SEA-Japan

No. 372 Aug.- Sept. 2015

JMU completes G-Series Dunkirkmax bulk carrier, DEEP BLUE

Japan Marine United Corporation (JMU) delivered an 182,000DWT bulk carrier to L.A. CAPE SHIPPING LLC at its Ariake shipyard on May 27, 2015.

This is the 8th vessel of the "G-Series" of Dunkirkmax bulk carriers, called G182BC. JMU previously built the G-Series Newcastlemax and Panamax bulk carriers, and this G182BC is the third ship type of the G-Series.

The G182BC type has succeeded in drastically decreasing fuel oil consumption by using various and comprehensive measures for energy-saving, and the Energy Efficiency Design Index (EEDI) is much improved.

The G182BC type has been developed with the expertise and vast experience of JMU. The SSD (Super Stream Duct) and Surf-Bulb (Rudder Fin with Bulb) equipped fore and aft of the propeller, respectively, much improve the propulsion performance. Furthermore, the unique bow shape of the LEADGE Bow can decrease additional resistance in waves, and the well-refined shape of the superstructure has low wind resistance.

Besides the above, the features of low level EEDI, application of the ballast water treatment system and compliance with the MARPOL NO_x tier-II make the vessel environmentally friendly.

Principal particulars

Length (o.a.):	292.00m
Breadth:	45.00m
Depth:	24.55m
Draught:	18.18m
DWT/GT:	182,608t/93,297
Main engine:	MAN B&W 7S65ME-C8.2 diesel x 1 unit
Speed:	15.05kt
Complement:	27
Classification:	NK

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Ship of the Year 2014 Award awarded to "LNG Carrier Sayaendo"

The Ship of the Year Award, presented yearly by the Japan Society of Naval Architects and Ocean Engineers (JASNAOE) to an outstanding Japanese-built vessel to be selected for its technical, artistic and social significance, considered a total of eight candidates for this 25th year of this award. An introductory event for the candidates and a selection committee meeting were held on Tuesday, June 9, at Meiji Kinenkan in Minato-ku, Tokyo, and the liquefied natural gas (LNG) carrier "Sayaendo," which was developed and built by Mitsubishi Heavy Industries, Ltd., was selected as the Ship of the Year 2014. The other award categories were given to the passenger/cargo vessel TACHIBANA MARU (large passenger ship category) built by Mitsubishi Heavy Industries, Ltd., ferry TAIKO (small passenger ship category), rail carrier PACIFIC SPIKE (large cargo ship category) built by Shin Kurushima Dockyard Co., Ltd., containership FUTABA (small cargo ship category) and training vessel OSHORO MARU (fishing boat/work vessel category).

LNG Carrier Sayaendo

The award presentation ceremony was held at the Kaiun Club on July 27 as a joint commendation event of three maritime academic institutes including JASNAOE, The Japan Institute of Maritime Engineering (JIME) giving the Marine Engineering of the Year prize, and The Japan Institute of Navigation (JIN) appreciating significant contributions to enhancement of navigation standards.

TACHIBANA MARU

PACIFIC SPIKE

HIGH BULK 34E

Namura completes 34,000DWT type bulk carrier, YOCHOW

Namura Shipbuilding Co., Ltd. delivered the YOCHOW, a 34,398 DWT bulk carrier, to Grand Famous Shipping Limited at its Imari Shipyard & Works on April 28, 2015. This is the 12th vessel of the series of 34,000 DWT type bulk carriers named HIGH BULK 34E, which were developed in collaboration with The Hakodate Dock Co., Ltd., one of Namura group companies, as the successor of Hakodate "SUPER HANDY 32" with a good reputation in the handy size bulk carrier market. The specifications of the HIGH BULK 34E were extensively reviewed and modified from the predecessor to respond to present market needs.

The HIGH BULK 34E type was designed as a log/bulk carrier, which can carry grain, coal, steel products and log/lumber. This type has a shallower draft than other vessels of the same type, but the loading capacity is maximized. The vessel has five semi-box shaped cargo holds without a bilge hopper, and each cargo hold has a large hatch opening to facilitate cargo handling. Collapsible/folding and fixed type steel stanchions for log/lumber loading are fitted on the upper deck. Four 30-ton capacity deck cranes are installed along the centerline between the hatch covers for cargo handling at ports without adequate facilities.

