

March 12, 2024

Concluded a Memorandum on Methanation Demonstration in Oman ～ Basic Design of Pilot Plant ～

As one of the ways to develop the Memorandum of Cooperation between Ministry of Energy and Minerals, Sultanate of Oman, and Ministry of Economy, Trade and Industry of Japan, executed in December 2022, Hitachi Zosen Corporation (hereinafter, “Hitachi Zosen”) and Hitachi Zosen Inova AG (Switzerland, hereinafter, “HZI”), a 100% subsidiary of Hitachi Zosen, have concluded a Memorandum of Understanding (hereinafter, the “MOU”) regarding cooperation in the field of Methanation^{*1} with Oman LNG LLC (hereinafter, “Oman LNG”).

【The signing ceremony】



Oman, like Japan, aims to achieve net-zero greenhouse gas emissions by 2050, and in December 2022, the two governments signed the Memorandum of Understanding of cooperation on carbon recycling, including hydrogen, ammonia and methanation^{*2}.

The MOU is based on the Memorandum of Cooperation between the two countries and aims to implement methanation equipment in LNG plants owned by the Oman LNG and to utilise emitted CO₂ as a resource.

The MOU intends to study the commercial prospects for a small pilot plant (methanation equipment, water-electrolysis equipment, etc.) at a site adjacent to the existing LNG plant and produce 1,200N m³/h of e-methane.

In concluding the MOU, the Group's knowledge and experience in methanation, as well as their water electrolysis and water treatment technologies for producing the hydrogen required for the methanation, and its engineering, procurement and construction (EPC) capabilities for constructing a large-scale plants, were highly evaluated.

Hitachi Zosen's proposal has been accepted for the fiscal year 2024 Subsidy program for "Oil Refining Technology Projects in Oil-Producing Countries (for projects to support strengthening relations with resource-rich countries to secure oil and natural gas rights and stable supplies)", for which the Ministry of Economy, Trade and Industry and the Agency for Natural Resources and Energy issued a public call in January 2024, and will use the subsidy for the MOU's pilot plant's basic design and evaluation for commercialization.

The Hitachi Zosen Group has extensive experience in the construction of water treatment plants in the Middle East. It is also currently contributing to the Middle East in the field of waste to energy plants through HZI. As we aim to create opportunities for business demonstration and social implementation of methanation and water electrolysis in Japan and globally, we are going to further develop our environmental business in the Middle East, deepen cooperation between Hitachi Zosen and HZI's respective methanation and water electrolysis technologies, and mobilize the Group's capabilities to work on this project.

※1 : A technology to synthesize methane, which is a main component of natural gas, by reacting hydrogen and carbon dioxide in a reaction vessel filled with a catalyst.

※2 : Japan's Ministry of Economy, Trade and Industry and Oman's Ministry of Energy and Mineral Resources were concluded on December 27, 2022.

The outline of the project is as follows:

- 1.Name of MOU : Memorandum of Understanding regarding cooperation in the field of Methanation
- 2.Signatories : Oman LNG LLC and Hitachi Zosen Corporation, Hitachi Zosen Inova AG
- 3.Signing date : March 11, 2024