upgrade



At Idemitsu Kosan's Tokuyama Refinery

the Group's instrumentation and information systems.

In early July 2007, a JCCP team visited the Head Office of LUKOIL-Inform and implemented an ES seminar on "Process Control" (detailed article on

pp. 4-6 in *JCCP NEWS* No. 98). This past September, a group of participants from LUKOIL-Inform came to Japan to participate in a ST program on "Refinery Computerization," an overview of which is described below.



At Nippon Oil Refining Company's Negishi Refinery



In a demonstration room at Yokogawa Electric's Mitaka Head Office

Twelve system managers from the Lukoil Head Office and refineries participated in the 11-day Study Tour, from September 25 to October 5.

2. Introduction

To accurately convey the progress and highly advanced state of computerization in Japan's refineries, onsite training formed the large part of the program. Visits were made to two refineries and two instrumentation companies.

(1) Lectures and training at JCCP

- Process control theories and practice
- Study of DCS trouble cases and operational support
- Modern instrumentation

(2) Onsite training

- Idemitsu Kosan Co., Ltd., Tokuyama Refinery

- Nippon Oil Refining Company, Negishi Refinery
- Yamatake Corporation, Shonan Factory/Fujisawa Techno Center
- Yokogawa Electric Corporation, Mitaka Head Office

3. Evaluation and Impressions of the Program

The participants possessed basic knowledge and ample experience in instrumentation, control, and information systems, and contributed many concrete questions and opinions to the lectures, so much so that several of the lectures had extended beyond their allotted time schedules. Many of those questions were about the benefits of introducing APC, control compatibility with other third-party DCSs, and the advantages of application software, all issues that appear to be of immediate interest toward advancement of systems

at Lukoil.

Overall satisfaction of the program was extremely high. Mr. Alexander Zheludov, leader of the study tour group, conveyed the group's appreciation of the opportunities to talk directly with, and receive highly informative responses from, frontline engineers at the refineries and instrumentation companies they visited. Evaluation forms filled out by the participants at the end of the program included several opinions to the effect that perhaps more time should have been allotted to tours of refinery sites, but evaluation-wise, eight participants rated the program "highly beneficial," and four rated it "beneficial." They also evaluated the study materials and course coordination favorably.

Study tour lectures are normally held in English, but since this program was designed solely for members from Russia, all lectures were translated



JCCP's CAI (Computer Assisted Instruction) room



At Yamatake Corporation's Fujisawa Techno Center

directly from Japanese to Russian, through an interpreter. This was a time-consuming process, but thanks to the interpreter's skills and his preliminary review of technical terms, lecture sessions proceeded smoothly.

As all participants belonged to the same company, they appeared to enjoy the program in a cheerful and relaxed demeanor. They seemed content to

remain standing on the train even when some seats became available, and showed no signs of weariness or fatigue even when they had to walk some distance.

The participants also gradually familiarized themselves with Japanese culture, and were all able to use chopsticks by the end of the program. Although there were some rainy days and extreme

temperature differences depending on the day, the group completed the entire program and smilingly returned to Russia in good health.

Lastly, JCCP would like to thank all the lecturers and companies who generously received the study group for their support and cooperation.

<by Yuji Nito, Training Dept.>



My Impressions of the Study Tour

Mr. Alexander Zheludov (LUKOIL-Inform / Russia)

On behalf of the group of engineers from LUKOIL-Inform who have participated in the Study Tour program on "Refinery Computerization" (ST-50-07), I would like to express our deepest gratitude to JCCP. At refineries and manufacturers of instrumentation devices and DCS systems, we observed intelligent automation (IA) systems, the manufacture of instrumentation devices, and software packaging, and learned about the installation status and maintenance characteristics of IA systems in Japan and future trends in IA systems, as well as about Japanese corporate culture. Through direct discussions with plant engineers, officers responsible for installing IA systems, and maintenance managers, we were able to receive high-level answers and acquire invaluable information.

We especially appreciated the technical exchanges we held with engineers at the facilities we visited, on topics relating to process automation and solutions. The study materials used in all lectures were also extremely well-organized, and lectures given by JCCP lecturers and staff members of visited facilities were highly informative and easy to understand.

We shall apply the knowledge we have gained in this program to future IA installation projects that Russia and East European countries are planning to launch in their oil refining plants.

Again, I would like to thank JCCP for giving us the opportunity of this program, and in closing, I wish for further development of the cooperative relationship between JCCP and LUKOIL-Inform.

Topics

Seminar on "Refinery Maintenance Management" Held in Mexico (PEMEX)

1. Background

Over the years, JCCP has received many participants from PEMEX, Mexico's state-run oil company, and enjoys friendly relations with the organization. Recently, in response to a request from PEMEX, JCCP has held a seminar on "Refinery Maintenance Management," from October 16 to 19, 2007. The seminar was implemented by Messrs. S. Miyawaki and K. Nakazawa, and I, A. Higashi, at PEMEX's Minatitlán Refinery.



At the PEMEX Head Office

In recent years, issues that the refinery maintenance sector is pressed to address, such as long-term and continuous safe/stable operations and reduction of maintenance costs, have become issues of common concern throughout the world. Japan has been tackling the issues for more than 10 years now, and has made significant achievements. PEMEX, wishing to tap the experience and expertise of Japan's refineries, thus requested the seminar.

The Minatitlán Refinery is Mexico's oldest refinery, which began operations in 1905 under PEMEX's oil refining sector. It is a venerable refinery, also called the Lázaro Cárdenas Refinery, after former Mexican president Lázaro Cárdenas, who is also the founder of PEMEX.

With the completion of the expansion project that began in 2003, the refinery will have almost double the original capacity to process crude oil (from 190,000 to 350,000 b/d), and the new heavy oil cracking unit will be able to increase the processing ratio of heavy Maya crude from 30% to 60%. Despite its being an oil-producing country, Mexico presently imports a certain percentage of gasoline to meet domestic demand, but the upgraded refinery would contribute significantly to remedying this situation. There is no doubt that the Minatitlán Refinery will come to assume a greater role than ever before.

2. Seminar Content

The seminar was designed to mainly introduce various maintenance management issues in the areas of long-term, continuous safe/stable operations and maintenance cost reduction, which JCCP lecturers have experienced at Japanese refineries, and examples of countermeasures to those issues. It specifically featured three topics: reliability management in refineries, static equipment damage and its countermeasures, and maintenance management of rotary machines.

The program was implemented according to the following schedule.

Day 1

- 1) Courtesy call on senior refinery officials (Mr. Tomas Avila Gonzalez, Director)
- 2) Introduction of the Minatitlán Refinery
- 3) Tour of the refinery (including the site of the expansion project)

Day 2

- 1) Opening ceremony
- 2) Introduction of JCCP (with a focus on maintenance-related JCCP-initiative courses in 2008)
- 3) Reliability management in refineries

Day 3

- 1) Case studies of static equipment damage and their countermeasures

Day 4

- 1) Maintenance management of rotary machines
- 2) Q&A session
- 3) Closing ceremony and presentation of completion certificates

The participants showed interest in the various reliability improvement activities that Japanese refineries are actually employing, although it took them some time to absorb cultural differences. They assimilated the information provided to them in their own way, and sought to find activities that they could apply to their refinery, to improve reliability, achieve long-term, continuous safe/stable operations, and reduce maintenance costs.

In the lecture on static equipment damage, case studies were categorized according to fundamental causes, to introduce damage countermeasures in concrete terms, and offer specific hints for improving refinery activities.

The lecture on maintenance management of rotary machines presented case examples that showed how the upgrading of parts materials and structural modifications can dramatically improve reliability. This convincing lecture captured the participants' interest and invited questions from them, concerning



Lecture sessions

such technical aspects as cost and maintenance performance of the measures discussed.

