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Imabari group achieves 100th newbuilding of "IS" I-STAR

The memorable 100th newbuilding of "IS"I-STAR (or called I-STAR), 61,000DWT type bulk carrier, has been completed and named ALAM MULIA at Iwagi Zosen Co., Ltd. of the Imabari Shipbuilding Group.

"The 100th construction record of "IS" I-STAR has been achieved due to our customers' support," says Imabari, "in five years since completion of its first vessel, IKAN SENUR, in September 2010." The "IS" I-STAR series has been gaining high reputation from local and overseas customers, contributing to safe marine transportation of various cargoes, and maintaining good fuel efficiency as well.

Imabari will add the upgraded "IS" I-STAR of 63,000DWT type, with deadweight increased by 2,000 tons from the current series, which will be completed in the spring of 2016. Imabari Shipbuilding Co. says that the group will devote all their energy to construction of better ships that will earn the customers' long-lasting appreciation.

Principal particulars

Length, o.a.:	199.98m
Breadth, mld.:	32.24m
Depth, mld.:	18.60m
DWT/GT:	61,254t/34,795
Main engine:	6S50ME-B9.3
Completion:	October 1, 2015

The 100th "IS" I-STAR, ALAM MULIA

JMU completes G-Series Panamax bulk carrier, ELSA S

Japan Marine United Corporation delivered the ELSA S, a G-Series Panamax bulk carrier at its Maizuru shipyard on August 27, 2015. The G-Series Panamax bulk carrier has succeeded in dramatic reduction of fuel oil consumption by using various and comprehensive measures for energy-saving, so that GHG (Greenhouse Gas) emission can be considerably reduced.

The G-Series Panamax bulk carrier has larger deadweight and cargo hold capacity suitable for carrying grain, bulk coal and iron ore in its 7 cargo holds, and has been developed with the expertise and vast experience of Japan Marine United Corporation. The SSD (Super Stream Duct) and SURF-BULB (Swept-back Up-thrusting Rudder Fin with Bulb) are equipped fore and aft of the propeller, respectively, to improve the propulsion performance. Furthermore, the unique bow shape of the LEADGE-Bow can reduce the added resistance due to waves and the well-refined shape of the superstructure has low wind resistance.

Besides the above, compliance with the fuel oil tank protection rules and MARPOL NO_x tier-II for the main engine and provision of a ballast water treatment system make the vessel more environmentally friendly.

To ensure the safety and maintenance of the vessel, CSR (Common Structural Rules) for bulk carriers and PSPC (Performance Standard for Protective Coatings) for ballast water tanks are applied.

Principal particulars

L (o.a.) x B (mld) x D (mld) x d (mld):	229.0m x 32.26m x 20.0m x 14.45m
DWT/GT:	80,800t/43,291
Main engine:	MAN B&W 6S60ME-C diesel x 1unit
Speed:	14.5kt
Complement:	25
Classification:	NK

Two New MHI Group companies to commence business operations in ship construction and hull block manufacture

New Entities Take Over Ship Construction Business in the Nagasaki Region in Move Aimed at Enhanced Competitiveness

Two new wholly owned group companies of Mitsubishi Heavy Industries, Ltd. (MHI), successors to MHI's ship construction operations in the Nagasaki district, will commence business operations on October 1. Mitsubishi Heavy Industries Shipbuilding Co., Ltd. will handle ship construction, while Mitsubishi Heavy Industries Hull Production Co., Ltd. will manufacture hull blocks. By making full use of the diverse resources developed at the Nagasaki Shipyard & Machinery Works, the two new companies will pursue enhanced competitive strength by narrowing product lines to areas of core competence and engaging in more compact business operations.

MITSUBISHI HEAVY INDUSTRIES SHIPBUILDING CO., LTD.

