SEA-Japan

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JMU completes 318,000DWT crude oil tanker, KYO-EI

Japan Marine United Corporation delivered the KYO-EI, a 318,000DWT crude oil tanker, to Ocean Link Maritime S.A. at the Ariake shipyard on February 13, 2014. The vessel is the first newly developed eco-ship series of Malacca max VLCC, called "Super Malacca-max VLCC."

The principal particulars of the vessel have been developed to be adaptable to the restrictions of the ship length and gross tonnage at Japanese ports. As a result, it has the largest deadweight at the Malacca draft and cargo tank capacity for light crude oil as Malacca max VLCC.

Despite the large deadweight and cargo tank capacity, the vessel can achieve impressive hull performance by adopting various technologies such as a sophisticated lower resistance hull form and optimized energy-saving devices. SSD (Super Stream Duct) and Surf-Bulb (Rudder Fin with Bulb), which equipped in front of and behind the propeller respectively, improve the propulsion performance. Furthermore, the unique bow shape, called the "LEADGE BOW," gives better performance in waves at both laden and ballast conditions. Voyage support system "Sea-Navi®" is provided onboard, which can also contribute to both optimum weather routing and real-time ship performance monitoring.

In addition, Japan's first MAN Diesel & Turbo model G-type electronically controlled marine diesel engine, which is complied with MARPOL NO_x restriction (Tier II), and the turbo generator are provided and contribute to further improvement of fuel oil consumption.

In relation to safety and maintenance, the vessel adopts the IMO Performance Standard for Protective Coatings (PSPC) for ballast water tanks. Moreover, it complies with the future environmental rules and regulations in advance by installing the Ballast Water Management System, being provided with the inventory list of hazardous materials, and so on. Therefore, the vessel can achieve not only energy-saving but also environmental friendly transportation.

Principal particulars

L (o.a.) x L (b.p.) x B x D x d:	335.0m x 330.4m x 60m x 29.0m x 21.3m
DWT/GT:	319,397t/162,858
Loading Capacity:	359,713m^3
Main engine:	MAN B&W 7G80ME-C9 x 1 unit
Speed, service:	15.8kt
Complement:	35
Classification:	NK
Completion:	February 13, 2014

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24th Ship of the Year Award awarded to bulk carrier, RAGA

The Japan Society of Naval Architects and Ocean Engineers (JASNAOE) convened a meeting of its selection committee for the society's 24th Ship of the Year Award for 2013 at Meiji Kinenkan in Tokyo and selected the large dry bulk carrier RAGA for the grand prix award. The awardees in this and other categories are selected from notable ships built in Japan in the past year according to the technological, artistic and social significance. For this year's commendation, the large bulk carrier SHOYOH has been chosen for the large cargo ship category, KAIYO MARU NO. 51 for the fishing boat/work vessel category, and SINSEI MARU for the special-purpose vessel category.

The awards will be presented on July 30 at the Kaiun Club in a joint commendation ceremony of three maritime academic institutions, of which the other two are The Japan Institute of Marine Engineering (JIME) and The Japan Institute of Navigation (JIN).

95,000DWT bulk carrier RAGA

This bulk carrier built by Imabari Shipbuilding Co. adopts a next-generation superstructure called the 'Aero-Citadel' with both reduced air resistance effect and anti-piracy measures. The Aero-Citadel has slimly streamlined shape and includes the accommodation quarters, engine room, and funnel casing. This slender superstructure can reduce wind resistance during navigation by 25-30% based on wind tunnel testing. The high energy saving, eco-friendly consideration, and anti-piracy measures were highly evaluated. (For more information, see SEA-Japan No. 361)

97,000 DWT coal carrier SHOYOH

SHOYOH built by Japan Marine United Corp. is the first large eco-designed coal carrier equipped with Contra-Rotating Propeller (CRP) system (see SEA-Japan No. 361). The ship can achieve fuel saving of about 16% together with other fuel-saving features.