The water ballast tanks comply with the IMO PSPC-WBT regulations for corrosion protection to increase the safety of the vessel. The main engine and generator engines are complied with the IMO NO_x emission regulations (Tier II). 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.

Principal particulars

L (o.a.) x B x D x d: 179.96m x 30.00m x 14.05m x 9.80m
DWT/GT: 34,398t/21,538
Main engine: MAN B&W 6S46ME-B8.3 diesel x 1 unit
Speed, service: about 14.0kt
Complement: 24
Classification: NK
Registry: Hong Kong S.A.R.

MES begins sales of newly developed high-pressure compressor for fuel gas supply systems used in LNG carriers

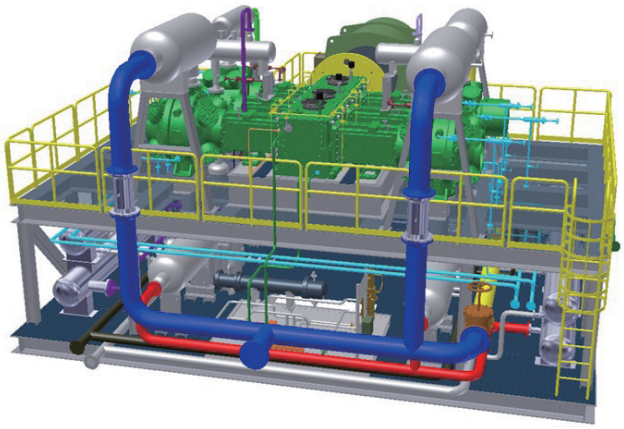
—Entering compressor market for ships and ocean equipment—

Mitsui Engineering and Shipbuilding Co., Ltd. announces that the company has developed a high-pressure compressor for fuel gas supply systems (FGSS) used in LNG carriers. MES has already began sales for the new compressor.

MES already offers a gas-fueled, electronically-controlled gas injection diesel engine (ME-GI) that serves as the main engine for LNG carriers and this new compressor serves for supplying high-pressure fuel gas to the ME-GI.

This compressor is a horizontally-opposed reciprocating compressor that is ideal for achieving a high supply pressure for fuel gas. The use of fuel gas requires high reliability. MES is one of the world's top manufacturers of reciprocating compressors used in land-based petroleum refineries and petrochemical processes. Since 1960, MES has delivered over 1,100 units.

In 1994, an MES compressor was used in the fuel supply system of the world's first facility using a low-speed gas injection diesel engine (GIDE) for power generation installed at MES Chiba Works. This system had a service history of nearly 20,000 hours.



Moving forward, MES will offer this new compressor together with the ME-GI, making MES the world's only manufacturer able to conduct comprehensive testing that combines the ME-GI and a high-pressure compressor before shipping. This testing process enables MES to confirm operating conditions of the ME-GI and the fuel supply high-pressure compressor prior to installation in the LNG carrier, providing much greater peace of mind for the customer.

LNG carrier construction is expected to grow in the future. MES will provide the environmentally friendly and highly economical ME-GI as a set together with this highly reliable compressor.

Sanoyas completes Panamax bulk carrier, NAVIOS SKY

Sanoyas Shipbuilding Corporation completed construction of the Panamax bulk carrier, NAVIOS SKY (HN: 1336), at the Mizushima Shipyard on April 21, 2015. This is the 4th vessel of a new series of Sanoyas 82,000DWT type Panamax bulk carriers.

The vessel has larger cargo hold capacity and further improved fuel consumption by 10% compared with the previous 83,000DWT type. The vessel achieves Phase 2 level of the EEDI (Energy Efficiency Design Index: measured as grams CO_2 per ton nautical mile) regulation that will apply to ships for which the building contract was placed on or after January 1, 2013.

For improvement of propulsion efficiency, the vessel is equipped with a low-speed and long-stroke electronically controlled main engine combined with a high-efficiency propeller and associated energy saving devices such as the STF (Sanoyas-Tandem-Fin (patent) with max. 6% energy saving) on the stern shell and highly efficient appendages on the rudder, which also contribute to the reduction of CO_2 emissions.

