



Japan Marine United established for extensive business services —Merger of Universal Shipbuilding and IHI Marine United—



Japan Marine United (JMU) was newly established by the management integration of Universal Shipbuilding Corporation (USC) and IHI Marine United (IHIMU) on 1st January, 2013.

Combining the respective engineering resources and strength of the 7 domestic shipyards at Ariake, Kure, Tsu, Maizuru, Isogo, Tsurumi and Innoshima and 2 technical research centers in Tsu and Yokohama, JMU will provide its customers with more extensive range of products, services, new ideas and concepts through our 4 core business - Merchant Ship Business, Naval Shipbuilding and Repair Business, Engineering Business and Life Cycle Business.

The various synergies of these 2 companies can make it possible for us to expand our product lineup, to improve the productivity of each shipyard, and to accelerate product development with our sufficient design capacity. In addition, JMU will make the most of its expanded capabilities and optimized organization for responding to large-lot orders, procuring equipment and materials under more competitive terms.

Through such efforts, this newborn company will attempt to establish our close ties and mutual trust between the clients in the world and to become the world's leading company in the marine/offshore industry.

Merchant Ship Business

Based on the world's top class technological resources, sufficient equipment and massive experience for shipbuilding of USC and IHIMU, JMU can provide various products, such as tankers, bulk carriers, container carriers, gas carriers, OSVs (offshore support vessel) and car ferries and so on. With an impressive construction record and state-of-the-art technologies, JMU builds highly economical and eco-friendly merchant ships for all over the world.

Furthermore, JMU will contribute to the offshore development through construction of Floating oil/gas Production, Storage, and Offloading unit (FPSO, FSO), drilling and production unit (Jack-up rigs, Semi-submerged rigs, Drill Ship etc.) and floating structures for offshore wind farms, as well as of offshore support vessels (OSVs)



Japan Marine United Head Office

and various type of working vessels.

Naval Shipbuilding and Repair Business

JMU has delivered various type of naval ships, patrol ships and specialized ship for Japanese Government, such as the helicopter destroyer "Hyuga", Aegis destroyer "Chokai", Antarctic observation ship "Shirase", mine-sweeper "Enoshima", Icebreaking patrol vessel "Soya", Helicopter-carrier patrol vessel "Daisen" and so on. JMU's 5 shipyard at Kure, Maizuru, Isogo, Tsurumi and Innoshima are supporting and making an important contribution to the operation of naval ships of the Japan Maritime Self-Defence Force and patrol vessels of the Japan Coast Guard.

Engineering Business

By the proven technologies and a lot of experience for shipbuilding, JMU provides design / construction support for various product, such as "DEEPDISH" upgrading work for semi-submerged rigs, the vessel with CRP (Contra-Rotating Propeller) propulsion system, the offshore structures, for instance, FPSO, FSO, FSRU with IHI-SPB (Self-supporting, Prismatic Shape IMO type B) tank system and technical assistance for shipyards worldwide.



For further information please contact:

Website: <http://www.jsea.or.jp>

JAPAN SHIP EXPORTERS' ASSOCIATION

2-2, Toranomon 3-chome, Minato-ku, Tokyo 105-0001 Tel: (03) 5425-9671 Fax: (03) 5425-9674 E-Mail: postmaster@jsea.or.jp

Life Cycle Business

JMU's global service network enable us to provide one-stop service wherever in the world to meet ship owner/operator's requirement, which includes drydock repairs, conversion

engineering and works (i.e., retrofit work for ballast water management system), running repairs, ship doctor service with information management system (ADMAX, Sea-Navi) and spare parts supply.



Ariake Shipyard



Kure Shipyard



Tsu Shipyard



Maizuru Shipyard



Yokohama Shipyard Isogo Works



Yokohama Shipyard Tsurumi Works



Innoshima Works

MHI completes 83,000m³-type LPG carrier, ASTOMOS EARTH

Mitsubishi Heavy Industries, Ltd. (MHI) completed construction of the ASTOMOS EARTH (HN: 2283), an LPG carrier with a tank capacity of 83,426m³, and delivered the vessel to Astomos Energy Corporation at the Nagasaki Shipyard & Machinery Works on August 31, 2012. This vessel is the first of the MHI third-generation LPGC, which was developed, based on the MHI first and second generation LPGC series having many delivery records (49 vessels).

This new LPGC has been designed with the concept of environmentally

friendly, easy and flexible operation and maintenance and high reliability as main features.

Higher propulsive performance having less vibration compared with conventional LPGC was achieved by the sophisticated hull form, optimum design of propeller and Mitsubishi-Reaction fin. Furthermore, the main engine complies with NO_x limitation Tier II, and low sulfur fuel can be used to comply with SO_x limitation of SECA (SO_x Emission Control Area).

