

## Kawasaki completes 145,000m<sup>3</sup> LNG carrier, CELESTINE RIVER



Kawasaki Shipbuilding Corporation has delivered the 145,000 m<sup>3</sup> LNG Carrier, CELESTINE RIVER (HN: 1587) to Chariot Finance Limited. A group company of Cheniere Energy, Inc., (an energy supplier of the US) is now chartering the CELESTINE RIVER. The operator is "K" Line LNG Shipping (UK) Limited.

The carrier has four MOSS type independent spherical tanks, which can contain a total of 145,394 m<sup>3</sup> LNG. The heat insulation uses the Kawasaki panel system known as the proven heat-insulation effect. The boil-off gas rate is maintained at about 0.15% per day by the system.

The cargo tanks are installed inside the cargo compartment built with double sides and double bottom to ensure safety so that the cargo tanks are not damaged directly.

The wheelhouse is equipped with the advanced integrated electronic navigation equipment, which were previously installed separately. This has further improved ship operation tasks. Windows around the wheelhouse provide a panoramic view of 360 degrees, allowing one-

man operation during oceanology navigation.

Cargo-handling operation is carried out at the cargo-handling room located in front of the accommodation quarters, where the Kawasaki IMCS (Integrated Management Control System) is installed to monitor and control cargo handling operation as well as monitoring engine conditions. The IMCS developed on the operator expertise basis is very easy to use.

#### Principal particulars

L (o.a.) x L (b.p.) x B x D x d: 289.70m x 277.00m x 49.00m  
x 27.00m x 11.90m

DWT/GT: 77,163t/117,895

Cargo tank capacity: 145,394m<sup>3</sup> (at -163°C, 98.5%)

Main engine: Kawasaki UA-400 steam turbine x 1 unit

MCR: 26,900kW x 80rpm

Speed, service: about 19.5kt

Complement: 46

Classification: DNV

Completion: Dec. 14, 2007



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## IHIMU completes 300,100MTDW crude oil carrier, IDEMITSU MARU

IHI Marine United Inc. has delivered the 300,100 MTDW crude oil carrier, IDEMITSU MARU, for Idemitsu Tanker Co., Ltd. at its Kure Shipyard.

Idemitsu Maru is the newest type of VLCC and has many features. The carrier is provided with larger capacity and good stability. Arrangement



of the cargo tanks is optimized together with ballast tanks and other compartments, resulting in remarkably low gross tonnage.

The main engine is a common rail electronically-controlled DU-Sulzer 7RT-flex 84T-D high power type, and economical electric power generation

can be achieved under sea going conditions by a turbo generator with the assist of exhaust gas. The superior hull form demonstrates efficient sea speed and good fuel consumption. An integrated bridge system is employed for one-

man operation possible.

To provide the ship with good propulsion performance, economical operation, and good maneuverability, IHIMU made full use of its technical and engineering expertise in the ship design and study, applying CFD analysis, 3D-FEM ship model analysis, walk-through simulation, and apparatus-installation simulation. The CIM system, Ajisai, was used for production management.

Principal particulars

L (o.a.) x B x D x d: 333.0m x 60m x 29m x 19.2m  
 DWT/GT: abt. 300,100t/160,300  
 Main engine: DU-Sulzer 7RT-flex 84T-D diesel x 1 unit  
 MCR: 27,160kW x 74.0rpm  
 Speed, service: 15.65kt  
 Classification: NK  
 Completion: Nov. 30, 2007

## Sanoyas completes 83,000MT-type Panamax bulker, GOLDEN SPRING

Sanoyas Hishino Meisho Corp. has completed the 83,730 DWT Panamax bulk carrier, GOLDEN SPRING (HN: 1259), for Golden Spring Maritime S.A. at the Mizushima Works and Shipyard. Sanoyas has previously constructed a total of 70 vessels of 70,000 to 75,000 DWT class. This is the 2nd vessel of a series of the SANOYAS newly developed 83,000DWT type, featuring the largest deadweight and cargo hold capacity for PANAMAX bulk carriers.

