



IHIMU completes 8,600TEU container ship, NYK ORPHEUS



IHI Marine United Inc. delivered the 8,600TEU container ship, NYK ORPHEUS, at its Kure Shipyard on June 30. The NYK ORPHEUS is the fourth and last ship of this series for NYK Line.

The NYK ORPHEUS, a new generation of postPanamax size container ship, has many superior features. Larger capacity and good stability are secured. The main engine uses the common rail electronically controlled DU-Sulzer 12RT-flex 96C high power engine, and the superior hull form demonstrates efficient speed and less fuel consumption.

The lashing bridges contribute to simple and secured lashing of on-deck containers. The integrated bridge system allows one-man operation of the ship.

To provide the ship with good propulsion performance, economical operation, and good maneuverability, IHIMU designed the ship with its technical and engineering ex-

pertise in container carrier construction, using CFD analysis, 3D-FEM ship model analysis, walk-through simulation, and apparatus installation simulation by the CIM system, Ajisai, that IHIMU developed.

Principal particulars:

Length, o.a.:	336.0m
Breadth, mld.:	45.8m
Depth, mld.:	24.4m
Draught, mld.:	13.0m
DWT/GT:	96,490t/abt. 99,400
Loading Capacity:	8,600TEUs
Main engine:	DU-Sulzer 12RT-flex 96C x 1 unit
MCR:	65,210kW x 100.3rpm
Speed, service:	25.0kt
Classification:	NK
Completion:	June 30, 2008



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Peony Shipholding takes delivery of CSCL HOUSTON from Naikai

The 2,553TEU container carrier, CSCL HOUSTON (HN: 717), completed at the Innoshima Shipyard of Naikai Zosen Corporation, was delivered to Peony Shipholding S.A. on Aug. 26.

The carrier can exclusively carry 2,553TEU containers including 250 reefer containers. The cargo hold consists of six compartments, and ten hatch openings are provided. The full cell guide system is employed for each container hold.

The main engine is the super long-stroke type diesel engine to reduce fuel oil consumption, and the ship propulsion efficiency has been improved with adoption of the energy-saving stern hull form and a large-diameter five-blade propeller.

Safe ship operation at a port, or in navigation, is ensured with a bow



thruster for easier berthing and unberthing, auto-heeling control equipment for safe cargo handling, and a collision avoidance-assisting unit.

Principal particulars:

L (o.a.) x L (b.p.) x B x D x d: 199.93m x 188.00m x 32.20m x 16.60m x 9.80m

DWT/GT: 33,100t/27,200

Main engine: Hitachi MAN B&W 7S70MC-C diesel x 1 unit

MCR: 21,735kW x 91rpm

NCR (90%): 19,560kW x 88rpm

Speed, service: about 22.2kt

Complement: 25

Classification: NK

Completion: Aug. 26, 2008

LNG carrier, ENERGY NAVIGATOR, completed by Kawasaki

Kawasaki Shipbuilding Corporation delivered the 147,000m³ LNG Carrier, ENERGY NAVIGATOR (HN: 1600) to the co-owner, Tokyo LNG Tanker Co., Ltd. and Mitsui OSK Line on June 30, 2008. The LNG carrier is the ninth of the 147,000m³ class, a design developed by Kawasaki, and highly evaluated by owners at home and abroad.

The carrier has four MOSS type independent spherical tanks, which can contain a total of 147,558m³ 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

0.1% 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 advanced integrated electronic navigation equipment, which was 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 ocean-going navigation.

Cargo-handling operation is carried out at the cargo-handling room located

in front of the accommodation quarters, where the Kawasaki IAS (an integrated controlling and monitoring system) is installed to monitor and control cargo handling operation as well as monitoring engine conditions. The IAS developed on the operator expertise basis is very easy to use.

The carrier will navigate under cold sea conditions with atmospheric temperature of minus 25 degrees C and seawater temperature of minus 2 degrees C. Accordingly, all electrical and electronic apparatuses are protected from such severe conditions.

