SEA-Japan

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Namura completes Dunkirkmax Capesize bulker, UNITED ETERNITY

Namura Shipbuilding Co., Ltd. delivered UNITED ETERNITY, a 183,026 DWT bulk carrier, to Hydrangea Line S.A. at its Imari Shipyard & Works on December 11, 2017. The vessel is the first of the newly-developed 183,000 DWT type bulk carrier with the following features.

The principal dimensions have been optimized focusing on the restrictions of the Port of Dunkirk in France. Further improvement of propulsion performance and fuel saving can be achieved with adoption of two energy saving devices, the Namura flow Control Fin (NCF) and the Rudder-Fin developed by Namura, an electronically controlled main engine, the latest model of high efficiency propeller, and low friction type anti-fouling paint.

For environmental protection, the vessel is equipped with a main engine and generator engines compliant with the Annex VI of MARPOL 73/78 regulations to reduce NO_x emissions; the arrangement of fuel oil tanks is designed for usage of low sulfur fuel oil; and an air seal type stern tube sealing device is adopted to reduce the risk of oil leakage.

The vessel uses the power management system for the main generators, which allows automatic start and stop at load shedding, automatic fuel changeover, start blocking for power-consuming auxiliary machinery, etc. The centralized fresh water cooling system adopted for the machinery space equipment contributes to easy maintenance.

To improve the environment of on-board living quarters, an elevator is installed for moving between the accommodation quarters and engine room, and the vessel complies with the SOLAS Chapter II-1 Regulation 3-12, Code on noise levels on board ships. The ballast water treatment system to control the quality of ballast water is equipped for protection of the marine environment to comply with the International Convention for the Control and Management of Ships' Ballast Water and Sediments.

The vessel has several storage tanks for appropriate management and discharge of drainage, sewage, rain water and water used for cleaning cargo holds. This will satisfy port restrictions on such discharges.

Principal particulars

L (o.a.) x L (b.p.) x B (mld) x D (mld) x d (mld):	291.99m x 287.50m x 45.00m x 24.60m x 18.20m
DWT/GT:	183,026t/93,453
Main engine:	MAN B&W 6G70ME-C9.5 diesel x 1 unit
MCO:	15,815kW x 70.5min^{-1}
Speed, service:	14.55kt
Complement:	28
Registry:	Panama
Classification:	NK
Completion:	December 11, 2017

For further information please contact: Website: http://www.jsea.or.jp

JAPAN SHIP EXPORTERS' ASSOCIATION

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JMU completes 302,000DWT crude oil tanker, GEM NO.5

Japan Marine United Corporation (JMU) delivered the GEM NO.5, a 302,000DWT crude oil tanker, to GEM NO.5 MARITIME CORPORATION at the Ariake shipyard on November 28, 2017. This is the sixth vessel of the "G Series" VLCC called G302T.

The principal particulars of the GEM NO.5 have been designed to provide flexibility for worldwide trade by achieving both compact hull form and large deadweight at shallow draft. The vessel has been developed drastically reducing fuel oil consumption together with CO_2 emission compared with existing vessels.

Excellent hull performance was achieved by using various and comprehensive technologies, which include advanced lower resistance hull form and optimized energy saving devices of the SSDR (Super Stream Duct®, SURF-BULB® (Rudder Fin with Bulb) and ALV-Fin® (Advanced Low Viscous Resistance Fin). Furthermore, the unique bow shape, called the "Ax-Bow®," gives better performance in waves under the laden condition.

The vessel's fuel oil consumption was further improved by a MAN Diesel & Turbo model G-type electronically controlled marine diesel engine, which complies with MARPOL NO_x regulation (Tier II), and a high efficiency propeller.

To ensure safety and maintenance, the IMO Performance Standard for Protective Coatings (PSPC) is applied for the cargo oil tanks and ballast water tanks. The vessel is also designed to comply with future environmental rules and regulations by installing the Ballast Water Management System, providing an inventory list of hazardous materials, and other features.

Principal particulars

L (o.a.) x B x D x d:	330.0m x 60m x 29.35m x 21.55m
DWT/GT:	302,650t/156,501
Main engine:	MAN B&W 7G80ME-C9.5 diesel x 1 unit
Speed, service:	15.80kt
Complement:	34
Classification:	ABS

Kawasaki delivers 164,700m³ LNG carriers, BISHU MARU

Kawasaki Heavy Industries, Ltd. delivered the BISHU MARU (HN: 1713), a 164,700m³ capacity liquefied natural gas (LNG) transport vessel for use by Kawasaki Kisen Kaisha, Ltd. ("K" Line).

