



March 28, 2019 Kawasaki Heavy Industries, Ltd. Toshiba Energy Systems & Solutions Corporation

## <u>Kawasaki Heavy Industries and Toshiba to collaborate on</u> <u>the Supply of Medium-Capacity Steam Turbines</u>

- Boosting sales of high-efficiency, cost-competitive100-200 MW class steam turbines -

TOKYO and KAWASAKI—Kawasaki Heavy Industries (Kawasaki) and Toshiba Energy Systems & Solutions Corporation (Toshiba ESS) have entered into a collaboration agreement to supply medium-capacity steam turbines for utility and industrial thermal power plants. Sales activities for all over the world will be starting today.

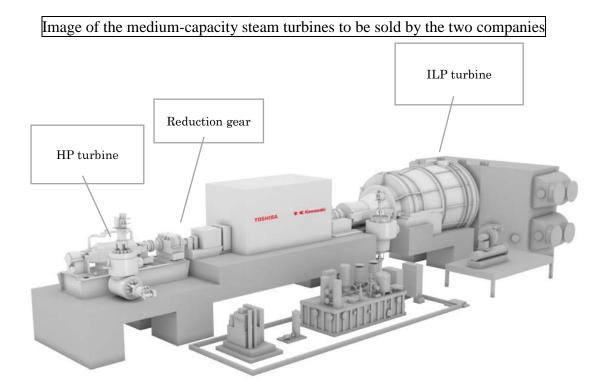
As the implementation of renewable energy has expanded throughout the world, the mainstream in the market for steam turbines for thermal power generation has been shifting from the large-capacity category to the small and medium of 300 MW or less. In addition to the existing needs for small to medium-capacity steam turbines to be cost competitive and adaptable to a wide variety of applications such as utility and industrial use, there are also increasing needs for these turbines to deliver higher efficiency through such as better steam conditions and employing the reheat cycle, and better capability enhancing power plant flexibility.

Under these circumstances Toshiba ESS and Kawasaki have been in studies for joint development of steam turbines which combine the material and the reliability technologies which Toshiba ESS has accumulated through the manufacture of steam turbines for utility-use thermal power plants, with the compact, high-speed turbine technology and packaging technology for diverse applications and flexible operations accumulated by Kawasaki through the manufacture of steam turbines for marine and industrial-use power generation. The two companies have agreed to effectively utilize each other's supply chains and to manufacture and sell the highly efficient and cost competitive medium-capacity of 100-200MW class steam turbines. Kawasaki will supply high-pressure (HP) turbine and reduction gear, while Toshiba ESS will supply intermediate- and low-pressure (ILP) turbine. The two companies will seek to expand their global sales through their respective sales networks.

Commenting on the collaboration, Takao Konishi, Vice President of the Thermal &

Hydro Power Systems & Services Div. of Toshiba ESS said, "Coping with various market environmental changes, we will expand sales of medium-capacity steam turbine and contribute to deliver stable power supply in harmony with the environment, based on our world-class expertise and technologies."

Takeshi Ohata, Vice President of Energy System & Plant Engineering Company of Kawasaki said, "We aim to actively expand energy and environmental business that leads to efficient energy use by pursuing synergies through this collaboration, based on the capability we have developed in meeting individual needs through implementation of industrial use steam turbines."



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