Principal particulars:

L (o.a.) x L (b.p.) x B x D x d: 289.53m x 277.00m x 49.00m x 27.00m x 11.60m

DWT/GT: 118,842t/73,640

Cargo tank capacity: 147,558m³ (-163 degrees C at 100%)

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

MCR: 26,900kW x 80rpm

Speed, service: abt. 19.5kt

Complement: 43

Classification: NK

Delivery: June 30, 2008



300,000DWT Unimax Ore carrier, GRANDE PROGRESSO, completed at Universal Ariake Shipyard

The 300,000DWT type ore carrier GRANDE PROGRESSO was delivered to a Kawasaki Kisen's 100% owned foreign subsidiary at the Ariake Shipyard of Universal Shipbuilding Corporation on May 30. The GRANDE PROGRESSO is the first very large ore carrier for exclusively loading at Brazil and unloading at Villanueva*, Philippines for JFE Steel Corporation of Japan.

[(*) The port facility of Philippine Sinter Corporation, a JFE Steel's subsidiary, where an ore sintering plant is located.]

The vessel is the first Unimax Ore carrier optimized to have the largest capacity of the 300,000DWT class to enter major iron ore loading ports in western Australia. The hull form is designed to be the most suitable for very deep waters at both Villanueva and Brazil, the largest iron ore shipping country.

Adequate hull strength is provided

to be applicable to various loading facilities, and every cargo hold is equipped with the world's largest single panel hatch cover to facilitate cargo handling.

With energy saving devices developed by Universal, the vessel could dramatically improve propulsive efficiency, decreasing fuel consumption compared with the conventional large ore carrier.

Universal will flexibly and actively respond to the diversifying needs in transport of steel material, amidst expected future expansion in marine transport triggered by global increase in demand for iron ore.

Principal particulars:



Length, o.a.:	327.0m
Breadth, mld.:	55.00m
Depth, mld.:	29.25m
Draught, mld.:	21.40m
DWT/GT:	297,351t/151,137
Main engine:	Hitachi MAN B&W 6S80MC-C diesel x 1 unit
Sea speed:	14.3kt
Classification:	NK
Completion:	May 30, 2008

Oshima completes J-OPEN type bulk carrier, SANKO MINERAL

Oshima Shipbuilding Co., Ltd. delivered the 50,700DW type box shaped bulk carrier, SANKO MINERAL, on June 20, 2008. This type of ship is named the J-OPEN Type Bulk Carrier. The ship has eight cargo holds of the open hatch type and is equipped with four jib cranes instead gantry cranes.

The ship features are represented by efficient and quick loading/unloading of a variety of cargoes, such as wooden pulp, packaged lumber, hot coils, containers, grains, ore, coal, sul-

fur, and other bale and bulk cargoes.

Cargo holds with complete square hatch corners and flush bulkhead surfaces can achieve smooth handling of unitized cargoes. A dehumidifier system is installed to keep special cargo dry, e.g., wooden pulp, roll paper, etc.

Large capacity 40t jib-type deck cranes and Freely Hi-Lift Type piggyback hatch covers reduces the time required for loading and unloading. In addition, each hatch cover is designed to open and close with free sequence to decrease opening and closing duration.

The vessel also has the following Oshima technologies to save fuel oil consumption and GHG. The Seaworthy Bow of excellent seaworthiness is adopted to im-

prove speed performance in rough weather conditions. (about 5% power saving at head sea compared with ordinary bulbous bow).

Flipper Fins, which are a set of fins of the simplest structure, are adopted to improve propulsive efficiency. Fuel oil saving more than 4% is possible. High-Lift Rudder composed of the Schilling rudder and rotary vane type steering gear is mounted to improve the maneuverability and course keeping stability.

Principal Particulars:

Length, o.a.:	189.99m
Length, b.p.:	186.00m
Breadth, mld.:	32.26m
Depth, mld.:	17.31m
Summer draft, mld.:	12.227m
DWT/GT:	50,757t/30,360
Loading capacity:	57,886m ³
Main engine:	KAWASAKI MAN B&W 5S60MC-C diesel x 1 unit
MCR:	13,850ps x 95.0rpm
Speed, service:	15.5kt
Classification:	NK



Sanoyas completes 83,000MT-type Panamax bulker STAR OF EMIRATES

Sanoyas Hishino Meisho Corp. has completed the 83,610 DWT Panamax bulk carrier, STAR OF EMIRATES (HN:1272), for Sun Cordia Marine 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 5th 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 and long-stroke main engine combined with a high-efficiency propeller and SANOYAS developed energy saving device called STF (Sanoyas-Tandem-Fin, patented: maximum 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.