Other eco-friendly features include various countermeasures such as the main engine complying with the NO_x emission Tier II limit for the prevention of air pollution, dedicated low sulphur content diesel oil tank to cruise in ECA (Emission Control Area), Ballast Water Treatment System and fuel oil tank protection for the marine environment conservation. In addition, independent holding tanks for accommodation discharges, dirty hold bilge, and rainwater on the upper deck are arranged.

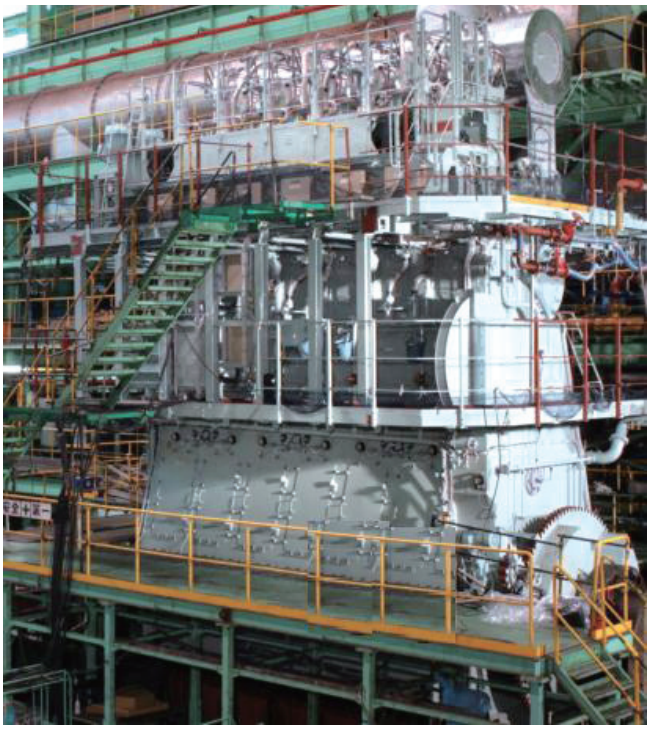
Principal particulars

L (o.a.) x B x D x d: 229.00m x 32.24m x 20.20m x 14.668m
DWT/GT: 82,056t/43,439
Cargo hold capacity: 96,597m^3 (grain)
Main engine: MAN B&W 6S60ME-C8.2 diesel x 1 unit
Max. continuous output: 8,740kW
Speed, service: about 14.5kt
Complement: 25
Classification: NK
Registry: Republic of Panama
Delivery: April 21, 2015

MHI-MME completes first UEC50LSH-Eco engine

MHI-MME has been offering a lineup of UE diesel engines with cylinder bores of 33 cm to 85 cm in the existing LSII and LSE series. The engines, which have been installed in various small and large types of ships, have acquired a good reputation. However, the market needs of recent years have diversified, with ship owners and operators seeking greater fuel efficiency, optimization for slow steaming, reduced engine speeds and greater compliance with emissions standards. Therefore, MHI-MME had been developing a state-of-the-art engine that incorporates all of the advanced technologies that the company has developed over the years. The latest UE engine series is called UEC-LSH, with development of the first in the series, the UEC50LSH-Eco engine, completed, and the first engine produced to order from Kobe Diesel Co., Ltd., an MHI-MME licensee.

In designing the UEC50LSH-Eco engine, MHI-MME began considering the principal particulars on the basis of thorough market research. As a result, the engine power output and speed were adjusted to characterisitics suitable for chemical tankers, handymax bulk carriers, supramax bulk carriers, and medium range tankers. The new engine has improved fuel consumption rate compared with competing engines. Further fuel efficiency has been achieved through enhanced propeller propulsion efficiency at long-stroke, low-speed engine operation.



First 6UEC50LSH-Eco engine

First UEC50LSH-Eco engine completed, Ship powered by the engine slated for service in September 2015

Three orders for the UEC50LSH-Eco have already been received by Kobe Diesel Co., Ltd. as the main engine of chemical tankers. Shop testing of the first 6UEC50LSH-Eco was completed in March after undergoing verification tests. Assessment and verification were carried out on the engine performance, reliability, and vibration, and the engine was optimized before delivery to the customer. The tanker powered by this engine will go into service in September 2015, and the engine is expected to exhibit the performance defined in its development concept. The concept will be incorporated into other engines that will follow the UEC50LSH-Eco, with MHI-MME and its licensees offering the LSE and LSH series engines.