3. Overview of the Seminar

Presided by Mr. Abec Tocedo, Manager of the Personnel Training Department, the seminar opened with a congratulatory message by Mr. Antonio Hernandez Escobar, Manager of the Production Unit and second highest-ranking member of the refinery staff, who expressed his appreciation and expectations of the seminar. Mr. Escobar also delivered a few words at the closing ceremony, thanking JCCP for the successful and productive implementation of the seminar, and encouraging the participants to actively apply the knowledge they have acquired from the seminar to their respective workplace.

During the seminar and particularly during the subsequent Q&A session, the participants posed so many questions, that the lecturers were barely able to respond to them all. The majority of the questions pertained to compelling issues facing refineries today and the differences between maintenance methods in Mexico and Japan.

A total of 30 participants attended the seminar. In addition to members from the Minatitlán Refinery, 2 members each from the PEMEX Head Office and the Salamanca, Cadereyta, and Salina Cruz Refineries also participated.

The seminar was conducted through Spanish/English simultaneous translation. Thanks to the interpreter's preparation for the seminar by reading the presentation materials in advance, the exchange of information through presentations and Q&A sessions proceeded extremely smoothly.

At the end of the seminar, the



Participants of the seminar with the JCCP team

participants responded to a questionnaire, in which they rated the seminar "very beneficial," and commented that what they have learned would be useful in their present/future jobs.

4. Visit to the PEMEX Head Office

After completing the seminar, we paid a courtesy call on the PEMEX Head Office, and had the opportunity to meet with members of the personnel department, the counterpart department for JCCP training programs.

Mr. Sergio Juan Ortiz Bautista, Jefe de la Unidad, warmly greeted us, and expressed his appreciation for the implementation of the seminar. Mr. Bautista also spoke about his thoughts on the necessity of strengthening the capacities of refinery engineers and developing outstanding engineers for the future. In this respect, he stated that he holds great expectations of JCCP training activities, as they provide first-hand experience in the industries and technologies of Japan, which he considers one of the world's most successful countries. He also expressed his wish to continue sending PEMEX

employees to participate in JCCP courses.

5. Impressions

The seminar proceeded smoothly, as planned, thanks to the meticulous arrangement and coordination by Mr. Mario, the coordinator at the refinery. We deeply appreciated his time and cooperation.

The participants gave the seminar presentations their undivided attention, and were so focused that, even when we asked if they would like to take a break, they expressed their desire to continue on with the presentation. They were able to deepen their understanding of refinery maintenance management by raising many pertinent questions and receiving detailed answers.

Lastly, we would like to thank everyone who participated and gave their support and cooperation in the successful implementation of the seminar. We would also like to extend our special thanks to Mr. Mario, Ms. Paola, Ms. Patty, who supported us throughout our stay in Mexico, and to Mr. Tomas, Mr. Fidel, and Mr. Elias at the PEMEX Head Office. Thank you very much.

<by Akio Higashi, Training Dept.>

Progress Report on the “Long-term Researcher Dispatch Program”

1. Background

JCCP launched the Long-term Researcher Dispatch Program in FY2007, as part of its research assistance activities under the International Joint Research Scheme. Through the program, JCCP sends honorary university professors and senior researchers from private companies in Japan, who have made remarkable achievements in their specialized field, to universities and research institutions in major oil-producing countries. The researchers reside in their respective host country long term, and routinely assist in the R&D activities of local researchers, in response to the needs of the counterpart organization. In addition to providing guidance, Japanese researchers who are dispatched to oil-producing countries apply their expertise to improving research methods, identifying new and promising research themes, and otherwise promoting the advancement and vitalization of research activities within their counterpart organizations. By providing research assistance in response to the requests of the



Dr. Hattori in a meeting with the Vice Chancellor of KFUPM, Sept. 2007

counterpart organization, the program is not only expected to strengthen personal exchanges in the R&D field, but also to build and increase the counterpart organizations' trust in Japan.

King Fahd University of Petroleum and Minerals (KFUPM) in Saudi Arabia and Kuwait Institute for Scientific Research (KISR) in Kuwait have been selected as counterpart organizations of the program. Over many years, the two organizations and JCCP have built a solid relationship through the implementation of joint research projects under the

international joint research scheme and technical cooperation programs, and by holding joint symposiums on a regular basis.

2. FY2007 Program

(1) Overview

Following meticulous planning and preparation among the Japanese researchers and their affiliated and counterpart organizations, two researchers have been dispatched to KFUPM and KISR this fiscal year. They have already commenced their research guidance activities at their counterpart organization, and are scheduled to reside in Saudi Arabia and Kuwait, respectively, for a period of three months, from November to February.

Dr. Hideshi Hattori, Professor Emeritus at Hokkaido University, has been asked to work under appointment with KFUPM. Dr. Hattori is a prominent researcher in the field of catalytic research, specializing in the action mechanisms of solid-base catalysts. At KFUPM, he is engaged in joint research on solid-base catalysts with local researchers.



Dr. Hattori inspecting KFUPM's research facilities, Sept. 2007



Dr. Higashi inspecting KISR's research facilities, Sept. 2007

KFUPM's vast campus consists of educational and research facilities, residential facilities, a medical center, and various other faculty and student facilities. Dr. Hattori commutes to his research laboratory from a guest house in the faculty residence area, which is only about a 15-minute walk from the laboratory. Taking advantage of the holiday break in the latter half of December, Dr. Hattori temporarily returned to Japan to celebrate the New Year holiday in Japan, and has left once again to Saudi Arabia to continue his research until the end of February.

Dr. Hidehiro Higashi from Catalysts and Chemicals Ind. Co., Ltd. has been asked to work under appointment with KISR. Dr. Higashi is a leading researcher in the development of oil refining catalysts. In response to a strong request by KISR, he has commenced research guidance activities for improving the assessment performance of a pilot plant. As KISR has no corporate guest house, Dr. Higashi has a long-term accommodation arrangement at a hotel located about 20 minutes by car from the institute, and is daily driven to the institute.

The two researchers began their long-term stay in the Middle East in early November, when the lingering summer heat was still intense. By the middle of December, however, they

had acclimated themselves to their new environment, and had begun providing steady research assistance and guidance to researchers at their counterpart organizations.

At the moment, JCCP's primary goal is the successful completion of the three-month-long program for this fiscal year. Hopefully, this particular experience will be applied to enhancing next fiscal year's program, upon hearing the views of the researchers, and gaining an accurate understanding of the researcher acceptance situation at the counterpart organizations.

(2) Send-off gathering

Prior to the two researchers'

departure in November, JCCP organized a small send-off gathering for them on October 22. The gathering took place in a fraternity house at Tokai University, and was attended by members from Petroleum Refining and Reserve Division at the Ministry of Economy, Trade and Industry, namely Mr. Shuzo Takada, Director, Mr. Takanobu Yasunaga, Deputy Director, and Mr. Tsuyoshi Kamijo, in addition to Messrs. Mikio Kojima, Executive Director, and Katsuo Yokoyama, Managing Director, from JCCP.

The small party began with a brief speech by Mr. Kojima. He stated that this new scheme of cooperation to oil-producing countries has been "made possible by the generous cooperation of the two distinguished researchers," and that he has "strong expectations for its successful completion." To that end, he also promised JCCP's full support in all aspects of their long-term stay in the Middle East. Dr. Hattori expressed his commitment to the effect that he intends to "fully apply himself to research activities" at KFUPM, and has prepared to "respond flexibly to the situation and requests of the counterpart organization." Dr. Higashi also articulated his resolve to direct his best efforts toward the effective application of Japan's world-class hydrogen refining catalyst technology to the counterpart organization. Finally, Mr. Takada



Mr. Kojima (right), Executive Director of JCCP, speaking at a send-off gathering for Drs. Hattori and Higashi



Brief speech by Dr. Higashi (center)

delivered words of encouragement to the two researchers. Based on his strong conviction that cultural exchanges are just as important as technical guidance and transfers, he expressed his high expectations of the two researchers' steady activities at their counterpart organizations, and wished them a healthy and fulfilling sojourn. After exchanging words of encouragement and resolve, over lunch the members engaged in animated conversation, mainly on topics about cooperation to oil-producing countries.

