

# The 15th Kuwait-Japan Joint Symposium

The 15th Kuwait-Japan Joint Symposium was held on January 20 and 21, 2014 under joint organization by Kuwait Institute for Scientific Research (KISR), Kuwait National Petroleum Company (KNPC) and Japan Petroleum Institute (JPI). The symposium has been held annually in Kuwait, initially with KISR as partner, and with the addition of speakers from KNPC from the 5th symposium. At this year's symposium, the number of speakers from KNPC surpassed the number from KISR for the first time. Furthermore, speakers from Kuwait Oil Company (KOC) and a catalyst company in Kuwait also gave presentations, and contributed to the diversity of the symposium with the participation of both researchers and business operators.

The Japanese side not only presented technical papers, but also captured the interest of Kuwaiti companies with even more practical presentations themed on "advancements in petroleum refining processes," which included the troubleshooting of actual cases of manufacturing facility corrosion in the refinery and procedures for operational optimization.

The names of the Japanese speakers and their presentation themes are shown below.

- (1) Prof. Keiichi Tomishige, Dr. Sci., Dept. of Applied Chemistry, Graduate School of Engineering, Tohoku University  
*Keynote lecture: "Natural gas conversion to synthesis gas by methane reforming using Ni catalysts modified with noble metals"*

- (2) Dr. Toshimitsu Suzuki, D.Eng., Professor Emeritus, Kansai University  
*"Highly selective oxidative dehydrogenation of propane to propylene"*
- (3) Dr. Masayoshi Soga, D. Eng., Professional Engineer (Resource), Senior Manager, Energy Economics Research Dept., JX Nippon Research Institute, Ltd.  
*"Possibility that the global refining system could supply low sulfur fuel in 2020"*
- (4) Mr. Yuji Kato, Rotating Equipment Engineering Group, Technical & Engineering Center, Idemitsu Kosan Co., Ltd.  
*"Utilization of regenerative repair for rotating equipment"*
- (5) Dr. Kenji Katoh, D.Eng., Material Specialist, Lloyd's Register Group Limited  
*"Development of corrosion-resistant steel for cargo oil tank of crude oil tankers and its international standardization"*

As the guests of honor, Mr. Ahmad S. Al-Jemaz, Deputy CEO, Mina Abdullah Refinery, KNPC, and Mr. Shigeru Yamamoto, First Secretary, Economic & Commercial, Japanese Embassy in Kuwait, also participated in the symposium.



Seminar scene



(From the left): Prof. Keiichi Tomishige, Graduate School of Engineering, Tohoku University and leader of the Japanese delegation (representing the Japanese speakers);  
 Mr. Shigeru Yamamoto, First Secretary, Japanese Embassy in Kuwait;  
 Mr. Ahmad S. Al-Jemaz, Deputy CEO, Mina Abdullah Refinery;  
 Dr. Meena Marafi, Executive Director, Petroleum Research Center;  
 Mr. Morihiro Yoshida, Managing Director of JCCP

### <Opening Speeches>

*Mr. Shigeru Yamamoto:*

Mr. Yamamoto first offered his congratulations on the holding of the 15th Kuwait-Japan Joint Symposium, then reported on the results of the meeting between Prime Minister Shinzo Abe and His Highness Prime Minister Sheikh Jaber Al-Mubarak during Prime Minister Abe's visit to Kuwait in 2013. Specifically, Mr. Yamamoto spoke about the agreement that was included in the joint statement issued after the meeting, which promised bilateral cooperation in diverse areas including the energy sector, and raised expectations for Japan's contribution to Kuwait's oil industry through joint implementation of the project by Kuwaiti and Japanese oil companies.

*Mr. Morihiro Yoshida, Managing Director of JCCP:*

Mr. Yoshida mentioned the Memorandum of Understanding on mutual cooperation of education institutions that was exchanged between Japan's Ministry of Education, Culture, Sports, Science and

Technology and Kuwait's Ministry of Higher Education during Prime Minister Abe's visit to Kuwait, and said the emphasis that was placed on cooperation in the scientific research sector is worthy of mention and an indication that JCCP's many years of activities have been recognized by the governments of both countries. Mr. Yoshida said he is convinced that the symposium and cooperation projects that have been implemented by KISR and JCCP to date will further strengthen relations between Kuwait and Japan.

The two-day symposium inspired active exchanges of views between the speakers and audience, at times turning into heated discussions, and ended with a closing speech by Dr. Meena Marafi, Executive Director, Petroleum Research Center, as summarized below.

### <Closing Speech>

*Dr. Meena Marafi:*

Dr. Marafi called on both the speakers and audience to think beyond the success of this symposium and consider all possible areas for improvement, in order to develop this symposium into a forum for promoting mutual knowledge and experience through collaboration between the researchers' world of academia and the practical world of companies. She also expressed her wish to see further development of the symposium in the future by strengthening diverse networks so that the symposium could provide a meaningful opportunity to build an even better future in the oil industry.

The symposium highlighted Kuwait's strong interest and high expectations of Japan's technologies, and provided the realization that JCCP activities have played an important role within the concerted efforts of diverse Japanese institutions to establish cooperative ties with Kuwait.