Principal particulars of Mitsubishi UEC50LSH-Eco diesel engine

Type:	6UEC50LSH-Eco-C2
Cylinder bore:	500mm
Piston stroke:	2,300mm
Stroke/bore:	4.60
Engine output:	10,680kW
Engine speed:	108min-1
Mean effective pressure:	2.19MPa
Fuel consumption rate:	164g/kWh
Weight:	225t

Easy Maintenance, High Reliability

- Extended maintenance intervals
- Proven, new-concept combustion chamber structure
- Engine diagnostic system available (option)

Energy-saving, Environmentally-friendly

- Extremely low fuel consumption
- Slow steaming capacity
- New concept electronically-controlled engine (Eco-engine)
- Cylinder oil reduction through the A-ECL oil lubrication system

Compact Engine for Versatile Rigging

- More compact than same-class competitor engines
- Wide rating settings (capable of a wide range of engine outputs and speeds)
- Low vibration (minimizes the need for additional antivibration measures)
- Reduced auxiliary engine bulk as compared to same-class competitor engines
- Reduced electronic-control related wiring and devices

Naikai completes 37,810DWT general cargo ship, GLOBAL DISCOVERY

Naikai Zosen Corporation completed construction of the 37,700DWT general cargo ship, GLOBAL DISCOVERY, at the Setoda Works on April 30, 2015. This vessel is the most advanced design of cargo ship employing double-side shells for every cargo hold. The double-side shell construction ensures stronger structural performance and better stability against external damage than the conventional cargo ship as well as easier maintenance inside the cargo holds. Should external damage occur, the inner shell of the vessel can prevent loss or outflow of cargoes and maintain the quality of cargoes. This construction complies with international regulations and protects the fuel oil tanks for marine conservation.

Designed with wide beam and shallow draught, the ship can enter ports of shallow water and navigate rivers, channels, and lakes. Course-keeping stability of the vessel is secured with an adequate rudder area and a special stern form. Four 30t deck cranes and wide hatch openings facilitate handling of particularly lengthy cargoes. Lumber loading capacity has been increased by the most suitable arrangement of ballast tanks.

Principal particulars

L (o.a.) x L (b.p.) x B x D x d:	183.00m x 177.00m x 30.60m x 14.50m x 10.00m
DWT/GT:	37,810t/23,749
Cargo hold capacity: (Grain)	47,125.3m^3
Main engine:	Hitachi-MAN B&W 6S46ME-B8.3 diesel x 1 unit
D.C.S.O.:	5,690kW x 107.0min^{-1}
Speed, service:	About 14.1kt
Complement:	25
Classification:	NK
Registry:	Vanuatu
Completion:	April 30, 2015

New SAJ Chairman appointed

Mr. S. Murayama

The 72th annual general meeting of the Shipbuilders' Association of Japan (SAJ) took place on June 16 and elected 19 new directors. Subsequently, the 652nd board of directors' meeting was held, and Mr. Shigeru Murayama was appointed as the 35th Chairman of SAJ. Mr. Murayama is concurrently President of Kawasaki Heavy Industries, Ltd.

Japan's shipbuilding industry at NOR-SHIPPING 2015

NOR-SHIPPING 2015, the 25th international shipping exhibition and conference organized by Norway Trade Fairs (NORGES VAREMESSE), was held at the Lillestrom Exhibition Centre in Lillestrom, Norway, from June 2 through 5. This year's NOR-Shipping had 992 exhibitors from 48 countries, and the exhibition was visited by an estimated 15,400 people. Under the slogan of "50 YEARS LOOKING FORWARD" to commemorate the 50th anniversary of its beginning, the exhibition was even more prosperous than in usual years.

On June 2, the Japanese stand was opened by Mr. T. Kunikata, the Japanese Ambassador to Norway, Mr. K. Tsukuda, president of JSEA, and Mr. M. Nakashima, chairman of JSMEA. A cocktail party was held in the evening on June 3 at the Radisson Blu Scandinavia Hotel, Oslo, co-sponsored by Ambassador Kunikata and Mrs. Kunikata as well as the JSEA president Mr. and Mrs. Tsukuda. About 692 guests joined from various circles including Norwegian shipowners.