(3) Letter from Dr. Hattori

After completing the first half of his appointed period, Dr. Hattori temporarily returned to Japan on December 13 to spend the New Year holiday in Japan (Sapporo, Hokkaido). He has written to JCCP on the occasion of his return, and reported on the status of his research at KFUPM so far, as well as various aspects of his stay in Saudi Arabia, as follows.

<Research status>

Prior to assuming the appointment at KFUPM, I visited the organization in September and spent two days discussing various matters related to the dispatch

program. During that meeting, the KFUPM side asked me to propose a research theme, and I responded by proposing a theme concerning solid-acid catalysts and another theme concerning solid-base catalysts, both of which were related to zirconia catalysts. We ultimately decided on both themes, and agreed on the participation of postgraduate chemical engineering and chemistry students in our experiments.

By the end of the first one and a half months of my stay until the Hajji holiday, we finished preparing 19 types of catalysts and successfully launched a high-pressure reactor. In the latter one and a half months, which will begin after New Year's, reaction experiments will probably comprise the main part of our activities. By all means, I hope to reach a point where we can obtain sufficient basic data to write a paper.

<Personal views on the research and local life>

KFUPM's Center for Refining and Petrochemical Research Institute is slightly different from research laboratories in Japanese universities, perhaps partly owing

to its proven achievements in the development of processes for practical application. When asked which is more important, publishing an academic paper or acquiring a patent, some KFUPM researchers immediately responded in favor of the patent. This mentality, I think, differs from that in Japanese universities, where novelty and originality of invention are valued above all. I hope to somehow convince the local researchers that basic research is also important, particularly in universities.

Officially, our work hours are from 7:30 am to 4:00 pm. The university has offered me the use of an on-campus guest house that is larger than 100 m² in total area. I can obtain food and other daily necessities at a supermarket that is only a stone's throw away, so I basically want for nothing, unless I get the urge to go out into the city. Prices here are reasonable. Although I cannot leave the campus without a car, I am lucky to be in an environment where everyone around me kindly offers his help when needed.

<by Kazuhisa Okumura, Technical Cooperation Dept.>

Total Number of Participants to JCCP Courses in Japan Has Surpassed 17,000!

November 27, 2007 was a landmark day for JCCP. With the two courses that were begun that day—TT-1 (Training Management) and TR-16 (Gas Processing for LNG)—the total number of participants JCCP has received since its founding has surpassed 17,000. As the commemorative 17,000th participant, Mr. Mohammad Ali Al-Qahtani received congratulatory words and a commemorative gift from Mr. Mikio Kojima, Executive Director of JCCP. At that moment, all the members of JCCP, wrapped in feelings of profound fulfillment and pride, were convinced that JCCP's 26 years of steady efforts in assisting oil-producing countries has resulted in the remarkable achievement.

Many of the 17,000 participants have gone on to become refinery directors and senior officials in national oil companies in their respective countries. JCCP is convinced that they will play a central role in the continued implementation of JCCP activities,

toward further strengthening the friendly relationships between Japan and oil-producing countries.

Encouraged by the astounding result, all of us here at JCCP have renewed our commitment to continue directing steady efforts to implementing effective and meaningful cooperation activities.

Below is a message from the 17,000th participant, Mr. Al-Qahtani (Saudi Aramco / Saudi Arabia).



Message from the 17,000th participant

Mr. Mohammad Ali Al-Qahtani
(Saudi Aramco / Saudi Arabia)

I am very honored to be the 17,000th participant at JCCP, since its establishment in 1981. I hope to return home to Ras Tanura Refinery and acquire more experience in my field. I am also looking forward to be participant number 20,000.

Since I came to Japan, I have discovered many fabulous things about JCCP and Japanese industries, particularly in the LNG field.

Japanese people are very kind and friendly, and I would like to thank them.

Finally, I would like to extend my sincerest gratitude to JCCP.

JCCP Participates in "Third OPEC Summit Exhibition" in the Kingdom of Saudi Arabia

1. Background

The Third OPEC Summit was held in Riyadh, the Kingdom of Saudi Arabia, on November 17 and 18, 2007. Under the three primary themes of "Reliability," "Prosperity," and "Protection," the heads of delegations of OPEC member countries adopted the

Riyadh Declaration, which highlighted environmental issues for the first time as OPEC. Prior to the summit, a four-day international oil exhibition was held from November 13 to 16, under the sponsorship of the Saudi Ministry of Petroleum. JCCP participated in the exhibition as part of its efforts to build friendly relations with oil-producing

countries, and introduced and promoted increased awareness of JCCP activities to representatives from oil-producing countries attending the exhibition.

2. JCCP Exhibition

In a booth occupying a 15 m² (3 × 5 m) space, twelve information panels

provided details of JCCP's training programs and technical cooperation projects, and an introductory DVD presented an overview of JCCP. The booth received as many as 200 visitors throughout the duration of the exhibition. On the first day, it had the honor of receiving a visit from H.E. Ali Al-Naimi, Minister of Petroleum of the Kingdom of Saudi Arabia. It was also honored by visits from H.E. Gholamhossein Nozari, Acting Minister of Petroleum of Islamic Republic of Iran, H.E. Dr. Purnomo Yusgiantoro, Minister of Energy and Mineral Resources of Indonesia, and H.E. Abdullah bin Hamad Al Attiyah, Deputy Prime Minister and Minister of Energy and Industry of Qatar. To each visitor to the JCCP booth, JCCP members handed out brochures introducing JCCP activities, and provided detailed information on



With H.E. Ali Al-Naimi, Minister of Petroleum of the Kingdom of Saudi Arabia

its training programs and technical cooperation activities. Many who visited the booth showed strong interest in the fact that JCCP offers technical assistance in cooperation with Japanese

private companies.

Near the JCCP booth were the large and attractive booths of Iranian oil companies such as NIOC, NIORDC, and NPC, in addition to Saudi Aramco,



Mr. T. Kinoshita, General Manager of the JCCP Riyadh Office, with H.E. Al-Naimi



H.E. Abdullah bin Hamad Al Attiyah, Deputy Prime Minister of Qatar, visits the JCCP booth.



H.E. Gholamhossein Nozari (second from right), Acting Minister of Petroleum of Islamic Republic of Iran, at the JCCP booth



H.E. Dr. Purnomo Yusgiantoro (center), Minister of Energy and Mineral Resources of Indonesia, listens to an explanation at the JCCP booth.



With Iranian exhibition participants in front of the JCCP booth



JCCP booth

ExxonMobil, Saudi Arabian Chevron, and ADNOC.

3. Impressions

During the exhibition, many JCCP graduates visited the JCCP booth and conveyed their support of JCCP, but even people who, for example, had only heard of JCCP's technical cooperation projects visited the booth, which indicated an increased awareness of JCCP activities in oil-producing countries. Visitors

commented that Japan's cooperation is "deeply appreciated by all oil-producing countries," and that they hope JCCP will continue to implement its personnel exchange activities, "as human resource development is becoming ever more important." Others expressed their support of JCCP technical cooperation projects, saying that "the practical nature of the projects bring tremendous benefits" to the counterpart organization.

At this exhibition, visitors were

restricted for the most part to people from within the oil industry, but with the attendance of important dignitaries from various countries, the exhibition provided an ideal opportunity to effectively promote JCCP activities. Taking to heart the precious views and requests it has received at the exhibition, JCCP intends to further enhance its activities in the future, and plans to continue participating in such opportunities as this exhibition, to increase its profile among oil-producing countries.