Various improvements are adopted for efficient and flexible cargo opera-

tion such as the increase in the unloading rate by auxiliary cargo pumps, elimination of loading restriction, cargo manifold arrangement to be fitted to various terminals, etc. In addition, the unbalanced cargo capacity is allocated to each cargo tanks to achieve the flexible cargo transportation.

Higher reliability was achieved by IMO IGC-code type B independent tank newly developed based on the feedback from long experience, design expertise accumulated through construction of MOSS type LNG carriers and the state-of-the-art structural analysis system MHI-DILAM (Direct Loading Analysis Method).

Principal Particulars

L (o.a.) x L (b.p.) x B x D x d:	230.0m x 219.0m x 36.6m x 21.65m x 11.575m
Gross tonnage:	47,950
Cargo tank capacity:	83,426m ³
Main engine:	MITSUBISHI UE-7UEC60LS II doesel x 1 unit
Output:	13,000kW x 100min ⁻¹
Speed, service:	17.0kt
Classification:	NK



KHI delivers bulk carrier NEUTRINO to Southern Pacific Holding

Kawasaki Heavy Industries, Ltd. delivered the 58,612DWT bulk carrier, NEUTRINO (HN: 1697), to Southern Pacific Holding Corporation at its Sakaide Works on October 12, 2012. The vessel is the 21st state-of-the-art bulk carrier of the 58,000DWT series developed by Kawasaki.

The vessel has a flush deck with a

forecastle and five holds that are designed for optimum transport of grains, coals, ores, and steel products. Four 30t deck cranes are installed along the center in between hatch covers to facilitate cargo handling at ports that lack cargo handling facilities.

The vessel employs the latest in technology to achieve maximum fuel

economy, including an energy-saving main diesel engine, highly efficient propellers, the Kawasaki rudder bulb system with fins (RBS-F), as well as a bow designed to reduce wave resistance, which all contribute to the vessel's enhanced propulsion performance.

The main engine and generator engine comply with Tier II NOx emission standards set by the International Convention for the Prevention of Pollution from Ships.

Principal particulars

L (o.a.) x L (b.p.) x B x D x d:	197.00m x 194.00m x 32.26m x 18.10m x 12.65m
DWT/GT:	58,612t/33,084
Cargo hold capacity:	73,614m ³
Main engine:	Kawasaki-MAN B&W 6S50MC-C7 diesel x 1 unit
MCR:	8,630kW x 116rpm
Speed, service:	about 14.5kt
Complement:	25
Classification:	NK
Registry:	The Marshall Islands
Delivery:	October 15, 2012



Imabari constructs 200th 28,000DWT bulk carrier

The Imabari Shipbuilding Company group completed construction of the 200th 28,000DWT type bulk carrier, KING RICE, at the shipyard of I-S Shipyard Co., Ltd. on October 29, 2012. It was a commemorative event for the group.

The first vessel of the 28,000DWT-type bulker series was the STELLAR BENY completed in 1990, and the group achieved building of the 100th vessel of the same series in March 2009. During the period of 19 years, vessels of the series gradually gained reputation in shipping areas. 200th delivery has been attained in three years and six months following the 100th vessel, thanks to the reputation widely known as "IMABARI 28" by the ship owners and operators worldwide.

For the future, the Imabari group will hold the basic concept at the initial development stage of the

28,000DWT bulk carrier and continue to develop the vessel to be eco-friendly and fuel-conscious by considering oil-cost increase and the environmental conservation.

Principal particulars (KING RICE)

Builder: I-S Shipyard Co., Ltd.

Ship type: Bulk carrier

L (o.a.) x B x D x d:	169.5m x 27.2m x 13.6m x 9.8m
DWT/GT:	28,000t/17,070
Main engine:	Hitachi-MAN B&W 6S42MC (Mark 6) diesel x 1 unit
Output:	5,850kW x 129rpm
Speed, service:	14.0
Completion:	Oct. 29, 2012



MES Delivers 72,800DWT open-hatch type general cargo carrier —1st vessel of open hatch series with 86,600m³ capacity—

Mitsui Engineering & Shipbuilding Co., Ltd. (MES) recently completed an open hatch type general cargo carrier of 72,800DWT, RAVEN ARROW (HN: 1836), which had been under construction at its Chiba Works, and delivered it recently to her owner Mi-Das Line S.A., Panama.

The vessel has a large cargo hold capacity of more than 86,600m³ and is the 1st vessel of its series.