Mitsubishi Heavy Industries Shipbuilding will focus on the construction of LNG and LPG gas carriers, a type of vessel in which MHI excels. Efficiency enhancement will be pursued primarily through production streamlining from continuous construction of the same ship type and supply chain management reforms. The new company will also achieve greater responsiveness and flexibility due to the compact organizational structure, and measures will be taken to promote active communication within the organization, to strengthen cost competitiveness, and to stabilize earnings.

MITSUBISHI HEAVY INDUSTRIES HULL PRODUCTION CO., LTD.

Mitsubishi Heavy Industries Hull Production will specialize in the production of large-scale hull blocks, an area in which the Nagasaki Shipyard's Koyagi Plant excels. The new company will pursue expansion in production scale, continuous production of blocks of identical type, and investments aimed at production streamlining.

Plans also call for the company to market its large-scale hull blocks to other shipyards and steadily expand its production volumes. Leveraging its distinctive capabilities, for example, the ability to manufacture large-scale hull blocks indoors and its ability to supply multiple blocks simultaneously, the company will obtain assured quality and high productivity as well as short delivery times and lower costs.

Throughout the years, the Nagasaki Shipyard & Machinery Works has handled a broad range of technologically advanced large-scale commercial ships. Going forward the two new companies will strive toward further development of MHI's commercial ship business by taking full advantage of and reorganizing these robust resources in terms of technology, production, and staff.

Profile of the New Ship Construction Company (as of October 1, 2015)

Name:	Mitsubishi Heavy Industries Shipbuilding Co., Ltd.
Head office:	180, Koyagi-machi, Nagasaki City, Nagasaki, Japan
Representative:	Hiroshi Yokota, President
Business:	Engineering, manufacture, and repair services of ships
Employees:	Approx. 500
Capital:	1,000 million yen
Fiscal year end:	March 31

Profile of the New Hull Block Manufacturing Company (as of October 1, 2015)

Name:	Mitsubishi Heavy Industries Hull Production Co., Ltd.
Head office:	180, Koyagi-machi, Nagasaki City, Nagasaki, Japan
Representative:	Koji Murakami, President
Business:	Manufacture of hull blocks, etc.
Employees:	Approx. 170
Capital:	300 million yen
Fiscal year end:	March 31

Koyagi Plant, a main facility of MHI shipbulding companies (below)

Completion of the first Japanese commercial ME-GI for LNG-fueled ships (Natural gas-fueled low-speed marine diesel engine)

Mitsui Engineering & Shipbuilding Co., Ltd. has completed the first Japanese commercial electronically-controlled gas injection diesel engine (the ME-GI).

The ME-GI is dual fuel engine with high thermal efficiency based on the principles of large 2-stroke low speed diesel engines. These engines can use both heavy fuel oil and natural gas as fuel.

The gas combustion systems that are used in small to medium-sized engines can be problematic in terms of knocking and misfiring due to load fluctuations. These engines have limited output under gas operation conditions compared to when they run on heavy fuel oil. On the other hand, when ME-GI engines are used for ship propulsion, they offer the same dependability and high-efficiency as low speed diesel engines which have a more than ample track record. Moreover, ME-GI engines can be operated in exactly the same way as low speed diesel engines. Although MES and other manufacturers have received orders for more than 150 ME-GI engines, the MES engine is the first commercial application of this technology in Japan.

The use of natural gas is eco-friendly and can contribute to significant reductions not only in CO_2 emissions, SO_x, PM emissions and NO_x, but can also reduce fuel costs through shale gas development. In this way, natural gas offers an alternative to heavy fuel oil for ship owners.

MAN B&W 8S70ME-C8.2-GI will be installed as the main engines for

two LNG-fueled ships, container/RORO ships that will be built for the US ship owner Crowley Maritime Corporation by VT Halter Marine Inc. (US shipyard).

MES can meet a wide range of fuel needs, including the ME-GI (LNG and heavy fuel oil), the ME-GI-ethane (ethane and heavy fuel oil), ME-LGI (methanol, other fuels & heavy fuel oil). MES will continue to provide their customers with eco-friendly and highly economical propulsion systems.