<by Nobutaka Sumikawa, Technical Cooperation Dept.>

Personnel
Exchange

Report on the Cooperation with Training Centers Program in South America —Venezuela, Colombia, and Brazil—

1. Background

From September 30 to October 13, 2007, a JCCP delegation visited Venezuela, Colombia, and Brazil under the Cooperation with Training Centers Program (TC-30-07). The delegation consisted of Mr. Akio Yamanaka, General Manager of the Administration Department, Ms. Mieko Onai, Assistant Manager of the Operations Department, and I, Yoshiaki Ueno, Master Lecturer of the Training Department. South American oil-producing countries are

not necessarily strategic suppliers of oil and energy to Japan at present, but JCCP considers it important to explore the possibility of strengthening JCCP activities in these countries, for Japan to secure a stable supply of oil and energy in the future. Based on this awareness, we have held direct discussions with JCCP counterpart departments in charge of human resources development and training in state-run oil companies in the three countries, to promote deeper understanding of JCCP activities, identify training needs, and exchange

views on improving the effectiveness of JCCP programs.

In Venezuela, which has been gaining widespread attention for the great potential of its crude oil reserves, we visited the Head Office and El Palito Refinery of the state-run oil company Petroleos de Venezuela, S.A. (PDVSA). In Brazil, where an increase in offshore oil production is expected to make the country a major oil exporter in the future, we visited the Head Office of Petroleo Brasileiro S.A. (PETROBRAS) and the Duque de Caxias Refinery.

Finally, in Colombia, the fourth largest oil-producing country in South America, we visited the Head Office and Cartagena Refinery of the country's national oil company ECOPEPETROL. At each of the companies, we introduced JCCP activities and courses, and held interviews to learn about the present state of and issues within each company, their education and training situation, as well as their training needs. These visits essentially helped deepen JCCP's close relationships with its counterpart departments.

The three countries are vigorously striving to increase crude oil production, and to this end, they are promoting the construction of new refineries and improving the refining capacity of existing refineries. In the meetings, the aforementioned oil companies gave detailed accounts of the need to secure human resources and implement personnel education programs in order to realize their future augmentation plans. They expressed full understanding of JCCP's role and activities, and specifically discussed how best to participate in future JCCP programs. As proposed by the JCCP delegation, they agreed to maintain consistency in the selection of participants to JCCP courses, and to take advantage of JCCP programs that dispatch experts from JCCP member companies in Japan.

A general overview of the meetings held in each country is introduced below.



At the PETROBRAS Head Office

2. Venezuela

Venezuela has 79.7 billion barrels of crude oil reserves, which is the sixth largest in the world. Its crude oil production has been hovering around the 3 million b/d mark in recent years, but it has plans to increase production to more than 5 million b/d by 2012. The country also has abundant reserves of unconventional Orinoco extra heavy crude, which amounts to a crude oil equivalent of 270 billion barrels of recoverable reserves. This is a volume that rivals Saudi Arabia's crude oil reserves of 260 billion barrels, and Venezuela intends to accelerate future development in this area.

(1) PDVSA Head Office

On October 2, we visited the PDVSA Head Office. JCCP has received about 100 participants from PDVSA, up to

2003. There had been a short period of discontinuation thereafter, but this year saw the participation of PDVSA employees in a JCCP regular course, for the first time in 4 years. JCCP has taken this opportunity as marking a new beginning of a full-fledged relationship with PDVSA, and has sent the delegation to introduce JCCP activities and FY2008 programs in detail to the PDVSA Head Office and its El Palito Refinery. Despite its temporary termination of participation in JCCP courses, the PDVSA side very warmly welcomed us. In the meeting with Mr. Durio Merchan (Executive Director in charge of the Human Resources Department), we discussed various issues amid a highly amicable atmosphere, and deepened our relationship with the counterpart department at PDVSA.

PDVSA is presently planning a number of large-scale projects in



At the PDVSA Head Office



At PDVSA's El Palito Refinery

response to the surge in oil prices, and one of its major concerns lies in the development of high-level engineers. Given this situation, the PDVSA side had many questions concerning JCCP activities, and expressed its strong intent to send young and promising employees to participate in JCCP courses in the future.

(2) El Palito Refinery

On October 3, we left our hotel in Caracas at 6:00 am to visit the El Palito Refinery, located about two and a half hours away by car. The deputy director of the refinery and the heads of the Operation, Maintenance, and Human Resources Departments welcomed us and participated in the meeting on JCCP activities and programs.

The refinery members showed strong interest in JCCP's programs for 2008, and requested the implementation of an Expert Service (ES) program for the Maintenance Department. In addition to regular ES programs, we also promoted ES programs that are implemented in cooperation with JCCP member companies.

(3) Japanese Embassy in Venezuela

On October 4, we visited the Japanese Embassy in Venezuela, and met with H.E. Ambassador Shuji Shimokoji and Mr. Kobayashi, First Secretary. Ambassador Shimokoji, who had just recently assumed office as Japanese Ambassador to Venezuela (after serving as Japanese Ambassador to Panama),

listened attentively to our description of past and present JCCP activities in the country, and together with Mr. Kobayashi, gave a detailed overview of current situations, security and environmental issues, and the state of economic and social affairs, in Venezuela.



*With Ambassador Shuji Shimokoji,
at the Japanese Embassy in Venezuela*

3. Colombia

ECOPETROL has been sending increasing numbers of participants to JCCP courses during the past several years, but we took the opportunity of our recent visit to promote a deeper understanding of JCCP activities at the company's Head Office and Cartagena Refinery.

ECOPETROL is strongly committed to environmental conservation, and is implementing a number of joint projects with foreign companies. As the development of capable engineers is an issue of primary concern to the company, the ECOPETROL side expressed strong expectations of JCCP. Moreover, ECOPETROL employees who had participated in JCCP regular courses in the past shared their views that their JCCP experience has enhanced their capacities to perform their duties.

(1) ECOPETROL Head Office

On October 5, we visited the ECOPETROL Head Office. From the

planning stages, the ECOPETROL side displayed much enthusiasm for our visit, and Mr. Federico Maya, Vice President in charge of the Refining Department, in particular, actively contributed his views and opinions on various issues, during the actual meeting. Mr. Byron Miranda, Director of the Cartagena Refinery, and JCCP graduates who hold important positions at the refinery also attended the meeting and took part in the highly active and energetic exchange of views. Through the meeting, we deepened our mutual friendship and understanding with ECOPETROL.

(2) Cartagena Refinery

On October 6, we visited the Cartagena Refinery. Cartagena is a city of world-class scenic beauty that boasts a commanding view of the Caribbean Sea and a treasure trove of ancient buildings dating back to the period of Spanish rule. Although we visited the



At the ECOPETROL Head Office



At ECOPETROL's Cartagena Refinery

refinery on a Saturday, Mr. Miranda, Director of the refinery, and a number of senior officials gathered to greet and extend their warmest hospitality. Mr. Hugo Barcelo, who was a participant in a JCCP regular course last year and is now in charge of capacity improvement planning at the refinery, gave a detailed overview of the refinery's future plans. We urged the continuous participation of refinery personnel in JCCP courses.

4. Brazil

Brazil's crude oil production is expected to surpass 2 million b/d by the end of FY2007, and the country is poised to become an exporter of crude oil in the near future. As of last year, it has become the world's leading producer of bio-ethanol. Brazil's state-run oil company PETROBRAS is an enormous company that employs 60,000 employees. It is listed on the New York Stock Exchange, and is an excellent company even by international standards. PETROBRAS University, from which JCCP has lately been receiving an increasing number of participants, is single-handedly responsible for the education and R&D aspects of PETROBRAS. During this particular visit to Brazil, we visited the Head Office of PETROBRAS, PETROBRAS University, and the Duque de Caxias Refinery, a PETROBRAS refinery nearest to Rio de Janeiro. We gave a detailed overview of JCCP activities and regular courses in 2008, and answered questions from the PETROBRAS side concerning Expert Service (ES) programs.

Through this visit, we acquired a general picture of the status and role of PETROBRAS University within the PETROBRAS Group, as well as of its educational system, and deepened friendly ties with members of the counterpart department.

(1) JETRO São Paulo Center

On October 8, we met with Mr. Yuji Watanabe, Director of the JETRO São Paulo Center. Mr. Watanabe shared

his vast knowledge of South American affairs with us, and described in detail the economic and social situations in Brazil today, emphasizing infrastructure development, education, security, and accumulated financial deficits as four priority issues that Brazil must address in the future. We explained the purpose of our visit, introduced JCCP's activities and recent undertakings, and exchanged views with Mr. Watanabe on future JCCP cooperation in Brazil.

