



## ***PRESS RELEASE***

October 15, 2012

### **MGC & JGC-Licensed DME Plant Completed in Germany**

Mitsubishi Gas Chemical Company, Inc.  
JGC Corporation

**Tokyo and Yokohama, Japan--** Mitsubishi Gas Chemical Company, Inc. (MGC) and JGC Corporation announced today that as of October 11, performance testing was successfully completed and commercial operation was started at a licensed dimethyl ether (DME) production plant commissioned by German chemical manufacturer Grillo A.G., using a process owned jointly by MGC and JGC. The plant is located in an industrial park in Frankfurt, Germany. Completion of the plant attracts further attention to this proprietary DME production process and further demonstrates its technological reliability.

DME is currently used mainly in aerosol products for cosmetics and paint, but as its physical properties resemble those of liquefied petroleum gas (LP gas) and it is easy to transport and store, DME is attracting attention overseas as a potential alternative fuel to LP gas and/or diesel, and also for use as fuel for boilers and automobiles. When DME is combusted, it generates neither sulfur oxides (SO<sub>x</sub>) nor soot (PM), and it can be easily produced from methanol from natural gas or coal, so expectations for DME as a clean next-generation fuel for power generation are high.

The DME production technology this proprietary process is based on was developed by MGC in 1965. MGC independently constructed and operated a DME production plant, and further developed its DME business by selling process licenses to two overseas companies.

Starting in 2001, with an eye toward using DME as fuel, MGC, with the cooperation of JGC, began developing process technology that could drastically scale up production capacity (to 1.5 million tons/year). JGC assisted in the

scale-up and optimization of the new process technology, and in 2008, MGC and JGC jointly sold a process license to Fuel DME Production Co., Ltd.

This process employs high-performance catalysts developed by MGC, and the process has been optimized to ensure high-purity DME product with minimal impurities. Furthermore, it has been established that the process can be used to manufacture DME on a scale as large as 1 million tons/year, making DME feasible for use as fuel, and contributing to the expanding potential uses of DME around the world. MGC and JGC will continue promoting the licensing of this DME production process overseas, as well as utilization of DME for energy purposes.

#### Grillo A.G. Company Outline

Name: Grillo-Werke AG

Head Office: Duisburg, Germany

Chairman of the Executive Board : Ulrich Grillo

Number of Employees: 1,621 (as of September 30, 2011)

#### DME Production Plant Outline:

Location: Industriepark Höchst, Frankfurt, Germany

Production Capacity: Spray/aerosol grade DME: 20,000 tons/year

Photo:



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