On June 4, The Japan Ship Exporters' Association (JSEA) and The Japan Ship Machinery & Equipment Association (JSMEA) jointly held the Norway-Japan Maritime Green Innovation Seminar-Introducing Japanese Challenging design Eco-Ships & High technologies- with over 110 participants focused on shipowners in Norway. The JSEA consisting of 10 Japanese shipbuilders participated with the financial support of The Nippon Foundation and in cooperation with The Shipbuilders' Association of Japan.

The JSEA and the JSMEA contributed the national exhibition stand presenting Japanese shipbuilding technology. PR videotapes of 10 firms were digitized for two 120-inch screens forming the banner hanging from the ceiling. This collaborative exhibition procedure was a great success in demonstrating Japanese technology.

The Energy Efficiency Award was given to the 96,000DWT bulk carrier, HARVEST FROST, constructed by Oshima Shipbuilding Co., Ltd. at the Opening Conference of the NOR-SHIPPING 2015. The vessel is equipped with the MALS (Mitsubishi Air Lubrication System) designed by Mitsubishi Heavy Industries, Ltd. MALS can greatly reduce seawater frictional resistance, resulting in a 27% reduction in CO_2 emissions.

From left are: Mr. K. Tsukuda, Mr. T. Kunikata, and Mr. M. Nakashima

CAPE HARVEST

Owner: Catalina Shipping S.A.
Builder: Imabari Shipbuilding Co., Ltd.
Ship type: Bulk carrier
L (o.a.) x B x D: 299.9m x 50.0m x 24.7m
DWT/GT: 206,600t/107,229
Main engine: 6S70ME-C8.2 diesel x 1 unit
Speed, service: 14.6kt
Classification: NK
Completion: March 31, 2015

AFRICAN BLACKBIRD

Owner: Lepta Shipping Co., Ltd.
Builder: Mitsui Engineering & Shipbuilding Co., Ltd.
Ship type: Bulk carrier (neo 66BC)
Hull No.: 1880
L (o.a.) x B x D: 199.99m x 36.00m x 18.45m
DWT/GT: 66,637t/38,203
Main engine: Mitsui-MAN B&W 7S50ME-B9.3 diesel x 1 unit
Speed, service: about 14.5kt
Complement: 25
Classification: NK
Registry: Panama
Delivery: May 19, 2015

NORD BELUGA

Owner: NORD SUMMIT PTE, LTD.
Builder: Oshima Shipbuilding Co., Ltd.
Hull No.: 10743
Ship type: Bulk carrier (ICE-1C)
L (o.a.) x B x D x d (ext.): 228.99m x 32.26m x 20.01m x 12.23m
DWT/GT: 81,841t/43,729
Main engine: Kawasaki-MAN B&W 6S60ME-C8.2 diesel x 1 unit
Speed, service: 14.30kt
Classification: DNV GL
Registry: Singapore
Completion: April 24, 2015

ENDURANCE SW

Owner: Endurance Pescadores S.A. Panama
Builder: Onomichi Dockyard Co., Ltd.
Hull No.: 702
L (o.a.) x B x D x d (ext): 199.90m x 32.26m x 18.60m x 13.00m
DWT/GT: 60,225t/34,812
Main engine: Mitsui-MAN B&W 6S50ME-B9.3 diesel x 1 unit
Speed, service: 15.6kt
Classification: NK/CR
Registry: Panama
Completion: April 15, 2015

TAURUS LEADER

Owner: SSC Taurus 2015 (7000) Pte. Ltd.
Builder: Shin Kurushima Dockyard Co., Ltd.
Hull No.: 5820
Ship type: Pure car carrier
L (o.a.) x B x D x d (ext.): 199.9m x 35.8m x 37.7m x 9.027m
DWT/GT: 19,278t/69,931
Main engine: Mitsui-MAN B&W 7S60ME-C8.2 diesel x 1 unit
Speed, service: 20.0kt
Classification: DNV GL
Registry: Singapore
Completion: March 10, 2015

UNITED LIBERTY

Owner: United Ocean Hull No.1535 S.A.
Builder: Tsuneishi Shipbuilding Co., Ltd.
Hull No.: 1535
Ship type: Bulk carrier
L (o.a.) x B x D x d (ext.): 229m x 32.26m x 20.00m x 14.29m
DWT/GT: 81,837t/43,089
Main engine: MAN-B&W 6S60MC-C (MARK 7) diesel x 1 unit
Speed, service: 14.5kt
Classification: NK
Registry: Panama
Completion: March 24, 2015