The second of Kawasaki's line of 164,700m³ capacity LNG carriers to be commissioned, this ship is designed to enable passage through the newly expanded Panama Canal, which opened for full operations in 2016. The vessel features standard LNG carrier hull dimensions to enable docking at major LNG terminals around the world while offering larger cargo tanks for increased transport capacity, thus cutting LNG transport costs and facilitating more flexible LNG trade operations by shipowners.

In addition, Kawasaki has incorporated hull structure improvements to decrease overall ship weight and achieved more optimal below-waterline hull design to fully optimize propulsion performance.

The new carrier is also equipped with a Kawasaki Advanced Reheat Turbine Plant (Kawasaki URA Plant) as its main engine unit. This reheating-type steam-turbine propulsion plant developed by Kawasaki offers significant improvements to transport efficiency.

Principal particulars

Length (o.a.):	293.00m
Length (b.p):	280.00m
Breadth (mld.):	48.90m
Depth (mld.):	27.00m
Draft (mld.):	12.20m
Gross tonnage:	127,088
Deadweight tonnage:	83,752t
Hold capacity:	165,109m³
Main engine:	Kawasaki URA-400 reheating-type steam-turbine engine x 1 unit
Maximum continuous output:	26,800 kW at 70rpm
Classification:	ClassNK
Delivery:	December 26, 2017

MHI completes 11,000GT roll on/off cargo ship, MARIMO

Mitsubishi Heavy Industries, Ltd.(MHI) has completed the MARIMO, an 11,000GT-class roll on/off cargo ship, and delivered the vessel to the owner, Kinkai Yusen Kaisha Ltd. on January 12, 2018.

The vessel was designed as a high-speed Ro/Ro cargo ship capable of carrying 161 units of 13m long trucks and 109 passenger cars. The vessel has three truck decks and one passenger car deck and is equipped with 7m wide stern and bow ramp doors on the starboard side, and two hoistable ramp ways to facilitate roll-on and roll-off cargo handling.

The adoption of a bow thruster, two stern thrusters, a reaction-type hanging rudder and a controllable-pitch propeller ensures efficient maneuverability in harbours and at sea. A pair of fin stabilizers is provided to reduce rolling and to protect cargoes. The electronically controlled low-speed main diesel engine enables low fuel consumption and low NO_x emissions.

The MARIMO is the first vessel of two new buildings and is now plying a domestic route between Hitachinaka, Ibaraki, and Tomakomai, Hokkaido.

Principal particulars

L (o.a.) x L (b.p.) x B x D x d:	179.90m x 171.00m x 27.00m x 23.27m x 6.80m
DWT/GT:	6,100t/11,229 (Japanese tonnage)
Main engine:	MAN B&W 9S50ME-C8.5 diesel x 1 unit
M.R.:	14,940kW x 127min^{-1}
Propeller:	Controllable pitch propeller x 1 unit
Speed, service:	23.0kt
Classification:	NK (restricted greater coasting service)
Registry:	Japan
Vehicle Loading Capacity	
13m-long chassis:	161 units
Passenger cars:	109 units
Complement	
Passengers:	12
Crew members:	15
Cargo handling equipment	
Stern ramp door (Deck 3)	1 set
Bow ramp door (Deck 3)	1 set
Hoistable ramp way (Deck 2-3 & Deck 3-4)	2 sets
Fixed ramp way (Deck 1-2)	1 set
Diesel generators:	1,250kW/set x 4 sets
Special equipment:	Bow thruster x 1 set
Stern thrusters:	2 sets
Fin stabilizer:	1 set

MES shifts to holding company named Mitsui E&S Holdings Co., Ltd.

Mitsui Engineering & Shipbuilding Co., Ltd. will shift to a holding company and have its name changed to Mitsui E&S Holdings Co., Ltd. as of April 1, 2018.

The new company will also establish fully owned operating companies for its "Ship & Ocean domain", "Machinery domain" and "Engineering domain" with the company split, which are scheduled to make fresh starts as "Mitsui E&S Shipbuilding Co., Ltd." (MES-S), "Mitsui E&S Machinery Co., Ltd." (MES-M), and "Mitsui E&S Engineering Co., Ltd." (MES-E) from 1, April 2018.

MITSUI E&S

Mitsui E&S Shipbuilding Co., Ltd.

MES-S operates the Tamano Shipyard, Chiba Shipyard and MES-KHI YURA DOCK CO., LTD. Through its over 100-year history of shipbuilding, MES-S has been committed to the pursuit of advanced technology and the supply of high performance and quality products. MES-S continues to contribute to safe and economical marine transportation through construction of high performance and quality products, meeting modern demands.

MITSUI E&S

Mitsui E&S Machinery Co., Ltd.

