

New JCCP Project Launched in Kuwait

—Joint Research on Upgrading Technology of Kuwait Heavy Crude—

1. Background

Kuwait exports crude oil and also processes heavy crude oil for domestic consumption. In recent years, however, trends toward low-sulfur gasoline, kerosene and gas oil, and the aging of domestic refineries are calling for urgent measures. To address these issues, Kuwait National Petroleum Company (KNPC) has decided to promote two simultaneous projects: the New Refinery Project (NRP) and the Clean Fuel Project (CFP).

As part of these projects, KNPC plans to construct new desulfurization units to reduce the sulfur content of gas oil and heavy oil. However, it needs to upgrade its technologies for selecting high-performance desulfurization catalysts and evaluating catalyst performance, before ultra-deep desulfurization of gas oil and desulfurization of heavy oil can proceed using the new desulfurization units. It has therefore asked Kuwait Institute for Scientific Research (KISR) to commence a study on the selection and performance evaluation of desulfurization catalysts.

Thus tagged by KNPC, KISR turned to JCCP for cooperation. JCCP called on the participation of JX Nippon Research Institute Ltd. and Kyushu University, and together organized a new JCCP project called “Joint Research on Upgrading Technology of Kuwait Heavy Crude” based on Japan’s technologies, experience, and know-how regarding desulfurization catalysts. The project was scheduled to be implemented over a three-year period from fiscal 2010.

2. Project Overview

Before technologies for desulfurization catalyst selection and catalyst performance evaluation can be developed, it is necessary to assess the composition of the feedstock to be desulfurized through catalyst activity. Therefore, the composition of Kuwait heavy crude oil (Lower Fars crude oil, Eocene crude oil, etc.), the gas oil and heavy oil refined from heavy crude oil, and the resulting desulfurized light fuel and heavy oil, will be analyzed in detail, to assess the desulfurization reaction properties of gas oil and heavy oil. Additionally, the performance of various demetallization catalysts will be investigated using literature references, because in heavy oil desulfurization, metals that degrade the activity of desulfurization catalysts must be removed through a demetallizing process.

Based on the results of the above, desulfurization and demetallization catalysts will be selected for use in pilot tests, and the selection of catalysts and conditions for the pilot tests will be proposed to KISR. Improvements of test conditions (operations, sample collection, analysis items, etc.) will also be discussed with KISR as necessary.

By executing the above activities, the project ultimately aims to transfer Japan’s technologies for desulfurization catalyst selection and catalyst performance evaluation to the Kuwaiti oil industry.



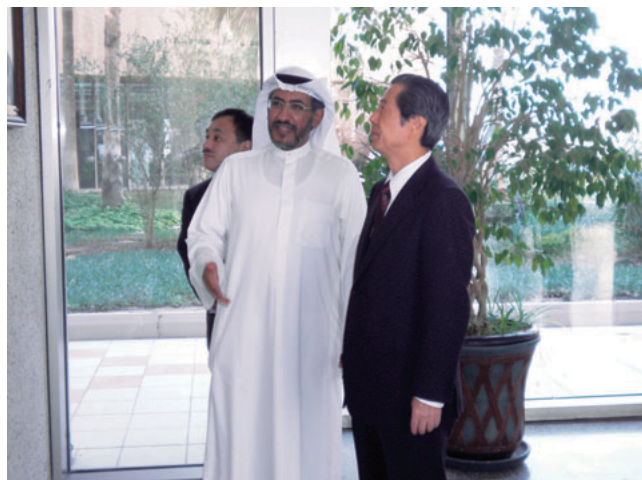
Signing ceremony



Dr. Hideo Nagashima, Vice President of Kyushu University, delivering a congratulatory message



Dr. Naji Mohammed Al-Mutairi, Director General of KISR, and Mr. Morihiro Yoshida, Managing Director of JCCP, exchanging the MOA



Dr. Al-Mutairi relaying the history of KISR to Ambassador Yasuyoshi Komizo

3. Signing Ceremony

After much consultation regarding the content of the joint project, KISR and JCCP reached an agreement and held a ceremony for the signing of a Memorandum of Agreement (MOA) on November 1, 2010. The MOA was signed by Dr. Naji Mohammed Al-Mutairi, Director General, on the KISR side, and by Mr. Morihiro Yoshida, Managing Director of JCCP, on the Japanese side, and commemorative gifts were exchanged with a prayer for the success of the new project.

From the Japanese Embassy in Kuwait, Mr. Yoshinori Yamashita, First Secretary, attended the ceremony and delivered a congratulatory message on the commencement of the new JCCP project, expressing his hope that the project will contribute to strengthening the friendly relationship between Kuwait and Japan. Also representing the Japanese side, Dr. Hideo Nagashima, Vice President of Kyushu University,

attended the ceremony and, on behalf of the institution as a cooperating member of the JCCP technical cooperation project, pledged to provide technical cooperation to KISR. On the Kuwaiti side, a total of 17 members attended the ceremony from companies such as Kuwait Petroleum Corporation (KPC), Kuwait Oil Company (KOC), and KNPC, and expressed words of appreciation to JCCP for its technical cooperation.

H.E. Mr. Yasuyoshi Komizo, Japanese Ambassador to Kuwait, rushed to the venue of the signing ceremony immediately after the presentation of the credentials to the king of Kuwait. The Ambassador participated in the welcome reception at KISR Headquarters with the Japanese delegation, and enjoyed a pleasant chat with Dr. Al-Mutairi.

All members of the project hope for its successful completion, and that the transfer of catalyst selection and new catalyst development technologies to Kuwait will further deepen the two countries' friendly relations.

<by Nobuyuki Suyama, Technical Cooperation Dept.>



Memorandum of Agreement