*<by Keiko Ebihara, Technical Cooperation Dept.>*

[Day One] Monday, January 20, 2014	
9:00-9:30	Opening Addresses: Mr. Ahmad S. Al-Jemaz, Deputy CEO, Mina Abdullah Refinery, Kuwait National Petroleum Company Mr. Shigeru Yamamoto, Commercial Attaché, Embassy of Japan in Kuwait Prof. Keiichi Tomishige, Head of Delegation, The Japan Petroleum Institute Mr. Morihiro Yoshida, Managing Director, Japan Cooperation Center, Petroleum
9:30-10:15	Keynote Lecture: "Natural gas conversion to synthesis gas by methane reforming using Ni catalysts modified with noble metals" (Prof. Keiichi Tomishige, Tohoku University, Japan)
10:15-10:45	Coffee Break

10:45-12:00	SESSION 1: Catalyst and Process Development; Chairperson: Dr. Hassan Al-Rabiah	
10:45-11:10	Paper 1	"State-of-the-art 'Catalyst systems' for heavy oil processing" Hasan M. Qabazard, Kuwait Catalyst Company, Kuwait
11:10-11:35	Paper 2	"Influence of support and supported phases on catalytic functionalities of hydrotreating catalysts" Mohan S. Rana, Kuwait Institute for Scientific Research, Kuwait
11:35-12:00	Paper 3	"Highly selective oxidative dehydrogenation of propane to propylene" Kenta Fukudome and Toshimitsu Suzuki, Kansai University, Japan
12:00-13:00	Prayer Time & Lunch Break	
13:00-14:20	SESSION 2: Green Initiatives in Refining Industry; Chairperson: Dr. Toshimitsu Suzuki	
13:00-13:25	Paper 4	"Possibility that the global refining system could supply low sulfur fuel in 2020" Masayoshi Soga, JX Nippon Research Institute Ltd., Japan
13:25-13:50	Paper 5	"Non-oxidative treatment methods on spent hydroprocessing catalysts" Narjes Ghaloum, André Hauser, Sakeena Al Sairafi, Hanadi Al Sheeha, Kuwait Institute for Scientific Research, Kuwait
13:50-14:15	Paper 6	"Petroleum refining processes emission sources: major contributing processes and ways of mitigation" M.S. Al-Rashidi, S.M. Al-Salem and A.R. Khan, Kuwait Institute for Scientific Research, Kuwait
14:15-14:40	Paper 7	"The establishment of the R&D Center — KIPRC" Rachid Chedid Sablit, Khairyah Kheefan Al-Hamad, Kuwait Oil Company, Kuwait

[Day Two] Tuesday, January 21, 2014		
8:30-10:40	SESSION 3: Advancements in Corrosion Mitigation; Chairperson: Mr. Saad Al-Dhafiri	
8:30-8:55	Paper 8	"Development of corrosion-resistant steel for cargo oil tank of crude oil tankers and its international standardization" Kenji Katoh* and Seiji Nishimura**, *Lloyd's Register Group Limited, **Nippon Steel & Sumitomo Metal Corporation, Japan
8:55-9:20	Paper 9	"Understanding the interactions between corrosion layers and inhibitor films in flow conditions" Abdulmuhsen Akbar*, Xinming Hu**, Chun Wang**, Richard Barker** and Anne Neville**, *Kuwait Institute for Scientific Research, Kuwait, **University of Leeds, UK
9:20-9:45	Paper 10	"Challenges in restoration of a titanium steam condenser" Mohammed Moyeenuddin, P.K. Mukhopadhyay and Hussain Al-Shammari, KNPC Shuaiba Refinery, Kuwait
9:45-10:10	Paper 11	"A novel fracture mechanics technique for the determination of susceptibility of engineering materials to stress corrosion cracking" Rihan Omar Rihan, Kuwait Institute for Scientific Research, Kuwait
10:10-10:40	Coffee Break	
10:40-11:55	SESSION 4: Failure Investigation; Chairperson: Dr. Kenji Katoh	
10:40-11:05	Paper 12	"Experience of super austenitic stainless steels in LNG import facility" Saad Al-Dhafiri, Thammar Al-Ansari and K. Laxma Reddy, KNPC Mina Al-Ahmadi Refinery, Kuwait
11:05-11:30	Paper 13	"Premature failure of upper PA/BFW heat exchanger tubes in delayed coker unit" Ali Radhi Saad Al-Azemi, KNPC Mina Abdullah Refinery, Kuwait
11:30-11:55	Paper 14	"Failure of DEA lean/rich exchanger in gas sweetening unit" Saad Al-Dhafiri and Ravi Mohan Gupta, KNPC Mina Al-Ahmadi Refinery, Kuwait
11:55-13:00	Prayer Time and Lunch Break	
13:00-14:40	SESSION 5: Corrosion Management; Chairperson: Dr. K. Ravindranath	
13:00-13:25	Paper 15	"Managing corrosion in bleed and high pressure flash gas lines containing NH <sub>4</sub> HS" Hiren Harishkumar Zala and Bader M.A. Al-Harbi, KNPC Shuaiba Refinery, Kuwait
13:25-13:50	Paper 16	"Utilization of regenerative repair for rotating equipment" Yuji Kato and Yoichi Tokita, Idemitsu Kosan Co., Ltd., Japan
13:50-14:15	Paper 17	"Monitoring of stagnant and low flow lines in petroleum refineries" Faisal Al-Refai, Vinod Kumar Bhatia and Sandeep Patil, KNPC Mina Abdullah Refinery, Kuwait
14:15-14:40	Paper 18	"Corrosion management in small bore drains and vents" Sunil Kumar Birla and P.K. Mukhopadhyay, KNPC Shuaiba Refinery, Kuwait
14:40	Closing Remarks Dr. Meena Marafi, Executive Director, Petroleum Research Center, Kuwait Institute for Scientific Research, Kuwait	