Torishima Pump Mfg. Co., Ltd.
29th August 2024

Torishima Signs Technical Support Agreement with Mitsubishi Heavy Industries for CO2 Separation and Recovery Pumps

To strive to achieve a carbon-neutral society, it is essential to enhance all available technologies for carbon capture and storage (CCS) and/or effective utilisation (CCU).
The processes which are currently in use for CO2 separation and recovery are; absorption liquid process, solid adsorption process and membrane separation process. Among these processes, the absorbent solution process has a long history as a gas treatment technology for the chemical industry and is suitable for larger capacities. As a result, this process is expected to be widely adopted in plants around the world. A critical factor in this process is to increase the capacity of the high-pressure pumps.

Torishima Pump Mfg. Co., Ltd (Torishima) is a global leader in pump manufacturing, having delivered numerous high-efficiency, high-pressure pumps with capacities exceeding 6,500 tons per hour for seawater desalination plants and long-distance water transmission pumping stations. Mitsubishi Heavy Industries, Ltd. (MHI) has been supplying absorption liquid process pumps around the world including the Middle East, North Africa, Southeast Asia, and India since the early 1990s. With extensive experience and technical expertise, MHI has established itself as a leading global manufacturer in this industry.

Torishima has signed a technical support agreement with MHI to receive all required technical assistance and data for the design and manufacturing of key pumps used in the absorption liquid process. This includes the semi-lean pump, which pressurizes the absorption liquid, and the power recovery turbine for CO2 separation.

By integrating MHI’s expertise in absorption liquid process pumps with Torishima’s large-capacity high-pressure centrifugal pump technology, Torishima is poised to contribute significantly to the global CO2 separation and recovery market by supplying high-efficiency pumps. This initiative will play a vital role in the pursuit of a carbon-neutral society.

The supply of energy-efficient, resource-saving and carbon-neutral pumps, and related equipment are a key part of Torishima’s growth strategy. Torishima is also actively investing in the development of high-efficiency pumps and large-capacity high-pressure pumps for alternative energies such as liquefied hydrogen and ammonia. With a commitment to innovation, Torishima aims to become an indispensable company in the global market, driving the development of technologies and products that are crucial to society's future.

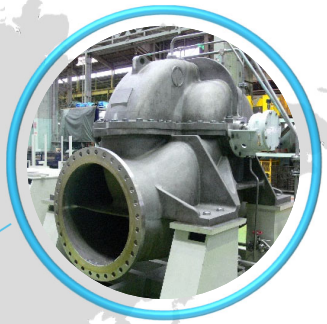
more than capacity: 1,000㎥/h・Total head 300m

Torishima Large-capacity・High-pressure

1,200 sets Supplied

Maximum Spec

Capacity	6,500㎥/h
Total Head	800m
Motor	11,000kW



Saudi Arabia
Desalination Plant
Water Transmission Pump
Pump Type : CDM

N. Africa 150

Middle East 950

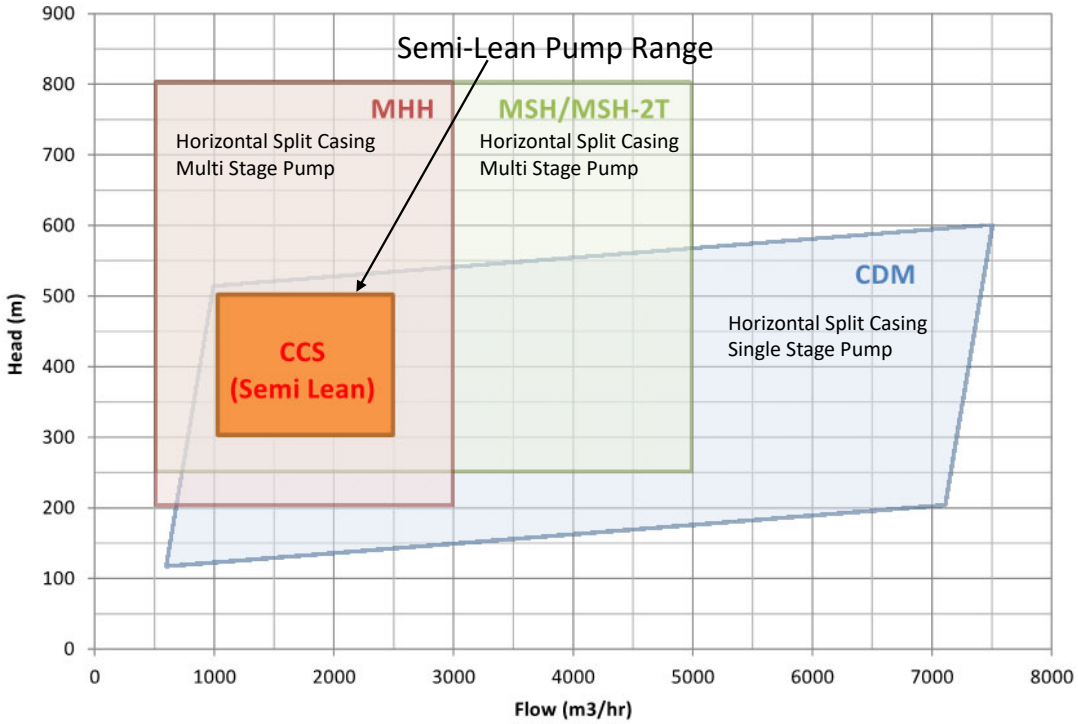
S. Aisia 60

Oceania N. & S. America 40

Oman
Desalination Plant
High Pressure RO Pump
Pump Type : MHH

Oder Duration：Year 2005～2024

Torishima Large-capacity・High-pressure & Semi-Lean Pump Range



Reference: Carbon-neutral related News Release

"Torishima and Kyoto University Make Hydrogen History with World's First High-Flow, High-Efficiency Liquid Hydrogen Pump" 14. Mar. 2024
"Joint Seminar held by Torisima and HERMETIC, "Torisima's Strives torwards a Decarbonised Society". 15. Nov. 2023
Announcement of New Team-composition for "Development of Large Flow Rate, High Pressure, High Efficiency Liquefied Hydrogen Boosting Pumps" 21. Sep. 2023
"Announcement of Business Alliance with HERMETIC of Germany" 31. Aug. 2023
"Development of Large Flow Rate, High Pressure, High-Efficiency Liquefied Hydrogen Boosting Pump" 4 Jul. 2023