Dual-fuel diesel engines available from MES

Engine model	Compatible fuels	Current engine building projects
ME-GI	LNG & heavy fuel oil	2 projects, 6 engines (for LNG-fueled ship and LNG carrier)
ME-GI-Ethane	Ethane & heavy fuel oil	1 project, 3 engines (for LEG (liquefied ethylene gas carrier)
ME-LGI	Methanol & heavy fuel oil, or Ethanol & heavy fuel oil, or LPG & heavy fuel oil, or Dimethyl ethyl & heavy fuel oil	1 project, 3 engines (for methanol carrier)

Tsuneishi group delivers 217th KAMSARMAX bulker, MEDI MATSUURA

Tsuneishi Shipbuilding Co., Ltd. completed construction of the MEDI MATSUURA, an 81,600DWT KAMSARMAX bulk carrier, at the Tsuneishi Factory for delivery on August 24, 2015.

The KAMSARMAX bulker was developed by Tsuneishi in 2004. The first vessel was delivered in 2005 at the Tsuneishi Factory. The MEDI MATSUURA is the 217th ship of the KAMSARMAX series.

Tsuneishi was one of the first shipbuilders to increase the deadweight of Panamax bulk carriers from the previous 70,000DWT to over 80,000DWT (up to 82,000 DWT), which are permitted to navigate the Panama Canal and at the same time to enter Kamasar Port, a major bauxite shipping port in Guinea. Tsuneishi named this type of Panamax bulker as KAMSARMAX, which is known for its greatly improved transport efficiency.

Principal particulars

Type: KAMSARMAX bulk carrier
Length, o.a.: About 229m
Breadth: 32.26m
Depth: 20.00m
DWT: About 81,788t
GT: 43,028
Main engine: MAN B&W 6S60MCME-C8.2 diesel x 1 unit
Speed, service:14.5kt (normal output)

Oshima completes 100,000DWT type bulker, TENRYU MARU

Oshima Shipbuilding Co., Ltd. delivered the 100,000DWT type bulk carrier TENRYU MARU on September 25, 2015. This is the first of a 100,000DWT type bulk carrier series developed by Oshima intended to specialize in carrying coal as well as grain cargos.

The TENRYU MARU has five holds with wide hatch covers for improved cargo handling efficiency. Hull dimensions are optimized to enter major Japanese ports. The double hull structure is employed for all fuel oil tanks and diesel oil tanks to prevent oil spills in case of damage. Two large capacity ballast pumps are used for shortening the deballast time.

This vessel reduces fuel consumption by adoption of a set of advanced flipper-fins, rudder bulb, low friction paint and electronically-controlled engine. The excellent seaworthy bow is also adopted to improve speed performance under rough weather conditions.

Principal particulars

Length (o.a.):	249.98m
Length (b.p.):	245.50m
Breadth, mld:	43.00m
Depth, mld:	18.50m
Summer draft, mld:	12.833m
DWT/GT:	100,172t/56,893
Loading capacity:	119,816m^3
Main engine:	Mitsubishi 7UEC60LSE-ECO-A2 diesel x 1 unit
MCR:	11,400kW at 87.0rpm
Speed, service:	14.0kt
Classification:	NK
Completion:	September 25, 2015

Naikai Zosen completes Roll-on/off cargo ship, HARU MARU NO. 3

Naikai Zosen Corporation completed construction of the 8,000DWT class Roll-on/off type general cargo ship, HARU MARU NO. 3, at its Setoda Works for delivery to Oshima Buturyu Co., Ltd. of Japan on October 28, 2015. The RO-RO ship is now engaging in Japanese coastal transport service between Mishima-kawanoe port, Ehime, and Chiba-chuo port, Chiba, via Uno, Okayama, and Izumi-otsu, Osaka.

The ship is designed for efficient roll-on/off transport calling at four ports. Cargo vehicles can be embarked, or disembarked, through the bow and stern shore ramps at the portside and are driven to their respective bays on the cargo decks via cargo hold ramps.