For improvement of propulsion efficiency, the vessel is equipped with a low-speed & long-stroke main engine combined with a high-efficiency propeller and SANOYAS developed energy saving device called "STF" (Sanoyas-Tandem-Fin (patent: max. 6% energy saving) on the stern shell.

For efficient cargo handling, cargo hatches are widened as much as possible. Dedicated fresh water tanks are provided for storing hold washing water generated by a large capacity type fresh water generator. In addition, a special fuel oil heating system

is applied for fuel oil storage tanks in order to avoid cargo damage by overheating.

Considering protection of the environment, various countermeasures such as fuel oil tanks of double hull structures, light color and tar-free coating for ballast tanks, holding tank for accommodation discharges and dirty hold bilge, and independent bilge segregation system for engine room, are incorporated.

Principal particulars

L (o.a.) x L (b.p.) x B x D x d: 229.00m x 223.00m x 32.24m x 20.20m x 14.555m  
 DWT/GT: 83,730mt/44,146  
 Cargo hold capacity: 96,152m<sup>3</sup> (grain)  
 Classification: NK  
 Main engine: MAN B&W 6S60MC-C diesel x 1 unit  
 MCR: 14,600ps  
 Speed, service: about 14.0kt  
 Completion: Jan. 31, 2008





## Oshima completes 1st JAPANAMAX, 82,282MT bulk carrier AZUR

Oshima Shipbuilding Co., Ltd. delivered the first vessel of the JAPANAMAX class bulk carrier named AZUR on Nov. 12, 2007. The JAPANAMAX has the maximum level deadweight of the Panamax class under the limitation of overall length of 225m, which allows the ship to enter all grain berths in Japan, where some of the grain ports have strict overall length limitation of 225m. The deadweight is increased by about 2,700MT

at the same draft compared with the present Oshima 77,000DWT type Panamax bulk carriers.

The vessel also has several new special technical features for improvement of the propulsive performance and more economical transportation. The Seaworthy Bow that demonstrates excellent seaworthiness is adopted to improve speed performance in rough weather conditions: About 5% power saving can be

achieved in comparison with an ordinary bulbous bow.

A high-lift rudder composed of the Schilling rudder and rotary vane type steering gear is equipped to improve the ship's maneuverability and course keeping ability. The Flipper Fins are a set of fins with a simple structure adopted to improve propulsive efficiency for fuel oil saving.

### Principal Particulars

Length (o.a.):	224.86m
Length (b.p.):	221.50m
Breadth, mld.:	32.26m
Depth, mld.:	20.05m
Summer draft, mld.:	14.40m
DWT:	82,282MT
GT:	42,712
Loading capacity:	96,041m <sup>3</sup>
Main engine:	KAWASAKI MAN B&W 5S60MC-C diesel x 1 unit
MCR:	10,959kw at 102.0rpm
Speed, service:	14.5kt
Classification:	NK
Completion:	Nov. 12, 2007



## Naikai completes 28,000DWT bulk carrier VALENTE VENUS

Naikai Zosen Corporation has completed the 28,401 DWT open bulk carrier, VALENTE VENUS (HN: 714) for Floral Shipping Navigation S.A. at the Setoda Works. The vessel is now operated for transport of copper ore and slug centered on New Caledonia.

The double hull construction similar to an ore carrier is adopted to provide greater hull strength than the conventional ship, eventually increasing ship safety against external damage. This also eases maintenance of the cargo holds, and even if the outer shell is damaged by external force, the cargo ore is secured against quality damage and leakage. Prior to the new international rules, the vessel employs fully double hull construction for the fuel tank to prevent fuel leaking outboard for marine pollution protection.

The vessel has four box-shaped cargo holds with wide hatches and three 30t deck cranes between the hatches. With these arrangements,

cargo-handling efficiency is increased.

