

January 28, 2015

DENKI KAGAKU KOGYO KABUSHIKI KAISHA  
(DENKA)

**DENKA Presents at the Eighth Japan-China Energy Conservation Forum an Agreement to License Its Calcium Carbide Technology to Chinese Businesses**

On December 28, 2014, DENKA attended the Eighth Japan-China Energy Conservation Forum, a public-private joint forum held in Beijing, China under the auspices of Japan's Ministry of Economy, Trade and Industry, the Japan-China Economic Association and China's National Development and Reform Commission. The forum included a project signing ceremony in which DENKA and Sinochem International Corporation (hereafter "Sinochem International"), a leading Chinese chemical trading company, jointly presented a technological collaboration and licensing agreement, signed by both companies, to transfer remote-operated fused calcium carbide tapping technology developed by DENKA.

In China, the majority of raw material used to produce vinyl chloride resin is acetylene created through the carbide method. On the back of the growing production volume of vinyl chloride resin, acetylene suppliers have been boosting their calcium carbide manufacturing capacities and as a result are facing the urgent need to upgrade their facilities. However, in the conventional manufacturing process, fused calcium carbide, melted at a temperature of 2,000°C or higher, has been tapped off from the furnace by human operators who have to be present near the facilities. Thus, this step has inevitably exposed workers to high-temperature environments.

Backed by its century-long track record in calcium carbide production, DENKA boasts a wealth of expertise in maintaining the security and safety of production facilities. Leveraging this experience, DENKA has developed, ahead of other manufacturers around the world, an automated system using the Remote Tapping Manipulator (RTM), and has introduced this system in its mass-production facilities to mitigate workplace hazards and operator burden. Not only does this system eliminate the danger involved in handling fused calcium carbide by allowing remote manipulation, the RTM also helps promote labor and energy saving. Because of these features, the system is expected to become mainstream among calcium carbide manufacturers throughout China. In addition to the signing of the technological collaboration and licensing agreement with DENKA, Sinochem International has entered into sub-licensing agreements with other Chinese calcium carbide manufacturers to promote technology transfer and the popularization of the RTM.

Previously, DENKA and Sinochem International also attended the Seventh Japan-China Energy Conservation Forum held in August 2012 to announce the signing of a licensing agreement with regard to the transfer of dry acetylene generation technology developed by DENKA to realize an energy- and water-saving production process.

Since its founding in 1915, DENKA has been a pioneering carbide chemical company in Japan, accumulating expertise in facility security, environment-friendliness, and energy and labor efficiency. We will draw on these strengths to promote partnerships with Chinese businesses and achieve mutual development while actively helping enhance workplace safety and conserve the global environment. In these ways, we will fulfill our responsibility as an outstanding manufacturer worthy of society's trust.



The Eighth Japan-China Energy Conservation Forum (Liaoning International Hotel)



The project signing ceremony:

Mr. Xie Zhenhua, vice chairman of China's National Development and Reform Commission (right, back row); Mr. Yosuke Takagi, Japan's State Minister of Economy, Trade and Industry (second from the right, back row); Mr. Glenn Qu, Assistant General Manager of Sinochem International (right, front row); and Mr. Hitoshi Watanabe, Senior Managing Executive Officer of DENKA (left, front row)