(2) Duque de Caxias Refinery

On October 9, we visited the Duque de Caxias Refinery, located about an hour's drive from Rio de Janeiro. The refinery is a historic refinery that commenced operations in 1961. It boasts the country's third largest refining capacity, and leads all other refineries in terms of the capacity and complexity of its secondary units. It also occupies a strategic location, in close proximity to both Rio de Janeiro and São Paulo. The refinery has plans to invest some 4.5 billion dollars by 2014, to increase the production of white oil and other value-added products. The refinery's next target, therefore, is to promote health, safety and environment (HSE) and energy conservation.

We gave a detailed overview of JCCP and its activities, including its regular training courses, to the refinery members, and again to Mr. João Machado, General Manager, who

later arrived at the meeting. We also requested the refinery's participation in regular courses.

(3) PETROBRAS University

On October 10, we visited PETROBRAS University. With the attendance of Mr. Walter Brito, Director of the Human Resources Department, and heads of relevant specialized fields, members of PETROBRAS University and the JCCP side alternately gave a presentation. Mr. Brito explained the organization, curriculum, and policies of PETROBRAS University in detail, and discussed the characteristics and priority policies of each department.

PETROBRAS University is an institution dedicated to educating PETROBRAS employees and undertaking various studies and research activities. It offers a diverse educational curriculum, including programs for employees who work in foreign countries and tie-up programs with foreign educational institutions and universities. In addition to its 30 or so exclusive instructors, the institution employs part-time lecturers from external institutions, as well as being under contract to dispatch experts to a number of foreign oil companies and organizations.

The members of PETROBRAS University showed strong interest in JCCP regular courses on human resource management, refinery management,



At the Duque de Caxias Refinery



Giving a presentation at the PETROBRAS International Forum



and environmental management, and exchanged views with us on future JCCP cooperation.

(4) PETROBRAS Head Office

Also on October 10, we visited the PETROBRAS Head Office, and met with Mr. Edson Castilho, General Manager, Equipment Division-Headquarters, and personnel in charge of refinery operations and facility management. We introduced JCCP activities, explained the content of JCCP regular courses in detail, and requested the participation of refinery employees in regular courses. The PETROBRAS side actively inquired about the Expert Service (ES) program, and we responded by introducing ES programs that are implemented through JCCP member engineering companies in Japan.

(5) Japanese Consulate General in Rio de Janeiro

On October 11, we visited the Japanese Consulate General in Rio de Janeiro and met with H.E. Mr. Masahiro Fukukawa, Consul-General, Mr. Tomoyuki Takayama, Consul, and Mr. Takayoshi Fukushiro, Researcher. Consul-General Fukukawa assumed his present post last year, after previously working at a Japanese embassy in the Middle East.

We gave a detailed description of

JCCP activities and purpose of our visit to South America. The Consul-General, in turn, described current situations in Brazil, mentioning the widening disparity between the rich and poor, and the increasing concern about the shrinking middle class. He also explained that next year marks the 100th anniversary of the arrival of the first Japanese immigrants to Brazil, and that a host of commemorative events are being planned.

(6) Participation at the PETROBRAS International Forum

On October 17, we (Y. Ueno) participated in a forum sponsored by PETROBRAS, and delivered an hour-long presentation titled "Overview of Oil Industry and Physical Distribution in Japan." (The forum was scheduled during the week following our visit to South America, but PETROBRAS strongly requested a lecture on the present situation of Japan's oil industry.) PETROBRAS sponsors this forum every year, inviting about 200 participants from throughout Brazil. This year, there was an especially strong interest in the current state of the oil industry in Japan, as well as in issues concerning rationalization of physical distribution and efficiency improvement. Many questions were also raised regarding

trends in the mixture of ethanol in gasoline.

5. Summary

In all three countries, meetings were held with the attendance of directors and managers of the relevant departments, and we were therefore able to introduce JCCP activities to many key personnel at once. They mainly inquired about JCCP regular courses on "refinery management," "environmental management," and "human resource management," and expressed strong interest in ES programs and courses implemented by JCCP member companies. The opportunities to hold direct discussions and exchange views with JCCP counterparts in the various institutions, allowed us to better understand their current situations and training needs, and lay the groundwork for even smoother communications. We strongly feel that our recent visits have achieved significant results for strengthening mutual relationships in the future. Based on the strong bonds of friendship we have established during the trip, we have renewed our commitment to deliver steady cooperation results and further strengthen ties between Japan and oil-producing countries.

<by Yoshiaki Ueno, Training Dept.>

Report on the Cooperation with Training Centers Program

—Russia and Kazakhstan—

In recent years, JCCP has been actively approaching Russia and the countries of Central Asia, to strengthen relationships with them, as they are expected to become major suppliers of oil and energy in the future. As part of its efforts, Mr. Tetsuji Kubota, Deputy General Manager, and I, Akio Hoshino, Master Lecturer, of the JCCP Training Department visited Russia and Kazakhstan under the Cooperation with Training Centers Program, from October 8 to 18, 2007. We visited major oil companies, engineering companies, shipping companies, and refineries, to identify needs relating to the operation and improvement of their training system, and to promote JCCP activities, with the objective of contributing to human resource development in the two countries.

1. Russia

(1) LukOil Oil Company, Nizhny Novgorod Refinery

The refinery is located in the suburbs of Nizhny Novgorod (formerly known as Gorky), and is the company's largest refinery, with a capacity of 400,000 b/d and 2,000 employees. We gave an introductory presentation to about 20 refinery personnel, and exchanged views with staff members from the Human Resource, Accounting, and Economy Departments. We then toured the 730-hectare refinery site by car. The refinery facilities are old, but upgrading projects are gradually advancing.

(2) Nizhegorodniineftep Project

This company is a subsidiary engineering company of LukOil, located in Nizhny Novgorod. We met with Mr. Anatoly M. Lantsev,

Technical Director, and learned that the company is extremely busy with a LukOil Refinery FCC project that is scheduled to be completed in 2009, and various other expansion projects.

A large number of female staff members of the company (most of whom are JCCP graduates) gathered in the conference room to welcome us. Their warm hospitality indicated the company's appreciation and expectations of JCCP.

(3) Transneft (Moscow)

A major crude oil transporting company based in Moscow, the company has recently begun to send a number of participants to JCCP courses. According to Mr. Igor G. Solyarskiy, Vice President, the company's main business at present is crude oil transportation, but it has plans to also undertake the transportation of other petroleum products in the near future. To this end, Mr. Solyarskiy feels that acquiring know-how and information on the downstream sector is essential, and has large expectations of JCCP.

(4) Vnipineft (Moscow)

Established in 1929, the company has grown into a major engineering company in Russia, with 15,000 employees. There have been several past JCCP course participants from Vnipineft, but this was the first time that JCCP has visited the company. We met with Mr. Eduardo A. Raud, Deputy Commercial Director of the Business Development Department, and deepened mutual understanding between the two organizations. The company is now a participant in the Sakhalin II Project, but also has plans to increase its presence in projects outside of Russia. It works in partnership with

Toyo Engineering Corporation in the Sakhalin II Project, and maintains a cooperative relationship with JGC Corporation.

(5) Slavneft (Moscow)

This was the first time JCCP members have visited this oil company. The company, on the other hand, has not sent any participants to JCCP courses, to date.

The company operates two refineries, and three-fourths of their production volume is exported to neighboring countries. We gave a presentation to Mr. Iliia B. Medvedev, Vice President in charge of HR, and Mr. Vladimir V. Krylov, Vice President in charge of the downstream sector, to promote JCCP activities. The presentation took 90 minutes, but they listened with keen interest, particularly to the explanation of JCCP's Human Resources Management course.