### Principal particulars

Length, o.a.:	161.00m
Length, b.p.:	154.50m
Breadth, mld.:	26.00m
Depth, mld.:	14.00m
Draught, designed:	9.00m
DWT/GT:	28,401t/16,992
Cargo hold capacity:	about 30,200m <sup>3</sup>

Complement:	20
Main engine:	Hitachi MAN B&W 7S35MC (MARK 7) diesel x 1 unit
NCR (90%):	4,410 kW (5,985ps) x 164min <sup>-1</sup> (164rpm)
Speed, service:	about 13.0kt
Classification:	NK
Hull No.:	714
Completion:	Jan. 16, 2008



## Imabari completes 180,000 DWT Type bulk carrier, CAPE UNITY

Imabari Shipbuilding Co., Ltd. has delivered the 180,181 DWT bulk carrier, CAPE UNITY (HN: 8035), to the domestic owner at the Saijo Shipyard. The CAPE UNITY is the 13th of the 180,000 DWT type bulk carrier series with a beam of conventional 45m developed by Imabari. The vessel has been designed to meet recent bulk carrier safety requirements as an ocean going bulk carrier suitable for carrying coal, ore, and other bulk cargoes except grain.

The vessel consists of nine cargo holds of single hull construction with top side tanks, double bottom tanks and side hopper tanks. The vessel has high loading performance for heavy cargoes at slack loading of SF=12.0CF/LT in the alternated loading condition Nos. 1, 3, 5, 7 and 9 cargo holds (other holds are empty) under 45% bunker condition with not more than assigned draft. Cargo loading and unloading are possible at two different ports under the condition of the homogeneous cargo with the same 45% bunker. Each of the nine holds has a side slid-

ing type hatch cover which is driven by hydraulic operation and well fitted to each cargo hatch coaming on the upper deck. Two hatch covers can be operated (opening/closing) simultaneously within about 3 minutes.

The No. 6 cargo hold is utilized as the water ballast tank and the No. 2 & 8 holds are designed as port use water ballast tanks to increase loading ability. To cope with the ballast exchange required by the rules, the vessel provides sufficient capacity with two 2,500m<sup>3</sup>/h ballast water pumps.

An energy saving device, the "hybrid fin" developed by Imabari, is installed at the fore edge of the rudder just after the propeller. The main engine is a low speed, 2-stroke, single acting, direct reversible cross head



diesel engine in compliance with NO<sub>x</sub> restrictions. The vessel has a differential GPS, AIS and VDR to ensure safe navigation and operation.

Principal particulars

L(o.a.) x B x D x d: 288.93m x 45.00m x 24.70m x 18.174m

DWT/GT: 181,181t/90,092

Cargo hold capacity: 199,724m<sup>3</sup>

Main engine: MITSUI-MAN B&W 6S70MC-C diesel x 1 unit

MCR: 18,630kW x 91rpm

Speed, service: 15.35kt

Complement: 25

Classification: NK

## MES completes 81,000 DWT type bulker

—1st ship of newly designed Panamax—

Mitsui Engineering & Shipbuilding Co., Ltd. (MES) delivered an 81,000 DWT-type bulk carrier LADY GIOVI (HN: 1687) to Clio Marine Inc., Liberia on Dec. 10, 2007, at its Tamano Works. This is the first ship of a newly designed type of Panamax bulk carrier having deadweight of over 81,000 metric tons with the same overall length (225 meters) as the MES-built 75,000 DWT type bulk carriers.

Principal Particulars

Length, o.a.: 225.00m  
Length, b.p.: 221.50m

Breadth, mld.: 32.25m  
Depth, mld.: 19.90m  
Draft, mld.: 14.35m  
GT: 43,408t  
DWT: 81,791mt  
Main engine: Mitsui-MAN B&W 6S60MC-C diesel x 1 unit  
Max. continuous output: 12,100kW x 94rpm  
Speed: 15.0 knots  
Complement: 25  
Classification: NK  
Delivery: Dec. 10, 2007

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## RIO GENOA, 160,000DWT crude oil tanker completed by Universal

Universal Shipbuilding Corporation has delivered the 160,000 DWT crude oil tanker, RIO GENOA, for Pine Maritime Corporation at the Ariake Shipyard.

The vessel has a larger deadweight with 50m beam than the conventional Suezmax. A larger cargo volume is provided for the main Suezmax unloading ports in the Gulf of Mexico, the water depth of which is very shallow.

