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Kawasaki Heavy Industries, Ltd.

TB Global Technologies Ltd.

Ship Shore Coupler for Liquefied Hydrogen Transport Obtains Technology
Qualification from Nippon Kaiji Kyokai (ClassNK)
—major step towards commercial-scale marine transport of liquefied hydrogen—

Kawasaki Heavy Industries, Ltd. (Minato-ku, Tokyo, Representative Director, President, and CEO: Yasuhiko Hashimoto) and TB Global Technologies Ltd. (President and Representative Director, Laurent Poidevin) announced today that its jointly developed 6- and 16-inch caliber Ship Shore Couplers for liquefied hydrogen (LH₂) transport have passed development tests and obtained technology qualification from Nippon Kaiji Kyokai (ClassNK).



Prototype 6-inch Ship Shore Coupler (at JAXA Noshiro Rocket Testing Center)

This type of flange-style coupler is used to connect the cargo handling pipework on a liquefied hydrogen carrier ship to a marine loading arm installed on the jetty at the liquefied hydrogen site (Figure 1). Ensuring high sealing performance and safe usage even under the cryogenic conditions (-253°C) of liquefied hydrogen, the new couplers have been designed for improved workability during connection. Low temperature strength testing using liquefied hydrogen at Noshiro Rocket Testing Center of the Japan Aerospace Exploration Agency (JAXA) showed no problems, and the couplers were technically qualified by ClassNK. By officially recognizing the reliability of a technology key for constructing the supply chain, this qualification is a major step forward towards the commercial-scale marine transport of liquefied hydrogen.

The 6-inch caliber ship shore coupler is scheduled to be applied in the “Liquefied Hydrogen Supply Chain Commercialization Demonstration Project” * a project managed by Japan Suiso Energy, Ltd.. The 16-inch caliber ship shore coupler was developed to meet the anticipated future expansion of liquefied hydrogen demand.

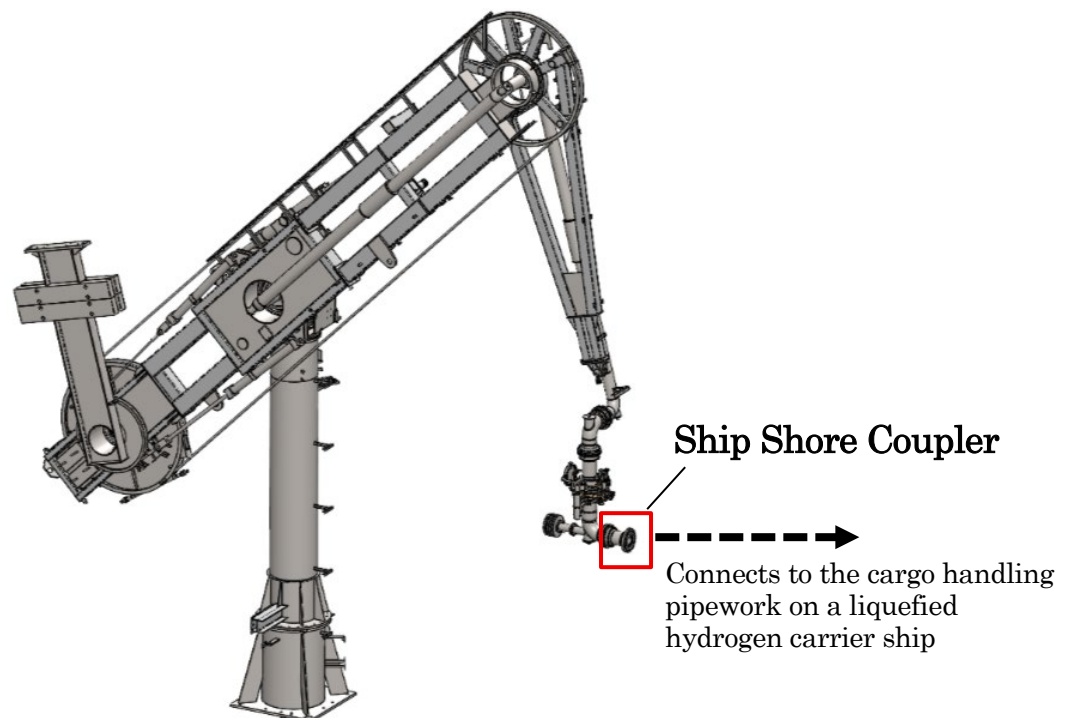


Figure 1: Ship Shore Coupler (flange-style coupler used to connect the cargo handling pipework on a liquefied hydrogen carrier ship to a marine loading arm installed on the jetty at the liquefied hydrogen site)

Both companies will continue their efforts to develop Ship Shore Couplers essential for marine transport to help create a global supply chain for liquefied hydrogen and realize a carbon-neutral society.

* Green Innovation Fund Project of the New Energy and Industrial Technology Development Organization (NEDO)

<https://green-innovation.nedo.go.jp/en/>

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