In consideration of environment preservation, the various provisions 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 adopted.

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 14.551m

DWT/GT: 83,610mt/44,251

Cargo hold capacity: 96,110m³ (grain)

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

MCR: 11,640kW

Speed, service: about 14.2kt

Classification: ABS

Completion: July 1, 2008

MES completes YASA GOLDEN DARDANELLES, 110,000DWT double hull Aframax tanker

Mitsui Engineering & Shipbuilding Co., Ltd. (MES) has delivered a 110,000DWT type double hull crude oil tanker, YASA GOLDEN DARDANELLES (HN: 1673), to YASA Tanker And Transportation S.A. at its Chiba Works.

This is the 8th Aframax Tanker of 42m beam with the largest deadweight and the largest cargo tank capacity. The vessel has a cargo tank capacity of 128,000m³ and deadweight

of 110,000 tons, which are the largest for the Aframax Tanker with 42m beam.

The newest hull form including bulbous bow and stern arrangement is employed to achieve the highest propulsion performance for the Aframax tanker.

Three types of oils can be loaded/unloaded into/from cargo tanks simultaneously by three cargo pumps with self-stripping system. The vessel has

two ballast pumps, which enable easy ballasting and deballasting operation.

Two sets of Differential Global Positioning System (DGPS) are installed for

satellite navigation. Electronic Chart Display Information System (ECDIS), Automatic Ship Identification System (AIS) and Voyage Data Recorder (VDR) are installed for better route planning and safer navigation.

Principal Particulars:

Length, o.a.: 245.50 m

Length, b.p.: 234.00 m

Breadth, mld.: 42.00 m

Depth, mld.: 21.50 m

Draft, mld.: 14.95m at full load

DWT/GT: 110,828t/59,745

Cargo tank capacity: 128,073m³
(100%)

Main engine: MITSUI-MAN B&W
7S60MC diesel x 1 unit

MCR: 14,280kW x 105rpm

Speed: 15.3kt

Complement: 28

Classification: LR

Delivery: June 24, 2008



SSK completes 115,577DWT crude oil tanker, PACIFIC FANTASY

Sasebo Heavy Industries Co., Ltd. (SSK) has completed construction of the 115,577 crude oil tanker, PACIFIC FANTASY (HN: 749). The tanker is the tenth vessel of the 115,000DWT Aframax series built at the Sasebo Shipyard.

The tanker is the flush deck type without forecastle. The engine room and the living quarters are arranged aft, and cargo tanks are arranged along the centerline, which consist of 14 tanks including slop tanks. 14 ballast tanks are provided. The shipsides and bottoms are double hull constructions.

The tanker has the longitudinal bulkheads forming the double hull construction. The ABS Safe Hull-CM is applied to cope with the fatigue strength. The height of the fishplate

meets the Exxon Mobil requirements.

Cargo oil pipes consist of three lines that allows handling two or three types of oils simultaneously without mixing different types of oils.

Two sets of chain stoppers for SPM are arranged. Tar free coating systems are applied in water ballast tanks for corrosion prevention of the tanks.

Big windows are arranged in the wheelhouse to have 360-degree view.

Principal particulars
L (o.a.): 243.80m
L (b.p.): 234.00m



B (mld.): 42.00m
D (mld.): 21.50m
d (mld): 15.62m (summer, full load)
DWT/GT: 115,577t/59,164
Cargo tank capacity: 126,606m³
Main engine: Mitsui B&W 6S60MC-C diesel x 1 unit
MCR: 11,700kW x 95.0 min⁻¹
Complement: 25 (max.)
Classification: ABS

Shin Kurushima completes PCC GRAND VICTORY for Dynamic Inventor

The large car carrier GRAND VICTORY (HN: 5440) was completed at the Onishi Shipyard of Shin Kurushima Dockyard Co., Ltd. for Dynamic Inventor Marine S.A. in June 2008. The carrier was designed by taking special considerations for environmental protection and cargo-handling efficiency.

Before designing the actual ship, scale model tests were conducted for performance validation, which proved reduction of noise and vibrations and optimal propulsion performance of the ship. The carrier employed a unique bulbous bow and asymmetric stern fin (AS Fin, patented), both based on the design of Shin Kurushima, for improved maneuverability and the ship

operational economy with less environmental load.