The vessel uses the Surf-Bulb (Rudder Fin with Bulb) that achieves very high energy saving. Furthermore, the bow above the waterline of the vessel is shaped as the Ax-Bow that can reduce the added wave resistance at sea.

The vessel was designed to meet recent IMO rules, such as PMA (Permanent Means of Access) and pump room bottom protection. The main engine is a MAN B&W 6S70MC-C and a low sulfur fuel oil tank is provided for SO<sub>x</sub> emission control. The vapor emission control system is in-

stalled to prevent emissions of VOC (volatile organic compound) into the atmosphere at loading and unloading.

The vessel has three cargo pumps, and the Auto Eductor Stripping System is provided for easy cargo handling. A cargo-heating system is provided in the cargo oil tanks to carry various kinds of cargo oil.

Principal particulars

L (o.a) x B x D x d : about 276.88m x 50.00m x 22.40m x 16.142m

DWT/GT: 159,395t/83,722

Main engine: MAN B&W 6S70MC-C x 1 unit

Speed, service: 15.25kt

Classification: ABS

Completion: October 2007



## JSEA participates in Posidonia 2008

The 21st Posidonia 2008 (The International Shipping Exhibition) will take place at the Hellenikon Exhibition Centre in Helleniko for five days from June 2 through 6. This event is organized by the Posidonia Exhibitions SA and sponsored by the Greek Ministry of Mercantile Marine, Union of Greek Shipowners, etc., and organizations related to the maritime industry.

The Japan Ship Exporters' Association (JSEA) consist-

ing of 12 Japanese shipbuilders will participate in the exhibition with the financial support of The Nippon Foundation and in cooperation with The Shipbuilders' Association of Japan. JSEA and the Nippon Kaiji Kyokai (Class NK), a co-exhibitor, will use a 289.41m<sup>2</sup> exhibition area where Japanese shipbuilding technology will be presented. Particular ship hull forms and newly developed ship designs will be introduced with the plasma vision system

and other displays.

Shipbuilders:

IHI Marine United Inc.

Imabari Shipbuilding Co., Ltd.

Kawasaki Shipbuilding Corporation

Mitsubishi Heavy Industries, Ltd.

Mitsui Engineering & Shipbuilding Co., Ltd.

Namura Shipbuilding Co., Ltd.

Oshima Shipbuilding Co., Ltd.

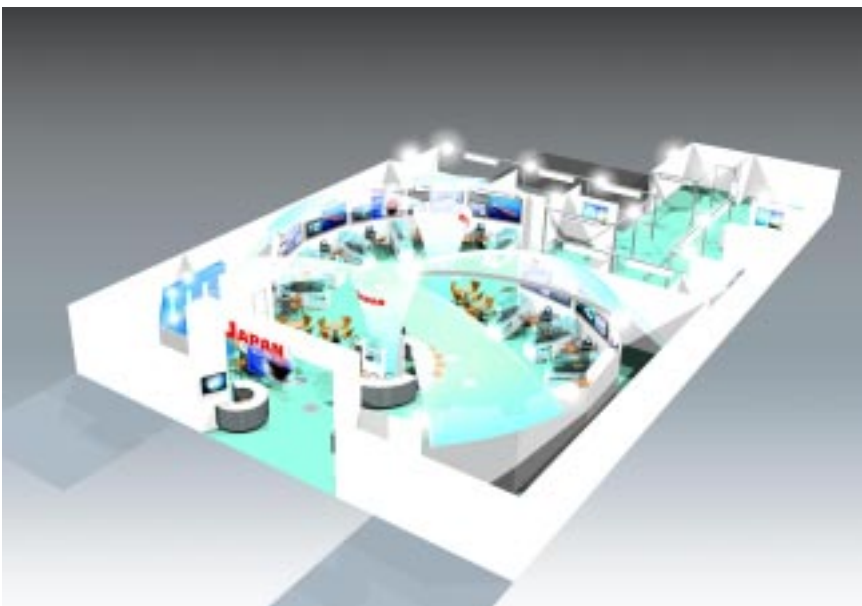
Sanoyas Hishino Meisho Corporation

Sasebo Heavy Industries Co., Ltd.