(6) Other Facilities in Russia

In addition to the above facilities, we visited the Japanese Embassy in Moscow and the Moscow Office of Mitsubishi Corporation, and acquired a general understanding of the present political, economic, and social situations in Russia. We strongly felt that the macro-level information, as seen through the eyes of Japanese citizens living abroad, will be valuable in enhancing future JCCP activities.

The main points of the discussions were as follows: "Russia's economy is booming. However, similar to Japan, the strong downtrend in the birthrate and the growing gap between major cities and regional areas are becoming serious social issues. Russia has begun to realize the great potential of its



*At LukOil;
Dr. Kuyykin (left) and Mr. Anatoly (third from left)*



*At Nizhegorodniineftep Project;
Mr. Lantsev (back row, center) and Mr. Nikonorov (right);
Most of the women are JCCP graduates*

resources, and is actively working to increase their added value. The country as a whole is particularly responsive to the term ‘Japanese technology,’ and undeniably has a strong interest in Japanese expertise and technologies.”

2. Kazakhstan

(1) Central Dispatching Board of Oil and Gas Industry (CDB OGI)

This company has a familiar relationship with JCCP, as senior officers of the company, from the president on down, have attended Study Tour (ST) programs in Japan, in 2005 and 2006. We met with Mr. Kairat N. Kaipiyev, President, who heartily welcomed us. According to Mr. Kaipiyev, Kazakhstan produces 1.3 million b/d of petroleum at present, but there are plans to increase production three-fold by 2020. He believes that

training in various aspects related to petroleum is essential to achieving that production increase, and places high hopes on JCCP programs. We strongly felt the company’s sincere expectations of JCCP in the warm and attentive hospitality we received from the more than 30 members of CDB OGI who had gathered to welcome us.

(2) KazMunayGas (KMG) Head Office

We gave a presentation to about 10 management-level members of the HR, HSE and Petrochemical Departments. Ms. Raushan Raiskhanova, HR Director, appeared to have a strong interest in JCCP’s activities, and was particularly interested in knowing whether JCCP offers courses other than those related to the oil refining sector that are listed in the program. We explained that JCCP is an organization specializing in the downstream sector, and that there is a

different organization for the upstream sector.

(3) KazMunayGas Atyrau Refinery

The Atyrau Refinery is one of KazMunayGas’s three refineries, located on the northern shore of the Caspian Sea. It has a capacity of 100,000 b/d. This was JCCP’s first official visit to the refinery. We gave a brief presentation to Mr. Shkodin O. Urievich, Administration Department Director, and other management-level officers, and deepened mutual understanding between the two organizations. The refinery, built in 1965, looks its age, but the shiny new tower, vessel, and piping of the diesel fuel desulfurization unit that was installed last year by JGC Corporation, seemed to lend an air of modernization to the refinery. With the completion of the renovation project, the refinery has gained the capacity to produce Euro III- and IV-compatible



*At Transneft;
Mr. Solyarskiy, Vice President (front row, right)*



*At the Japanese Embassy in Russia;
(from left) Mr. Takeshi Hikiyama, Economy Minister of the Japanese Embassy in Russia, and Mr. Ichinose, Counselor*



At CDB OGI;
Mr. Kaipiyev, President (front row, right), Ms. Kopebosinova (left),
and Mr. Izbergenov, Vice President (back row, center)



At the KazMunayGas Head Office;
Ms. Raiskhanova, HR Director (second from left)

diesel light fuels. Its next challenge is residual oil upgrading.

(4) Other Institutions in Kazakhstan

In Kazakhstan, we also visited JGC's Almaty Office, located in the former capital city of Almaty, and obtained a general overview of the political,

economic, and social situations in Kazakhstan. As our last destination, we paid a visit to the Atyrau Refinery site office, and listened to stories about the challenges the refinery has encountered in carrying out the project.

We followed an extremely busy agenda, which consisted of visits to 12 facilities in 9 days, but in both Russia and Kazakhstan, we sensed great energy emanating from their strong efforts to modernize their country, as well as from the air of activity surrounding the entire country, the cities, the industries, the business world, the people, and almost all other aspects of

society. As far as could be observed, both countries have shed any negative image that Eastern European countries have previously had, and have developed into prosperous countries, equal to the Western European countries, even in terms of the abundance of products that are available on the market. The economic development and gradual "westernization" of the two countries in recent years were also evident in this aspect, as well.

To contribute to maintaining close relationships with Russia and Kazakhstan, JCCP intends to utilize the information and personal network achieved from this mission to further enhancing JCCP activities in the future.

<by Akio Hoshino, Training Dept.>



Staff of the Atyrau Refinery Museum giving a presentation on the history of the refinery

Participant's Voice



Advanced Field Devices and Control

(TR-13-07: August 21 – September 7, 2007)

Mr. Roberto Carlos Mideros Simarra (ECOPETROL / Colombia)

On behalf of the Advanced Field Devices and Control participants, I would like to take this opportunity to convey my sincere thanks to all JCCP members, for giving us this great chance to attend and take part in this invaluable course program, especially Mr. Kojima, Executive Director

of JCCP, Mr. Kirita, Mr. Nito and Mr. Saegusa, not only for their support and the hard effort they made to give each participant the characteristically warm hospitality and kindness of the Japanese people, but also for their excellent guidance and polite treatment during all the

visits we made to the different companies.

As an Arabic partner said, "It is over now as everything in our life has an end, and the happy times vanish especially rapidly, even if we want them to last longer." I absolutely agree with him, and I am sure all other participants do, too.

The course content had great meaning to me, and has given me abundant knowledge about process control, including SIS. The practical explanations using software and real-time DCS were especially helpful. Additionally, being in Japan not only increased and enhanced my technical knowledge in engineering, but it also allowed me to exchange experiences in this specific area with other people, and to gain a different perspective about the level of technological development at my company, ECOPETROL Colombia, which I had assumed, ranked equally with the other companies. This course also helped my co-participants eliminate certain constraints in their companies.

This was my first time in Japan, and I was completely taken with the politeness and impeccable manners of the Japanese people. I was also amazed with Tokyo. This flashing and colorful city gave me a broad understanding of Japanese culture, while giving me some reasons to improve my life, as well as my country, Colombia. I was surprised with the punctuality of the Japanese people and their commitment to constantly keep to their schedules.

During our field trips to Kyoto, Yokohama, and Hiroshima, I was impressed with all the marvelous



At Yamatake Corporation's Isehara Plant

attractions and beautiful places, including the castles, Buddhist temples, and Shinto shrines. However, Hiroshima city was the most beautiful place that I have ever seen. I think this city symbolizes the Japanese people's power to overcome hardships. I have complete respect for the way the Japanese people have rebuilt not only the entire country, but also their economy, after the war. Most importantly, the people of Hiroshima were polite and friendly, despite all the pain that they have suffered in the past.

Finally, from the bottom of my heart, I would like to say to JCCP, thank you very much, though these words are hardly enough to express my full appreciation. I hope to come back as soon as possible, either to participate in a course again, or for vacation.

Domo Arigato Gozaimashita. Muchas Gracias.



Training Management

(TT-1-07: November 27 – December 14, 2007)

Mr. Ali Abudullahi Sulaiman Al-Eisri (ORC / Oman)

My name is Ali and I come from Oman, but not today. Today, I am from 13 different countries, because I am representing all my friends in the Training Management course. I am honored to be chosen by my team members to write about our course for this JCCP newsletter.

During this beneficial and excellent course, we traveled to different cities in Japan, from Tokyo, to Kyoto, Hiroshima, Tokuyama, Sakaide, Yokohama, and to Zushi. In those cities, we visited a number of leading oil and gas companies, who shared with us their experiences in HRM and HRD. We have gained valuable knowledge and information from their presentations and lecture sessions,

and fully appreciate the effort they put into preparing such outstanding and well-organized programs, as well as their warm hospitality, kindness, and generosity. Sharing experiences with Japanese engineers was also a precious experience, which allowed us to form new friendships.

We also attended two days of lectures at Meisei University. The lectures featured many case studies, and were very helpful in understanding HRD in Japanese companies.