1. The Vessel is one of the largest open hatch general cargo carriers in the world with eight box-shaped cargo holds and four jib cranes for handling cargo.
2. The vessel has three pairs of piggyback-type hatch covers to have large hatch openings.
3. The vessel has large hatch openings, which has no protruding object, and higher structural reliability with the characteristic structure of the hatch corners.
4. In consideration of carrying forest products, bulkheads of cargo hold have no protruding objects and dehumidifier system is provided.
5. Fittings for container and packaged lumber loading are fitted on the hatch covers.
6. A hydrodynamic energy saving device on the rudder achieves good propulsive performance.
7. MITSUI-MAN B&W Diesel Engine 5S60ME-C8 is a light, compact and high output electronically controlled engine complying with MARPOL NO_x restriction for exhaust gas.
8. The bow thruster and high-lift rudder enables good maneuverability in port.
9. The vessel has a ballast water treatment system for protection of marine environment in advance of forthcoming entry into force of Ballast Water Management Convention.



Principal Particulars

L (o.a.) x L (b.p.) x B x D:	about 210.00m x 202.00m x 36.00m x 20.20m
DWT/GT:	72,871t/46,295
Main engine:	Mitsui-MAN B&W 5S60ME-C8 (Mark 8) diesel x 1 unit
MCO:	9,450kW x 89rpm
Speed, service:	14.5kt
Complement:	30
Classification:	NK
Registry:	Panama
Delivery:	November 27, 2012

Universal completes 180,000DWT bulk carrier, CAPE GENESIS

Universal Shipbuilding Corporation delivered the 180,000DWT Bulk Carrier, CAPE GENESIS, to LEO OCEAN S.A. at the Tsu shipyard on October 25, 2012. This is the fourth vessel of new design series of Dunkirkmax bulk carriers that achieved large deadweight under restrictions for ship's dimensions.

The vessel has double side skin con-

struction for cargo holds and fuel oil tanks in order to reduce flooding risk due to side damage and improve cargo handling.

The vessel is equipped with high propulsion efficiency and energy saving devices, SSD (Super Stream Duct) and Surf-Bulb (Rudder Fin with Bulb), in front of and behind the propeller respectively.

The bow shape, called the "LEADGE BOW," reduces the added wave resistance not only at the laden condition but also the ballast condition.

Deck machinery such as wind-

lasses, mooring winches, and hatch covers are driven by an electric-motor system for oil leak prevention on the deck.

This vessel is equipped with ME electronic control main engine which enables the combustion conditions to be lower fuel oil consumption and emission at any load by adjusting the fuel injection and exhaust valves electronically.

Principal particulars

L (o.a.) x L (b.p.) x B x D x d:	292.0m x 287.9m x 45m x 24.5m x 18.15m
DWT/GT:	182,097MT/93,031
Loading capacity:	193,396m ³
Main engine:	MAN B&W 7S65ME-C diesel x 1 unit
Speed:	15.35kt
Complement:	25
Classification:	NK
Completion:	October 25, 2012



NAMURA completes post-Panamax bulk carrier, KIYO

Namura Shipbuilding Co., Ltd. delivered the Kiyo, a 92,353DWT bulk carrier at its Imari Shipyard & Works on November 7, 2012. The vessel is the fifth post-Panamax bulk carrier of the 92,000DWT type with the wide breadth. The hull is designed and constructed by complying with the Common Structural Rules (CSR).

The vessel is mainly designed to



carry coal to electric power stations in Japan. The wide beam and shallow draft helps achieve more efficient cargo handling compared with conventional ships engaged in the same trade.

The vessel uses high-performance mooring equipment and large-capacity ballast pumps. The former makes berthing and unberthing easy, and the latter facilitates cargo-handling operation, respectively.

The main engine is the long-stroke, low-speed, and fuel-efficient type. The Namura flow Control Fins (NCF), rudder fins, and a high-

efficiency propeller are also equipped. The combined use of these contributes to increase propulsive performance.

The central fresh water cooling system is used for cooling the machinery in the engine room to achieve easy maintenance. Water ballast tanks of this bulk carrier conform to the requirements of IMO Performance Standard for Protective Coatings (PSPC).

Principal particulars

L (o.a.) x B x D x d: 234.90m x 38.00m x 20.00m x 12.80m

DWT/GT: 92,353t/50,927

Main engine: MAN B&W 6S60MC-C (Mark7) diesel x 1 unit

Speed, service: about 15.0kt

Complement: 25

Classification: NK

Flag: Liberia

Oshima completes SAGA FORTUNE, open hatch general cargo carrier

Oshima Shipbuilding Co., Ltd. delivered the 56,023DWT open hatch type general cargo carrier, SAGA FORTUNE, to SAGA Shipholding (Norway) AS on November 6, 2012.

The vessel is suitable to carry a variety of cargoes, such as roll papers, wooden pulp, packaged lumbars, containers, grain, aluminum ingots, industrial vehicles, steel hot coils, steel pipes, sulfur, and other bale and bulk cargoes.