Shin Kurushima Dockyard Co., Ltd.

Sumitomo Heavy Industries Marine & Engineering Co., Ltd.

Universal Shipbuilding Corporation



**EVER SALUTE**

Operator: Evergreen International S.A.  
 Builder: Mitsubishi Heavy Industries, Ltd., Kobe Shipyard  
 Hull No.: 1275  
 Ship Type: Container ship  
 L (o.a.) x L (b.p.) x B x D x d : abt. 300.0m x 285.00m x 42.80 x 24.20m x 14.20m  
 DWT/GT: 78,733t/75,246  
 Container carrying capacity: 7,024TEUs  
 Main engine: Mitsubishi-Sulzer 10RTA96C diesel x 1 unit  
 MCR: 54,900kW x 100min<sup>-1</sup>  
 Complement: 27  
 Classification: ABS  
 Completion: Jan. 11, 2008

**REIMEI**

Owner: Sherwood Overseas S.A.  
 Builder: Kawasaki Shipbuilding Corporation  
 Hull No: 1586  
 Ship type: LPG carrier  
 L (b.p.) x B x D x d: 222.00m x 37.20m x 21.00m x 11.20m  
 DWT/GT: 53,100t/45,811  
 Main engine: Kawasaki-MAN B&W 7S60MC-C diesel x 1 unit  
 Speed, service: About 16.85  
 Classification: NK  
 Completion: Dec. 21, 2007

**YASA GOLDEN MARMARA**

Owner: Lepta Shipping Co., Ltd.  
 Builder: Mitsui Engineering & Shipbuilding Co., Ltd.  
 Hull No.: 1672  
 Ship type: Tanker  
 L (o.a.) x L (b.p.) x B x D x d: 245.50m x 234.00m x 42.00m x 21.50m x 14.95m  
 DWT/GT: 110,769t/59,745  
 Main engine: MITSUI-MAN B&W 7S60MC diesel x 1 unit  
 MCR: 14,280kW x 105rpm  
 Speed, service: 15.3kt  
 Cargo tank capacity (100%): 128,073m<sup>3</sup>  
 Classification: LR  
 Completion: Jan. 25, 2008

**OWARI MARU**

Owner: Samarinda Maritima S.A.  
 Builder: Namura Shipbuilding Co., Ltd.  
 Hull No: 271  
 Ship type: Ore carrier  
 L (o.a.) x L (b.p.) x B x D x d: 319.58m x 308.00m x 54.00m x 24.30m x 18.127m  
 DWT/GT: 229,013t/113,928  
 Main engine: 6UEC 85 LSII diesel x 1 unit  
 MCR: 22,432kW x 76.0rpm  
 Speed, service: 15.1kt  
 Classification: NK  
 Completion: Nov. 21, 2007

**EAGLE HOPE**

Owner: Eagle Hope Partnership  
 Builder: Onomichi Dockyard Co., Ltd.  
 Hull No: 528  
 Ship type: Product tanker  
 L (o.a.) x L (b.p.) x B x D x d: 228.49m x 219.95m x 32.20m x 20.65m x 14.368m  
 DWT/GT: 73,965t/40,865  
 Main engine: Mitsui MAN B&W 6S60MC-C (Mark-7) diesel x 1 unit  
 Speed, service: 15.7kt  
 Classification: ABS  
 Completion: Feb. 4, 2008

**PACIFIC HORIZON**

Owner: Cameleer Shipping S.A.  
 Builder: Shin Kurushima Dockyard Co., Ltd.  
 Hull No: 5495  
 Ship type: Chemical tanker  
 L (o.a.) x B x D x d: 182.03m x 28.2m x 18.2m x 11.3m  
 DWT/GT: 37,981t/25,180  
 Main engine: 6UEC50LSII diesel x 1 unit  
 Speed, service: 14.9kt  
 Classification: NK  
 Completion: Dec. 18, 2007

