

**Creation of Sales System for Ballast Water Management Systems  
– Expansion of Treatment Capacity and Creation of Chemical Supply Base  
Network –**

19 April 2011

JFE Engineering Corporation

JFE Engineering Corporation has moved quickly to create a sales system for its ballast water management system,<sup>\*1</sup> "JFE BallastAce," enabling a detailed response to client needs, in anticipation that the conditions for Convention on Ballast Water taking effect may be satisfied in the near future.<sup>\*2</sup> (Official name of convention: International Convention for the Control and Management of Ship's Ballast Water and Sediments)

- (1) Approval of type expansion for maximum treatment capacity and 1/2 reduction in chemical use

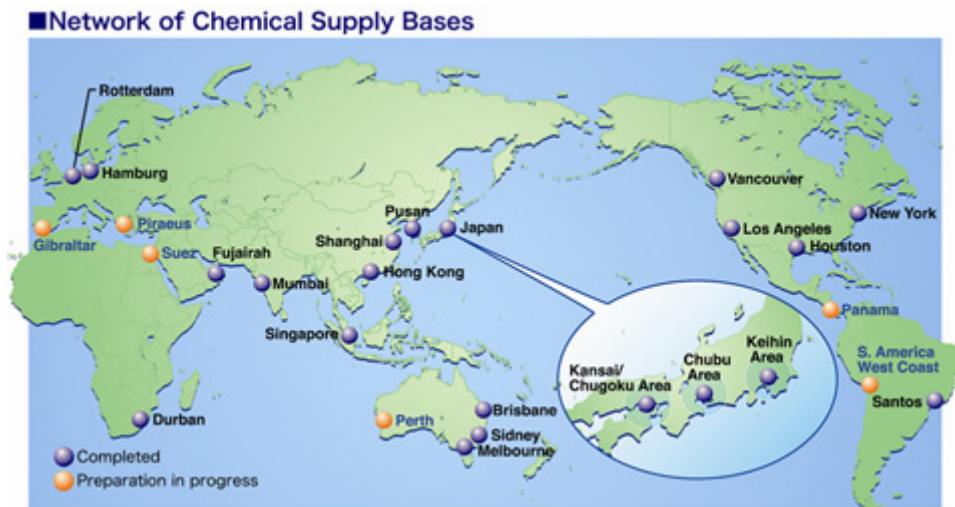
Approval for type expansion up to 4,500m<sup>3</sup>/h/unit was received from Japan's Ministry of Land, Infrastructure, Transport and Tourism (MLIT). This 4,500m<sup>3</sup>/h/unit is the world's largest treatment capacity for a single unit. This makes it possible to meet the needs of diverse ship types, from small vessels up to 400,000 ton class large-scale ships.

JFE Engineering also received MLIT approval for a one-half reduction in the amount of chemicals used in the system,<sup>\*3</sup> making it possible to reduce running costs by half.

- (2) Creation of chemical supply bases

To provide full follow-up for ships using the JFE system, the company has completed the creation of a chemical supply network at 20 main ports around the world, such as Singapore, Rotterdam. An expansion in the number of supply bases is also underway.

JFE Engineering is committed to further improvement of this system in the future to support an expansion in orders for the JFE BallastAce system, and will contribute to the environmental management efforts of clients and preserving the marine environment/maintaining biodiversity at the global scale.



\*1 Ballast water management system

Ballast water is seawater which ships carry in order to maintain the ship's balance. It is normally taken on in ballast tanks in the bottom of the ship at the unloading port and discharged at the loading port. Ballast water management systems are used to treat marine organisms carried with the ballast water, and thereby prevent disruption of the local ecosystem by ballast water discharge. If the Convention on Ballast Water takes effect, all oceangoing commercial ships will be legally required to install ballast water management systems in order to satisfy the treatment criteria provided in the convention. Furthermore, the ships which are subject to regulation will be expanded successively to newly-constructed ships and existing ships.

\*2 Conditions for Convention on Ballast Water Treatment taking effect and current status (As of April 19, 2011)

The Convention will take effect 12 months after the date when the following 2 conditions are satisfied:

- [Condition 1] Ratification by at least 30 member countries of the International Maritime Organization (IMO) → At present, has been ratified by 27 countries.
- [Condition 2] The tonnage owned by the ratifying countries must be at least 35% of total world commercial ships. → Current tonnage ratio is 25.32%.

\*3 Chemicals

The following chemicals, which were developed by Toagosei Co., Ltd., are used.

Biocide: "TG Ballastcleaner®"

Main ingredient: Sodium hypochlorite (used as a disinfectant for waterworks and swimming pools and as a food additive)

Neutralizing agent: "TG Environmentalguard®"

Main ingredient: Sodium sulfite (used in producing food preservatives and dyes, etc.)

For further information, please contact:

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