Cargo holds with complete square hatch corners and flush bulkhead surfaces achieves smooth handling of unitized cargoes. High stability hull form is adopted for carriage of cargoes on hatch covers. A hold dehumidifier is installed to keep dry for cargoes that hate dampness such as roll paper, wooden pulp, etc.

Two sets of high performance 42t gantry cranes manufactured by IKNOW Machinery facilitate cargo handling. A protector is also equipped for loading and unloading in bad weather.

For environmental protection, all fuel oil tanks have double side skin

construction, and ballast water treatment system manufactured by Optimarin is installed.

Following devices are also installed. A bow thruster and high-lift rudder offer effective maneuverability. A seaworthy bow for achieving excellent seaworthiness is also adopted to improve speed performance under the rough weather conditions (about 5% power saving compared with ordinary bulbous bow). Low-fuel consumption (40% lower EEDI than reference line) is accomplished by new optimized hull form and adoption of "Flipper-Fins"

which increase propulsive efficiency.

Principal Particulars

L (o.a.) x L (b.p.) x B x D x d:

199.90m x 194.00m x 32.26m x 19.50m x 13.30m

DWT/GT: 56,023t/37,441

Loading capacity: 64,514m³

Main engine: Diesel United WARTSILA 6RT-flex50B diesel x 1 unit

MCR: 9,474kW x 124.0rpm

Speed, service: 15.0kt

Classification: DNV

Completion: November 6, 2012



ETERNAL TRIUMPH

Owner: Clio Marine Inc.
 Builder: IHI Marine United Inc.
 Hull No.: 3331
 Ship type: Bulk carrier
 L (o.a.) x B x D: 190.00m x 32.26m x 18.10m
 DWT/GT: 55,830t/31,538
 Main engine: DU-WARTSILA 6RT-flex50 diesel x 1 unit
 MCR: 8,890kW x 116.0rpm
 Classification: NK
 Registry: Singapore
 Completion: September 25, 2012

**TTM HOPE**

Owner: New Hope Maritime S.A.
 Builder: Sanoyas Shipbuilding Corporation
 Hull No.: 1309
 Ship type: Bulk carrier (Handycaper type)
 L (o.a.) x L (b.p.) x B x D x d: 245.00m x 238.00m x 43.00m x 21.65m x 15.404m
 DWT/GT: 119,496t/64,642
 Cargo hold capacity: 135,717m³ (grain)
 Main engine: MAN B&W 6S60MC-C diesel x 1 unit
 MCR: 13,560kW
 Classification: NK
 Completion: September 25, 2012

**TSUBAKI**

Owner: Kyushu Shosen Co., Ltd.
 Builder: Naikai Zosen Corporation
 Ship type: Passenger/car ferry
 L (o.a.) x B x D: 86.50m x 14.50m x 10.40m x 4.30m
 DWT/GT: 577t/1,599
 Vehicle: 18 units (8t truck basis)
 Passenger: 482
 Crew: 18
 Main engine: Daihatsu 6DCM-32e diesel x 2 units (twin screws)
 MCR: 2,942kW x 750/186 min⁻¹
 Speed, trial max.: 20.733kt
 Classification: JG

**PACIFIC TOPAZ**

Owner: Hexad Shipping S.A.
 Builder: Onomichi Dockyard Co., Ltd.
 Hull No.: 575
 Ship type: Crude/product tanker
 L (o.a.) x B x D: 182.5m x 32.20m x 18.40m x 19.05m
 DWT/GT: 50,000t/28,426
 Main engine: MITSUI MAN-B&W 6S50MC-C diesel x 1 unit
 Speed, service: 15.2kt
 Classification: ABS
 Registry: Liberia
 Completion: October 23, 2012

**CORAL AMETHYST**

Builder: Shin Kurushima Toyohashi Shipbuilding Co., Ltd.
 Hull No.: 5740
 Ship type: Bulk carrier
 L (o.a.) x B x D x d (ext.): 224.98m x 32.26m x 19.85m x 14.328m
 DWT/GT: 78,092t/41,963
 Main engine: B&W 6S60MC-C diesel x 1 unit
 Speed, service: about 14.5kt
 Classification: NK
 Registry: Panama
 Completion: October 2012

**HANJIN ROSARIO**

Builder: Tsuneishi Shipbuilding Co., Ltd.
 Hull No.: Sno.1468
 Ship type: Bulk carrier
 L (o.a.) x B x D x d: 228.99m x 32.26m x 20.05 x 14.40m
 DWT/GT: 82,158t/43,004
 Main engine: Mitsui MAN B&W 6S60MC-C (Mark 7) diesel x 1 unit
 Speed, service: 14.5kt
 Classification: KR
 Registry: Panama
 Completion: January 18, 2013