The course also gave us the opportunity to explore the beauty of nature in Japan, as well as to catch a glimpse of historical Japan through visits to famous temples and

imperial castles. It was interesting to see the coexistence of traditional and modern Japanese cultures. We were blessed with good weather in all the cities we visited, which greatly boosted our spirits during our field trips.

In addition to experiencing Japanese culture, we learned about 13 different cultures at the same time, because participants of 12 different nationalities attended the course. Regardless of cultural differences, we became like one big family, helping and taking care of each other. I am sure that all of us will continue to be in touch with each other after this course.

I wouldn't be surprised if many of us bring our families to Japan during holidays in the future. Personally, I wish to know more about Japan and its culture, people, cities, and beautiful gardens, so hopefully, I will be back soon with my family.

Special thanks to Mr. Kojima, Executive Director of JCCP, Hoshino-san, Tabe-san, and Hiro-san, for their hospitality, generosity and kindness. We are thankful to



At Meisei University

you all, beyond words. No matter how many times we say thank you, it will never be enough to express our full appreciation. We wish you all success, and hope to see you in our countries some day.

Arigato Gozaimashita.



Advanced Technologies for Rotary Machinery –Reliability Enhancement–

(IT-2-07: December 5 – December 19, 2007)

Mr. Khalaff M. Al-Ghamdi (Saudi Aramco / Saudi Arabia)

On behalf of all participants of the IT-2-07 course, I sincerely thank all the JCCP management and staff for arranging such a wonderful training program and giving us the opportunity to participate. I would like to extend my special gratitude to Kojima-san, Executive Director, and to JCCP coordinators Miyawaki-san, Higashi-san, and Tone-san.

The program was structured in a systematic manner, comprising classroom lectures, site visits to factories, visits to historical places, buffet lunches, and subway rides that took us across the breadth and width of Japan. There is no doubt that this training program will benefit us, our companies, and our countries.

The participants of this program included 16 engineers from different companies in 8 countries. We are grateful to JCCP for the wonderful welcome given us and for imparting in-depth knowledge of advanced technologies. In the future, we may perhaps see new business opportunities arise between our companies and JCCP-affiliated companies.

One thing I would like to mention, however, is the issue of communication. We noticed that the Japanese

are making every effort to incorporate English into their lives. We wish you success in this regard, as English proficiency will further open Japan to the international world and make Japan a technological giant, in the true sense of the word.

It is on this note that I, on behalf of all participants of this program, say "Thank you very much, and God bless you."



At Shin Nippon Machinery Co., Ltd.'s Kure Works

JCCP Regular Courses Completed in October – December 2007

<p>TR-14-07 Petroleum Marketing</p> <p>Period: October 30 – November 16, 2007 No. of participants: 16 Country of participants: Indonesia, Iran, Kuwait, Libya, Mexico, Myanmar, Nigeria, Pakistan, Russia, Singapore, Thailand, UAE</p>	
<p>TR-15-07 Environmental Management for Refineries</p> <p>Period: October 30 – November 16, 2007 No. of participants: 16 Country of participants: Colombia, Indonesia, Iran, Kuwait, Mexico, Nigeria, Pakistan, Qatar, Saudi Arabia, Thailand, Vietnam, Yemen</p>	
<p>TR-16-07 Gas Processing for LNG</p> <p>Period: November 27 – December 14 No. of participants: 13 Country of participants: China, Kazakhstan, Indonesia, Libya, Mexico, Nigeria, Qatar, Saudi Arabia, Thailand, Vietnam, Yemen</p>	
<p>TT-1-07 Training Management</p> <p>Period: November 27 – December 14 No. of participants: 18 Country of participants: China, Colombia, Indonesia, Iran, Kazakhstan, Malaysia, Mexico, Oman, Pakistan, Qatar, Russia, Saudi Arabia, Thailand</p>	
<p>IT-2-07 Advanced Technologies for Rotary Machinery – Reliability Enhancement –</p> <p>Period: December 5 – December 19, 2007 No. of participants: 16 Country of participants: Indonesia, Kuwait, Libya, Malaysia, Mexico, Nigeria, Saudi Arabia, UAE</p>	
<p>TR-3-07 Model Predictive Control</p> <p>Period: December 5 – December 19, 2007 No. of participants: 12 Country of participants: Indonesia, Iran, Libya, Malaysia, Mexico, Nigeria, Qatar</p>	

Total: 91 participants

Project Renewal LOI Exchanging Ceremony with Qatar Petroleum

Qatar Petroleum (QP) and JCCP recently held a ceremony at the QP Head Office to exchange a Letter of Intent (LOI) on renewing the “FEED Study on LPG Recovery at QP’s Mesaieed Refinery,” a two-year technical cooperation program that was signed and begun in FY2006. The ceremony took place with the attendance of a number of QP members, including Mr. Hussain M. Al-Ishaq, Director Refining in charge of petroleum refining, Mr. Abdulaziz M. Al-Khoori, Mesaieed Refinery Operations Manager, and several engineers, and a number of members representing the Japan side, including Mr. Noboru Homma, First Secretary at the Embassy of Japan in Qatar, and Mr. Hajime Marukawa, Director and Senior General Manager of Cosmo Engineering Co., Ltd. (CEC), the company that is implementing the project.

In response to increasing worldwide environmental concerns, QP has launched a Health, Safety & Environment Management Program, in an effort to reduce waste and increase energy efficiency. The FEED Study project has been implemented as part of this effort, based on a strong request by



Attendees of the ceremony

the Qatar side for JCCP cooperation in examining systems for recovering LPG from fuel gas and flare gas.

At the ceremony, Mr. Al-Ishaq and Mr. Al-Khoori firstly thanked JCCP and CEC for its technical cooperation in improving efficiency at the Mesaieed Refinery. Mr. Homma then read a message from H.E. Yukio Kitazume, Ambassador of Japan to Qatar, which expressed his appreciation of activities JCCP has implemented in the Middle East to date, such as the annual GCC-Japan Environment Symposium and the many technical cooperation projects conducted

jointly with Middle East oil-producing countries. In his message, Ambassador Kitazume also articulated his expectation that the project will further strengthen the friendly relations between Qatar and Japan. Following Mr. Homma, Mr. Katsuo Yokoyama described a few words as the newly-appointed Managing Director of JCCP, as well thanked QP for its cooperation in hosting the GCC-Japan Environment Symposium in February, and in implementing technical cooperation projects with JCCP. Mr. Marukawa from CEC also delivered a greeting, thanking QP and JCCP for



Exchanging the LOI

*Right: Mr. Hussain M. Al-Ishaq, Director Refining (QP)
Left: Mr. Katsuo Yokoyama, Managing Director (JCCP)*



Ceremony venue

Center: Mr. Noboru Homma, First Secretary at the Embassy of Japan in Qatar

the opportunity to participate in the project, and expressed his company's commitment to making a steady

contribution to increasing efficiency at the Mesaieed Refinery through the project. After the speeches, Messrs. Al-

Ishaq and Yokoyama exchanged the LOI and commemorative gifts, and closed the ceremony on a successful note.

<by Takeyoshi Haishima, Technical Cooperation Dept.>

The Sixth Scientific Council Meeting with UAE University Held in Al Ain

On November 4, 2007, JCCP and UAE University co-hosted the Sixth Scientific Council Meeting at UAE University, located in Al Ain, UAE. The two institutions began implementing joint technical cooperation programs in FY2001, and are presently carrying out two programs on wastewater treatment and acid gas treatment.

As partners from the UAE industrial sector, the Ruwais Refinery of Abu Dhabi Oil Refining Company (TAKREER) is supporting the wastewater treatment program, and Abu Dhabi Gas Liquefaction Co. Ltd. (ADGAS) is giving cooperation in the acid gas treatment program.

From Japan, Nippon Oil Research Institute is participating in the implementation of the programs, and Dr. Masaaki Teramoto of Kobe University is providing research guidance and project assistance in the acid gas treatment program.

The Scientific Council Meeting is held biannually, alternating the venue between Japan and UAE. At the sixth such meeting held recently, the members reported on, and actively discussed, the progress of activities that have been made during the first half of FY2007.