MES-M is a leading manufacturer of large-sized, low-speed diesel engines for ships. MES-M is pressing ahead with the development of technologies for meeting not only NO_x regulations but also SO_x regulations and for CO_2 emissions reduction (energy conservation). As part of these actions, it is working to respond to the diversification of fuels. MES-M will broaden its lineup of products including systems for ME-GI (methane and heavy oil), ME-GI-Ethane (ethane and heavy oil) and ME-LGI (methanol, LPG or other with heavy oil), which MES-M has already manufactured, to continue to provide customers with propulsion systems that are friendly to the environment and that excel in economic efficiency.

Naikai completes vehicle carrier, TRANS HARMONY 1

Naikai Zosen Corporation completed construction of the TRANS HARMONY 1, a vehicle carrier capable of transporting of 3,000 vehicles, for Toyofuji Shipping Co., Ltd. on January 15, 2018. The carrier was put into service for vehicle transport on the Southeast Asian routes.

The cargo vehicles can roll on and off the carrier through two shore-rampway doors provided for the aft and midship sections at the starboard side. Movement of vehicles inboard can be achieved using hold rampways to reach the respective bays on car decks. The vehicle hold consists of nine car decks, two of which are liftable decks to permit transportation of trucks and heavy vehicles.

The main diesel engine is the electronically-controlled (ME-C) type to reduce fuel consumption and to improve combustion state at low load conditions. The overall hull form of the carrier has been optimized against air and water resistance by conducting wind-tunnel and water-tank tests. Moreover, the carrier uses energy saving-type bottom paint as well as the Spray-Tearing Plate called STEP, an appendage to reduce resistance in waves.

Principal particulars

Length (o.a.):	199.90m
Breadth (mod.):	32.20m
Depth (mld.):	30.33m
Draught (mld.):	8.10m at full load
GT:	about 50,200
Vehicle carrying capacity:	about 3,000 passenger cars
Vehicle accommodation hold:	Nine decks (including two liftable decks)
Complement:	25
Main engine:	MAN B&W 6S60ME-C8.5 diesel x 1 unit
MCO:	11,400kW x 105.0min^{-1}
Speed, service:	about 19.75kt
Registry:	Panama
Classification:	NK
Completion:	January 15, 2018

Niigata completes 4th ocean-going tugboat, ALP KEEPER

Niigata Shipbuilding & Repair, Inc., wholly owned by Mitsui Engineering & Shipbuilding Co., Ltd. (MES), delivered the ocean-going tugboat, ALP KEEPER, to the owner ALP KEEPER B.V. (a ship owning company of ALP Maritime Services B.V., the Netherlands) on February 2, 2018. The ALP KEEPER is the last delivery of a four-ship series to the Dutch company.

The ship is one of the most powerful tugboats in the world, as the main propulsion unit consists of four 4,500kW engines and acieves the maximum speed of 19.39 knots and navigation speed of 13 knots. The towing capacity is 302 tons. With this capability, the tugboat can tow various large floating structures such as FPSO, FLNG, drilling rigs, etc. for long distances during non-stop navigation for 45 days.

The ALP KEEPER has been designed and constructed to have class notations of Ice Class 1B, External Fire Fighting System Fi-Fi II, and Dynamic Positioning System DP Class II. Thus the ship is allowed to engage in various services such as offshore support, anchor handling, etc., besides towing.

Principal particulars

Length, o.a.:	88.5m
Breadth, mld.:	21.0m
Depth. mld.:	9.5m
DWT/GT:	4,139t/5,901
Main engine:	4500kW x 4 units
Propeller:	4-blade 5,000mm dia. CPP with fixed nozzle x 2 units
Side thruster:	4 units (Bow: 2 units, Stern: 2 units)
Complement:	35
Classification:	DNV-GL

JSEA participates in Posidonia 2018

The 26th Posidonia 2018 (The International Shipping Exhibition) will take place at the Metropolitan Expo Centre in Athens for five days from June 4 through 8. This event is organized by Posidonia Exhibitions SA and sponsored by the Greek Ministry of Mercantile Marine, Union of Greek Shipowners, and other organizations related to the maritime industry. The Japan Ship Exporters' Association (JSEA) will participate in the exhibition with the financial support of The Nippon Foundation and in cooperation with The Shipbuilders' Association of Japan. JSEA will represent the Japanese shipbuilding industry together with the Japanese Marine Equipment Association (JSMEA) on the 453m² stand floor and demonstrate their superior technologies accumulated through many years of experience in shipbuilding. Specific ship hull forms, newly developed ship designs, and other developments will be demonstrated with 46-inch monitors, photographs, and other presentations. A large multi-screen monitor system will be installed as a backdrop to the bar counter serving drinkables to attendees.

In addition, JSEA is now planning to hold the Japan Seminar with the following schedule: On Tuesday, June 5, 2018, Afternoon, at the Posidonia Seminar Room, Metropolitan Expo Centre.

