Establishing Shipbuilding Leadership through Superior Manufacturing Technologies

Two years have passed since the formation of Japan Marine United Corporation (JMU) through the merger of Universal Shipbuilding Corporation and IHI Marine United Inc. in January 2013.

The merger has enabled JMU to combine the two former companies' substantial engineering and technological resources and know-how, as well as marketing capabilities and facilities for large projects.

By leveraging these competencies, JMU is expanding its product lineup while taking a leading role in developing advanced technologies for increased energy savings and environmental load reduction. Going forward, JMU will continue to push ahead with its design and production of marine vessels offering superior performance and quality that meet the discriminating needs of its customers.

President & CEO **Shinjiro Mishima**

Japan Marine United

Newly Completed Fleet of Eco-ships

SHOYOH

In 2014, a year when JMU completed a variety of low-impact marine vessels, the company also saw its 97,000 DWT coal carrier, *SHOYOH*, delivered in July 2013, receive the Ship of the Year 2013 award in the large cargo vessel category. The award was presented by the Japan Society of Naval Architects and Ocean Engineers. *SHOYOH* is the world's first large bulk carrier to be fitted with contra-rotating propellers (CRP). This system, along with other cutting-edge energy-saving devices installed in *SHOYOH*'s stern, enables the ship to realize 16% greater fuel efficiency than a conventional vessel. Moreover, its power turbine generator uses exhaust gas from the main engine to help cut fuel consumption for electricity generation by 50%.

One of the low-impact vessels completed in 2014 was the *ENEOS OCEAN*, the first ship in a series of very large crude oil carriers (VLCCs). *ENEOS OCEAN* is specifically designed to take advantage of changes in Japan's port traffic regulations. Two other newly completed vessels were the *PELOREUS*, the first G182BC series Dunkirkmax-class large bulk carrier, and the *IVS NARUO*, a FUTURE 60 bulk carrier in JMU's FUTURE series. These vessels were delivered to customers in May, July and December, respectively.

JMU employed its state-of-the-art analytical technologies to optimally design the hulls of these eco-ships, and deployed cutting-edge energy-saving devices for enhanced environmental performance. Moreover, each ship boasts an Energy Efficiency Design Index (EEDI) that is approximately 20% lower than the EEDI baseline that will be introduced in 2020, thereby ensuring energy efficiency that more than satisfies the latest international standards for ocean-going vessels. With advantages such as these, it is no wonder that JMU's new eco-ships are winning strong praise from customers.

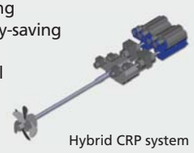
ENEOS OCEAN

IVS NARUO

PELOREUS

Orders Received for Large Ferries with High-efficient Hybrid CRP Systems

In fiscal 2014, JMU received orders for its first two large ferries, which will be delivered in 2017. To enhance fuel efficiency, JMU plans to install hybrid contra-rotating propellers (CRP) systems and other energy-saving devices, which will be combined with optimally designed hulls. Both vessels will ply the waters between Oarai Port in Ibaraki Prefecture and Tomakomai Port in Hokkaido Prefecture.



Hybrid CRP system

Highlights in 2014

April 2014
- Established Offshore and Engineering Division and Ship Life Cycle Division
- Received orders for eight 14,000-TEU container ships

May 2014
- *ENEOS OCEAN*, cutting-edge VLCC, named and delivered

June 2014
- *SHOYOH* selected as Ship of the Year 2013 in large cargo vessel category

July 2014
- *PELOREUS*, first next-generation energy-saving G182BC bulk carrier, delivered

- Mr. Naoki Tsuda, former president of IHI Marine United Inc., received Prime Minister's Commendation for contributing to Japan as maritime nation

October 2014
- Received orders for large ferries with highly efficient hybrid CRP systems

- Mr. Seiya Norimatsu of JMU Business Support Co., Ltd. received gold medal at Asian Para Games as member of wheelchair rugby national team

December 2014
- *IVS NARUO*, first FUTURE 60 series eco-ship, delivered

March 2015
- *HATSUSHIMA* midsized minesweeper delivered
- *IZUMO*, one of Japan's largest class of helicopter destroyer, delivered

From January 1, 2013

JFE Holdings, Inc.

JFE Steel Corporation | JFE Engineering Corporation | JFE SHOJI TRADE CORPORATION | (Equity-method affiliate) Japan Marine United Corporation

April 1, 2003: Established operating companies

JFE Steel Corporation → JFE SHOJI TRADE CORPORATION

JFE Engineering Corporation → Universal Shipbuilding Corporation

JFE Urban Development Corporation

Kawasaki Microelectronics, Inc.

JFE R&D Corporation

September 27, 2002: Inaugurated JFE Holdings, Inc.

Kawasaki Steel Corporation

July 1969
Landfill operations commenced at West Plant, Chiba Works

July 1961
Mizushima Works established in Kurashiki, Okayama Prefecture

February 1951
Chiba Works established as first modern integrated iron and steel works in postwar Japan

August 1950
Steel division of Kawasaki Heavy Industries spun off as independent Kawasaki Steel Corporation

August 1943
Chita Works established in Aichi Prefecture

May 1917
Fukiai Works established in Kobe

October 1896
Kawasaki Dockyard Company, Ltd. established (later renamed Kawasaki Heavy Industries, Ltd.)

April 1878
Shozo Kawasaki established Kawasaki Tsukiji Shipyard in Tsukiji, Tokyo

Nippon Kokan K.K.

December 1971
Construction of Ohgishima commenced at Keihin Steel Works

January 1969
Tsu Shipyard inaugurated operations

April 1968
Keihin Steel Works established (consolidation of Kawasaki, Tsurumi and Mizue works)

February 1965
Fukuyama Works established

October 1940
Tsurumi Steelmaking and Shipbuilding Company (formerly Asano Shipyard) acquired and absorbed

June 1936
First blast furnace blown in and integrated steel production started

April 1916
Yokohama Shipyard launched (later renamed Asano Shipyard Co., Ltd.)

June 1912
Nippon Kokan K.K. established