The ship employs a bulbous bow and energy-saving stern fins to increase propulsion performance, and an energy-saving device "STEP" is installed to reduce wave resistance under rough sea conditions. STEP (patented) is the Spray Tearing Plate, which is a device to alleviate the increase in wave resistance under rough sea conditions.

Anti-rolling tanks are provided to prevent the ship from rolling during navigation. Moreover, the bow and stern thrusters facilitate berthing and unberthing of the ship at ports. The main engine uses the electronically controlled type (model ME-B) to decrease fuel consumption and improve combustion conditions under low load operation.

Principal particulars

Length, o.a.:	153.92m
Breadth, mld.:	25.00m
Depth at upper/boarding decks:	17.50/12.35m
Draught:	6.50m
DWT/GT:	4,990t/8,558
Vehicle loading capacity:	100 13m-chassis trucks 250 automobiles
Complement:	14
Main engine:	Hitachi MAN B&W 7S50ME-B8.3 diesel x 1 unit
MCR:	10,300kW x 112.6min^{-1}
Speed, service:	about 21.0kt
Classification:	NK (Limited coasting area)
Completion:	October 28, 2015

MANHATTAN BRIDGE

Owner: East River Shipping GK
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: 147,420t/152,297
Main engine: 11S90ME-C9.2
Speed, service: 21.85kt
Classification: NK
Completion: Oct 15, 2015

PACIFIC GRACKLE

Owner: Swire Pacific Offshore Operations (Pte) Ltd
Builder: Japan Marine United Corporation
Hull No.: 0085
Ship type: Platform supply vessel
L (o.a.) x B x D: 84.65m x 18.00m x 7.60m
DWT/GT: 4,089t/3,585
Main engine:
Yanmar 6EY26LW x 2 units
Yanmar 6EY18(A)LW x 2units
(Diesel Electric)
Speed, service: 12.00kt
Classification: DNV-GL
Registry: Singapore
Delivery: September 17, 2015

XING NING HAI

Owner: Xingning Shipping Limited
Builder: Namura Shipbuilding Co., Ltd.
Hull No.: 381
Ship type: Bulk carrier
L (o.a.) x B x D x d: 179.96m x 30.00m x 14.05m x 9.80m
DWT/GT: 34,443t/21,532
Main engine: MAN B&W 6S46ME-B8.3 diesel x 1 unit
Speed, service: About 14.0kt
Classification: NK
Complement: 24
Delivery: July 13, 2015

ECO WILDFIRE II

Owner: Apex Glory Shipping Corporation
Builder: Kanda Shipbuilding Co., Ltd.
Hull No.: 548
Ship type: Open hatch cargo ship
L (o.a.) x B x D x d (ext.): 179.9m x 28.40m x 14.25m x 10.026m
DWT/GT: 33,190t/21,265
Main engine: MAN B&W 6S46MC-C8.2 diesel x 1 unit
Speed, service: 14.0
Classification: NK
Registry: Panama
Completion: June 29, 2015

IVS HIRONO

Owner: Cardinal Maritime S.A.
Builder: Onomichi Dockyard Co., Ltd.
Hull No.: 709
Ship type: Bulk carrier
L (o.a.) x B x D x d (ext.): 199.90m x 32.26m x 18.60m x 13.00m
DWT/GT: 60,280t/34,806
Main engine: B&W 6S50ME-B9.3 diesel x 1 unit
Speed, service: 14.5kt
Classification: NK
Registry: Singapore
Completion: August. 27, 2015

Cover Photo

Mt. Fuji and Sea Trial

The Sagami Gulf, vast and deep, is well-known worldwide for its diversification of marine creatures, and is also a good location for sea trials. The pictured ship is the AFROESSA, built by Shinkurushima Toyohashi Shipbuilding Co., Ltd. with Mt. Fuji, a World Cultural Heritage site, in the background.