Fishing vessel KAIYO MARU NO. 51

KAIYO MARU NO. 51 constructed by Miho Shipyard Co. is an oceangoing dragnet fishing vessel built by following the trends of advanced North European fishing vessels. The vessel was greatly improved in profitability, working environment, and safe fishing operation. Sanitary management was also upgraded by introducing mechanized fish processing systems.

Special-purpose vessel SHINSEI MARU

The research and study vessel SHINSEI MARU built by Mitsubishi Heavy Industries, Ltd. for the Tohoku Ecosystem-Association Marine Science Center established as a network for restoration and assistance in the reconstruction of fishing grounds off the Pacific Coast of Tohoku (see SEA-Japan No. 361).

Kawasaki obtains DNV type certificate for marine gas-injection diesel engine

Kawasaki Heavy Industries, Ltd. has developed a marine main diesel engine, model L30KG, of the gas fuel injection type for large vessels and obtained the first type certificate for a Japanese gas-injection diesel engine from DNV. With the acquisition of the certificate, Kawasaki has started marketing of the engine. The company also aims at obtaining the type certificate for the control system of the engine within this year.

Kawasaki developed a similar model of gas injection diesel engine for electric power generation in advance of the development of the marine gas engine. The new engine has superior power generation efficiency of 49.5% and low nitrogen oxides (NO_x) emissions of below 200ppm (in terms of O_2 = 0%). This highly efficient and eco-friendly engine is now available in the market.

The Kawasaki marine gas injection engine L30KG was developed based on the preceding diesel engine for power generation use by adding the required technologies for the marine

main engine applicable to variable loads, direct drive of a propeller, or indirect-propulsion system (electric propulsion). The verification tests on an engine model of 2.7MW with six cylinders were conducted at the Kobe Works of Kawasaki.

The International Maritime Organization (IMO) will gradually enforce emission restrictions of carbon dioxides (CO_2), NO_x, and sulfur oxides (SO_x) on commercial vessels. The third emission restriction applied to the NO_x emissions from marine diesel engines will be implemented from 2016. NO_x emission must be reduced by 80%, or more, compared with the first emission restriction.

Gas injection diesel engines do not need any denitrification units to suppress NO_x emission to below the value required by the third emission restrictions, although gas injection diesel engines are excluded from the restrictions. Moreover, compared with ordinary diesel engines, gas injection diesel engines can drastically decrease emissions of CO_2 and NO_x to achieve eco-friendly performance, which will promote construction of vessels complying with the various requirements for environmental conservation.

Main specifications of L30KG

Engine type: Gas injection diesel engine, L30KG
No. of cylinders: 5, 6, 7, 8, and 9
Bore: 300mm
Stroke: 480mm
Speed: 750rpm, rated
NCR: 2,225kW, 2,670kW, 3,115kW, 3,560kW, and 4,005kW

Sanoyas completes 120,000DWT Handy Cape bulker PACIFIC POWER

Sanoyas Shipbuilding Corporation delivered the PACIFIC POWER (HN: 1313), a 120,000DWT Handy Cape bulk carrier, to Power Shipping S.A. on March 7, 2014. The vessel was constructed at its Mizushima Shipyard. This is the first vessel of the new version of Sanoyas 120,000DWT Handy Cape bulk carrier.

The vessel has larger deadweight and cargo hold capacity and improved fuel consumption by 10% compared with the previous version. The vessel with wide beam and shallow draft will clear the restrictions of some ports for large bulk carriers and has been named "Handy Cape" because it is the most flexible among Cape size bulk carriers. For improvement of propulsion efficiency, the vessel is equipped with a low-speed and long-stroke fuel-optimized main engine combined with a high-efficiency propeller. Moreover, an energy saving device called "STF" (Sanoyas-Tandem-Fin (patent); max. 6% energy saving) is installed on the stern shell. These arrangements contribute to the reduction of CO_2 emission.