JSEA consists of the following shipbuilders:

Imabari Shipbuilding Co., Ltd.
Japan Marine United Corporation
Kawasaki Heavy Industries, Ltd.
Mitsubishi Shipbuilding Co., Ltd.
Mitsui E&S Shipbuilding Co., Ltd.
Namura Shipbuilding Co., Ltd.
Oshima Shipbuilding Co., Ltd.
Sanoyas Shipbuilding Corporation
Shin Kurushima Dockyard Co., Ltd.
Sumitomo Heavy Industries Marine & Engineering Co., Ltd.

Publication of Shipbuilding and Marine Engineering in Japan 2018

Shipbuilding and Marine Engineering in Japan 2018 has been published by the Japan Ship Exporters' Association (JSEA). The publication (64 pages 210mm wide x 285mm tall, in four color printing) outlines the latest shipbuilding achievements together with examples of ships and advanced technologies. The details of ships and shipbuilding technology are compiled in a CD-ROM for convenient access. Major contents include the current status of the Japanese shipbuilding industry, recent trends in ship technology, new completions, new shipbuilding technology, navigation systems, energy-saving equipment and systems, main engines, software for shipbuilding rationalization, and building and repairing facilities, which have been developed in the past two years.

To our readers

- Please notify us of any change in address by letter, telefax, or E-mail together with the old mailing label to ensure you continue to receive SEA-Japan.
- We welcome your comments about SEA-Japan. Please address all correspondence to the Japan Ship Exporters' Association (JSEA), or the Japan Ship Centre (JETRO) in London.
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Correction

There was a mistake in the leading article titled "Imabari completes 20,000TEU container carrier, MOL TRUTH" in the last issue (SEA-Japan No. 387). In the third line of the fourth paragraph of the right column, the text "The plate thickness is 80cm" should have read "The plate thickness is 80mm". We are sorry for this error.

MONACO BRIDGE

Owner: Forward Gloria Navigation S.A.
Builder: Imabari Shipbuilding Co., Ltd.
Ship type: Container carrier
L(o.a.) x B x D: 365.9m x 51.2m x 29.9m
DWT/GT: 144,765t/154,000
Main engine: 11S90ME-C10.5 diesel x 1 unit
Speed, service: 21.85kt
Classification: LR
Completion: February 9, 2018

VENEZIA

Owner: Eastern Mediterranean Maritime Limited
Builder: Mitsui Engineering & Shipbuilding Co., Ltd.
Hull No.: 1959
Ship type: Bulk carrier (neo60BC)
L (o.a.) x B x D x d (ext.): 199.99m x 32.25m x 18.50m
DWT/GT: 60,388t/34,094
Main engine: Mitsui-MAN B&W 6S50ME-B9.3 diesel x 1 unit
Speed, service: about 14.5kt
Registry: Malta
Classification: NK
Delivery: October 25, 2017

EN MAY

Owner: En May Maritime LLC
Builder: Oshima Shipbuilding Co., Ltd.
Hull No.: 10801
Ship type: Bulk carrier
L (o.a.) x B x D x d(ext.): 228.41m x 36.50m x 19.89m x 13.972m
DWT/GT: 85,001t/46,990
Main engine: Mitsui-MAN B&W 6S60ME-C8.2 diesel x 1 unit
Speed, service: 14.30kt
Registry: Monrovia
Classification: BV
Completion: September 22, 2017

HIGH ADVENTURER

Owner: Indigo Marine Shipping S.A.
Builder: Onomichi Dockyard Co., Ltd.
Hull No.: 743
Ship type: Product/chemical tanker
L (o.a.) x B x D x d (ext.): 182.50m x 32.20m x 19.05m x 13.10m
DWT/GT: 49,997t/29,513
Main engine: Mitsui MAN B&W 6S50ME-B9.5 diesel x 1 unit
Speed, service: 14.1kt
Registry: Panama
Classification: NK
Completion: November 6, 2017

HODAKA GALAXY

Owner: MOL Chemical Tankers Pte. Ltd.
Builder: Shin Kurushima Dockyard Co., Ltd.
Hull No.: S-5970
Ship type: Chemical tanker
L (o.a.) x B x D: 151.50m x 27.1m x 14.2m
DWT/GT: 26,198t/16,589
Main engine: 6S46ME-B8.3 diesel x 1 unit
Speed, service: 14.95kt
Registry: Singapore
Classification: NK
Completion: January 19, 2018

XING SHUN HAI

Owner: Minsheng Financial Leasing Co., Ltd.
Builder: Tsuneishi Shipbuilding Co., Ltd.
Hull No.: 1558
Ship type: Bulk carrier
L (o.a.) x B x D: 229.00m x 32.26m x 20.00m
DWT/GT: 81,824t/43,017
Main engine: MAN B&W 6S60ME-C8.2 diesel x 1 unit
Speed, service: 14.50kt
Registry: Hong Kong
Classification: NK
Completion: January 29, 2018