The following is an overview of the achievements.

• Wastewater treatment

In the wastewater treatment program, a new treatment method that combines biological treatment and activated carbon adsorption treatment processes was acknowledged as the optimum method for treating wastewater. Particularly with respect to adsorption treatment, activated carbons made by processing seeds from locally-cultivated dates were determined to be especially effective in adsorbing certain metals.

As a result of a survey on wastewater properties at the Ruwais Refinery, it was

agreed that treatment technologies need to be established for CODs, phenols and sulfuric acid salt.

• Acid gas treatment

In the acid gas treatment program, a variety of experiments were conducted using hollow fiber membrane as a means of removing carbon dioxide and methane from natural gas. The results of the experiments closely matched a mathematical model that has been developed earlier. In reality, the process would require an increase in pressure, so an experiment was also conducted to demonstrate that carbon dioxide can indeed be removed under increased pressure. The experiments verified the effectiveness of hollow fiber membrane. The members of the program will continue to pursue their efforts to attain a practical process that can take the place of gas-washing with an alkali solution.

<by Nobuyuki Taneda, Technical Cooperation Dept.>



Opening ceremony



Discussion session

The 17th Annual Saudi-Japan Joint Catalyst Symposium



Opening address by H.E. Dr. Khaled S. Al-Sultan, Rector of KFUPM



Opening speech by Dr. Eiichi Kikuchi, Chairman of JPI



Dr. Hideshi Hattori, Professor Emeritus at Hokkaido University and guest researcher at KFUPM

On November 11 and 12, 2007, a Saudi-Japan Joint Catalyst Symposium was held at King Fahd University of Petroleum and Minerals (KFUPM) in Dhahran, Saudi Arabia. The symposium, which is jointly hosted every year by KFUPM and the Japan Petroleum Institute (JPI), under commission by JCCP, has taken root in Saudi Arabia as an annual event at KFUPM.

To deliver a symposium that suitably reflects the trends of the times, JPI's Overseas Cooperation Committee, chaired by Dr. Takashi Tatsumi from the Tokyo Institute of Technology, has held highly active discussions with members of KFUPM headed by Dr. Sulaiman S. Al-Khattaf, Director, Center for Refining & Petrochemicals, Research Institute, prior to the symposium, from which the symposium theme and presentation

topics have ultimately been decided.

The 17th such symposium held this year featured presentations by a group of seven researchers from Japan, headed by Dr. Eiichi Kikuchi, Professor at Waseda University and Chairman of JPI. Dr. Hideshi Hattori, Professor Emeritus at Hokkaido University, was also invited to give a presentation. Dr. Hattori currently resides in Saudi Arabia as a guest researcher at KFUPM, under JCCP's long-term researcher exchange program.

The symposium began with an opening address by H.E. Dr. Khaled S. Al-Sultan, Rector of KFUPM, followed by opening speeches by Dr. Kikuchi, leader of the Japanese delegation, and Minoru Horike, General Manager of JCCP's Technical Cooperation Department. The technical sessions

began after the speeches.

The Japanese researchers and participants from KFUPM, Saudi Aramco, Saudi Arabia Basic Industries Corporation (SABIC), universities and research institutes in Saudi Arabia, and researchers from Kuwait and the U.S., together delivered 19 presentations in all, mainly on issues related to catalyst technology in the oil refining and petrochemical fields. An audience of approximately 100 people filled the symposium venue. They took an active part in the Q&A sessions, and boosted the symposium's spirit of mutual cooperation. Even lunch and rest breaks between presentations provided an ideal opportunity for personal exchanges among researchers and engineers.

JCCP extends its profound gratitude to all who have supported the implementation of the symposium—especially Dr. Al-Khattaf, Dr. Tatsumi, and Mr. Hideki Konishi, head researcher of the JPI Secretariat, who began preparing and coordinating the event from early on, as well as members of the KFUPM Secretariat and members of JPI's Overseas Cooperation Committee—and would like to ask for their cooperation, again in the future, for the continued development of the symposium.



Symposium session

<by Minoru Horike,
Technical Cooperation Dept.>

Project on Flare Gas Recovery from Oil Refining Facilities in the UAE

Background to the Project

Abu Dhabi National Oil Company (ADNOC) in the UAE has initiated a health, safety, and environmental management program in May 1998, and has been actively engaging in environmental countermeasures with the objectives of reducing waste gas and materials and improving energy efficiency. This policy has become a model for nationwide environmental countermeasures in the UAE, and has also prompted the enforcement of the Basic Environmental Law in February 2000.

Under this situation and based on a strong request by the Abu Dhabi Oil Refining Company (TAKREER),

JCCP has implemented a study on the applicability of the flare gas recovery technology at the Ruwais Refinery.

Overview of the Project

- **Objective**

The project sets out to introduce and examine the flare gas recovery system designed to reduce flare gas emission, with the final objectives of achieving effective utilization of flare gas and reducing environmental impact, at TAKREER's Ruwais Refinery.

- **Progress made so far**

We have completed the detailed design of the facility and arranging for the procurement of equipment and materials

in FY2006, and are mainly conducting on-site construction work in FY2007.

- **Future plans**

We are scheduled to complete the construction and commissioning work of the flare gas recovery system in FY2007. In FY2008, we plan to support operational technologies and conduct an evaluation of the project.

- **Expected results**

The project is expected to substantiate the feasibility of reducing gas emissions and improving energy efficiency at the Ruwais Refinery. It will also provide a basis for the application of the system to other units within the refinery, as well as to other refineries under TAKREER.

<by Hitoshi Hirokawa, Technical Cooperation Dept.>

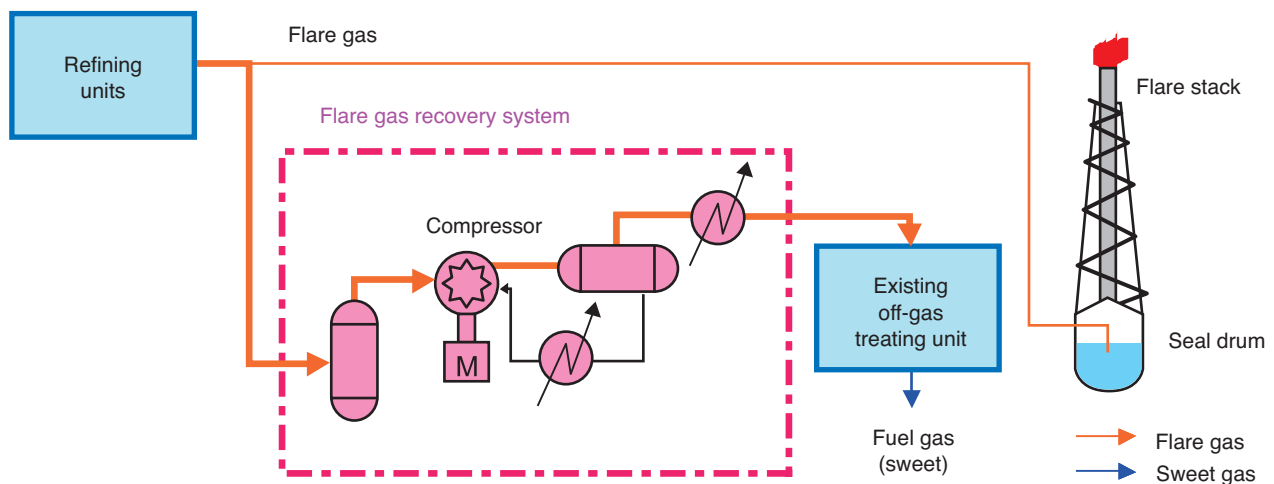


Diagram of the Flare Gas Recovery System

Personnel Changes

Outgoing Personnel

Incoming Personnel

Operations Department
General Manager



Koichi YOKOSUKA



Hisayoshi TANDA

Technical Cooperation
Department



Takashi KURODA



Makoto NAKAMURA



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