Eco-friendly features are demonstrated by the adoption of various countermeasures including the main engine complying with NO_x emission restriction Tier II for air pollution prevention, double-hull fuel oil tanks to protect the marine environment, and the Ballast Water Treatment System. In addition, independent holding tanks for accommodation discharges, dirty hold bilge and rainwater tanks are installed on the upper deck.

Principal particulars

Owner: Power Shipping S.A.
Hull No.: 1313
L (o.a.) x L (b.p.) x B x D x d (Summer): 245.00m x 239.00m x 43.00m x 21.60m x 15.625m
DWT/GT: 120,397 t/64,347
Cargo hold capacity: 136,528m^3 (grain)
Main engine: MAN B&W 6S60MC-C8.2 diesel x 1 unit
MCO: 11,860kW
Speed, service: about 14.5kt (at C.S.O. with 15% sea margin)
complement: 25
Classification: NK
Registry: Republic of Panama
Delivery: March 7, 2014

MES delivers 66,000DWT type bulker, CLIPPER EXCELSIOR

Mitsui Engineering & Shipbuilding Co., Ltd. (MES) delivered the 66,000DWT type bulk carrier, CLIPPER EXCELSIOR (HN: 1859), at its Tamano Works to Clio Marine Inc., Liberia on March 25, 2014.

This is the third ship of MES wide beam shallow draft vessel called "neo66BC," the new generation ship of MES "neo series."

Features

1. The vessel has five cargo holds and four cranes for handling cargo and keeps the superior usability of "Mitsui 56."
2. The ship is designed to have enough deadweight more than 66,000 metric tons and capacity more than 82,800 cubic meters for loading various cargoes like coal, ore, grain, as well as lengthy/heavy cargo such as steel pipes and hot coils.
3. Fuel oil consumption is less than that of a conventional Supramax bulk carrier despite its enlargement.
4. As a result of research work of interviews with ship owners and operators, investigations on ports all over the world and present trade patterns, wide beam (over-Panamax) and shallow draft make it possible to have wide flexibility for operations and high transport efficiency.
5. The new hull form makes it possible to keep good performance under rough sea conditions as well as calm sea conditions and shows better maneuverability.
6. The size of hatch opening is the largest for this type of vessel in terms of both length and width.
7. Main Engine, MITSUI-MAN B&W Diesel Engine 7S50ME-B9.3, complying with MARPOL NO_x restriction (Tier-II) for exhaust gas emissions, gives superior fuel oil consumption over wide range of output.
8. Considering strengthened restriction for SO_x, the ship has low sulfur fuel oil tanks, which are designed for operation in ECA (Emission Control Areas).
9. The vessel is designed in accordance with IACS Common Structural Rules.

Principal Particulars

L (o.a.) x B x D:	199.99m x 36.00m x 18.45m
DWT/GT:	66,684t/38,203
Main engine:	Mitsui-MAN B&W 7S50ME-B9.3 diesel x 1 unit
MCO:	8,470kW
Speed, service:	abt.14.5kt
Complement:	25
Classification:	NK
Delivery:	March 25, 2014

Namura completes 34,000DWT type bulk carrier, ANDALUCIAN ZEPHYR

Namura Shipbuilding Co., Ltd. delivered the ANDALUCIAN ZEPHYR, a 34,436DWT bulk carrier, to Three Kings Shipping Corp. Inc. at its Imari Shipyard & Works on March 12, 2014.

This is the first vessel of the series of 34,000DWT type bulk carriers called "HIGH BULK 34E," which has been developed in collaboration with one of the Namura group companies, The Hakodate Dock Co., Ltd., as a successor of the Hakodate "SUPER HANDY 32" with a good reputation in the handy size bulk carrier market, and the specifications have drastically been reviewed and modified from the predecessor to respond to the needs of today's market.

1. The vessel is designed for carriage of grain, coal, steel products, and logs/lumbers as a bulk carrier, and the shallower draft hull form is designed in maximizing the loading capacity.
2. The vessel has five semi-box shaped cargo holds without a bilge hopper, and each hold has a larger-size hatch opening. This arrangement facilitates cargo handling work.
3. Collapsible/folding and fixed type steel stanchions for log/lumber loading are fitted on the upper deck.
4. Improved propulsion performance and fuel saving can be achieved with adoption of the Namura flow Control Fin (NCF) and Rudder-fin (R-Fin), both developed by Namura.
5. Four sets of 30-ton capacity deck cranes are installed along the centerline in between the hatch covers for handling cargoes at ports without cargo-handling facilities.
6. Water ballast tanks comply with the IMO PSPC-WBT regulations for corrosion protection to increase the safety of the vessel, and the main engine and generator engines conform to IMO NO_x emission regulations (Tier II).

Principal particulars

L (o.a.) x B (mld.) x D (mld.) x d (mld.):	174.54m x 30.00m x 14.05m x 9.80m
DWT/GT:	34,436t/21,514
Main engine:	Mitsubishi 6UEC45LSE-B2 diesel x 1 unit
M.C.O.:	6,840kW x 113.3min^{-1}
Speed, service:	about 14.7kt
Complement:	24
Classification:	NK
Registry:	Republic of Panama

Sasaki completes 5,000CBM LPG carrier, EPIC ST. CROIX

Sasaki Shipbuilding Co., Ltd. completed construction of the 5,000CBM class LPG carrier (pressurized type), EPIC ST. CROIX (HN: 685), at the Kinoe Head Factory, Hiroshima, and delivered the ship to its owner, Epic Gas Ltd. of Singapore on April 24, 2014.

The carrier is the second delivery of two LPG carriers to the Singaporean owner and has two pressurized LPG cargo tanks with the total loading capacity of 5,015m^3. The carrier also has sufficient deadweight capacity that allows to load up to 93% of the total tank capacity even if the cargo is vinyl chloride monomer (VCM) with higher density than LPG.

The ship vibration is suppressed as much as possible for crew comfort by conducting adequate vibration analysis at the initial design stage. The ballast water treatment system is installed in the engine room for conservation of the marine ecosystem. Moreover, the carrier has an MGO chiller unit to use low-sulfur fuel oil (MGO) for the engine.

To cope with the recent increased demand for marine transport of LPG, Sasaki has received many inquiries for construction of such LPG carriers from shipowners in Europe as well as Singapore, and will build nine more LPG carriers (their capacities ranging between 3,500 and 11,000 CBM) up until the fourth quarter of 2016.

Principal particulars

Ship type: Liquefied gas carrier (ocean going)
L (o.a.) x L (b.p.) x B x D x d: 99.98m x 93.50m x 17.20m x 7.80m x 6.10m
DWT/GT: 4,996t/4,292
Cargo loading capacity: 5,015m^3
Main engine: MAN 5L35MC diesel x 1 unit
M.C.O.: 2,750kW
Classification: BV

POSIDONIA 2014 held successfully

The Japan Ship Exporters' Association (JSEA) participated in the 24th International Shipping Exhibition Posidonia 2014 held at the Metropolitan Expo Centre in Greece for five days from June 2 to 6. 19,421 people visited Posidonia 2014 that attracted 1,843 companies and organizations from 93 countries. The number of the visitors was the highest in the exhibition history.

At the opening ceremony held on June 2, Mr. Antonis Samaras, the Greek Prime Minister, gave the opening address. After the ceremony, Prime Minister Samaras and Miltiadis Varvitsiotis, the Greek Shipping and Aegean Minister, as well as honorable guests from related circles visited exhibition stands.

The Prime Minister together with the guests was welcome by Mr. Masuo Nishibayashi, Japanese Ambassador to Greece, Mr. Kazuaki Kama, JSEA president, and Mr. Motoyoshi Nakashima, chairman of the Japan Ship Machinery & Equipment Association (JSMEA) at the Japanese exhibition stands.

From left are JSEA President Kama, Ambassador Nishibayashi, and JSMEA Chairman Nakashima at tape-cut ceremony at the Japanese stand.

On June 4, the Japanese Ministry of Land, Infrastructure, Transport and Tourism (MLIT), ClassNK, and JSMEA jointly held the Japan-Posidonia 2014 Seminar — Introducing Japanese challenging design Eco-Ships & High technologies with over 250 participants focused on shipowners in Greece.

In the evening of the same day, Japanese Ambassador and Mrs. Nishibayashi, and JSEA president and Mrs. Kama co-sponsored a reception at the Athenaeum Inter-Continental Hotel with about 905 guests including government officials and participants concerned with the shipping and shipbuilding industries.

The JSEA consisting of 11 Japanese shipbuilders participated with the financial support of The Nippon Foundation and in cooperation with The Shipbuilders' Association of Japan. JSEA and the JSMEA contributed the national exhibition stand presenting Japanese shipbuilding technology.

The expertise of each shipbuilder was demonstrated, and expert delegates from the shipbuilders received visitors to provide further explanations. PR videotapes of 11 firms were digitized for a 183-inch screen with the support of the Nippon Foundation. This collaborative exhibition procedure was a great success in demonstrating the whole shipbuilding industry.

PLUTO

Owner: Lamda Shipholding Ltd.
Builder: The Hakodate Dock Co., Ltd.
Hull No.: 840
Ship type: Bulk carrier
L (o.a.) x B x D x d: 175.53m x 29.40m x 13.70m x 9.640m
DWT/GT: 32,092t/19,785
Main engine: Mitsubishi 6UEC45LSE diesel x 1 unit
Speed, service: 14.4kt
Classification: NK
Complements: 23
Completion: April 11, 2014

NSU OBELISK

Owner: Marea Buena S.A.
Builder: Imabari Shipbuilding Co., Ltd.
Ship type: Bulk carrier
L (o.a.) x B x D: 299.94m x 50.00m x 24.70m
DWT/GT: 207,819t/107,222
Main engine: Mitsui-MAN B&W 6S70ME-C8.2 diesel x 1 unit
Speed, service: about 15.30kt
Classification: NK
Completion: March 19, 2014

THREE SASKIAS

Owner: Leo Ocean, S.A.
Builder: Japan Marine United Corporation
Hull No.: 192
Ship type: Bulk carrier
L (o.a.) x B x D: 229.0m x 32.26m x 20.00m
DWT/GT: 81,094t/43,291
Main engine: MAN B&W 6S60ME-C8.2 diesel x 1 unit
Speed, service: 14.5kt
Classification: NK
Completion: March 25, 2014
Registry: Panama

FEDERAL TYNE

Owner: Baffin Investments Limited
Builder: Oshima Shipbuilding Co., Ltd.
Hull No.: 10698
Ship type: Bulk carrier
L (o.a.) x B x D x d (ext.): 189.99m x 32.26m x 17.87m x 12.578m
DWT/GT: 55,317t/31,590
Main engine: Diesel United-WARTSILA 6RT-flex50-D diesel x 1 unit
Speed, service: 14.30kt
Registry: Marshall Islands (Majuro)
Classification: DNV
Completion: April 23, 2014

RISING WIND

Owner: Bond Line S.A.
Builder: Tsuneishi Shipbuilding Co., Ltd.
Hull No.: 1511
Ship type: Bulk carrier
L (o.a.) x B x D x d: 228.99m x 32.26m x 20.05m x 14.40m
DWT/GT: 82,151t/43,013
Main engine: MITSUI MAN B&W 6S60MC-C (Mark 7) diesel x 1 unit
Speed, service: 14.5kt
Registration: Panama
Classification: NK
Completion: April 8, 2014

MEDI HAKATA

Builder: Shin Kurushima Toyohashi Shipbuilding Co., Ltd.
Hull No.: S-3673
Ship type: Bulk carrier
L (o.a.) x B x D x d (ext.): 189.93m x 32.26m x 18.40m x 12.95m
DWT/GT: 58,000t/32,700
Main engine: B&W 6S50ME-B9.3 diesel x 1 unit
Speed, service: 14.45kt
Registry: Panama
Classification: NK
Completion: May, 2014