The car carrier can carry 6,402 vehicles. Four decks of the 12 car decks provided for the carrier are liftable to accommodate large heavy vehicles or small cars efficiently. A new hull structure was adopted, which allowed eliminating the partial bulkhead above the boarding deck and arranging ramps along the side inside the cargo hold. Due to this ramp arrangement, cars can reach uppermost car deck or the lowest easily. Thus, car handling efficiency is drastically improved, reducing the required time for loading and unloading as well as fuel consumption and exhaust gas. This suppresses environmental pollution in a port.

Boarding of cars is carried out through the starboard ramp at the stern, which is 35.0m long and 8m wide applicable to the load of 150t, and the center ramp in-

stalled at the midship starboard, which is 17.1m long and 6.5m wide applicable to 35t.

In the cargo holds and the engine room, a highly sensitive fire detecting system, and safe and rapidly expandable foam fire extinguishing system are installed for the safety of the crew and elimination of the use of CO₂ for fire extinguishing.

The carrier has obtained the Class KR UMA notification, which permits remotely controlled operation of the main engine from the bridge. Moreover, remote control of the main engine can be achieved from the bridge, and remote control of the main engine and auxiliary machinery is possible in the main engine control room.

Principal particulars:
L (o.a.) x L (b.p.) x B x D x d: 199.99m x 192.00m x 32.26m x 35.80m x 9.625m
DWT/GT: 18,299t/59,217
Car-carrying capacity: 6402 units
Main engine: B&W 7S60MC (Mark VI) diesel x 1 unit
Speed, service: abt. 19.8kt
Classification: KR
Completion: June 2008



SUMMIT RIVER

Owner: KAW1595 Shipping S.A.
 Builder: Kawasaki Shipbuilding Corporation
 Hull No.: 1595
 Ship type: LPG carrier
 L (o.a.) x L (b.p.) x B x D x d: 226.00m x 222.00m x 37.20m x 21.00m x 11.20m
 DWT/GT: 52,991t/46,046
 Cargo tank capacity: 80,170m³
 Main engine: Kawasaki-MAN B&W 7S60MC-C diesel x 1 unit
 MCR: 14,000kW x 94rpm
 Speed, service: abt. 17.0kt
 Complement: 37
 Classification: NK
 Completion: July 10, 2008

**TUBARAO MARU**

Owner: G.O.D. Shipping S.A.
 Builder: Mitsui Engineering & Shipbuilding Co., Ltd.
 Hull No.: 1668
 Ship Type: Ore carrier
 L (o.a.) x L (b.p.) x B x D x d: 340.0m x 325.00m x 60.00m x 28.15m x 21.13m
 DWT/GT: 327,127t/160,774
 Main engine: Mitsui-MAN B&W 7S80MC-C diesel x 1 unit
 MCR: 23,640KW x 66rpm
 Speed, service: 15.0kt
 Complement: 30
 Classification: NK
 Completion: Aug. 5, 2008

**MOL COMPETENCE**

Owner: MOL Euro-Orient Shipping S.A.
 Builder: Mitsubishi Heavy Industries, Ltd.
 Hull No.: 2233
 Ship Type: Container Ship
 L (o.a.) x L (b.p.) x B x D x d: abt. 316m x 302m x 45.6m x 25m x 14.5m
 DWT/GT: 90,613t /86,692
 Container carrying capacity: 8,110TEUs
 Main engine: Mitsubishi Sulzer 11RT-flex 96C diesel x 1 unit
 MCR: 62,920 kW x 102 min-1
 Complement: 30
 Classification: NK
 Completion: June 27, 2008

**CHIYOTAMOU**

Owner: G.O.D. Shipping S.A.
 Builder: Namura Shipbuilding Co., Ltd.
 Hull No.: 278
 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 18.10m
 DWT/GT: 228,627t/113,932
 Main engine: Mitsubishi 6UEC 85LSII diesel x 1 unit
 Output: 22,432kW x 76.0rpm
 Complement: 25
 Classification: NK
 Completion: June 4, 2008

**TAWA ARROW**

Owner: Glory Ocean Shipping S.A.
 Builder: Oshima Shipbuilding Co., Ltd.
 Hull No.: 10519
 Ship Type: Bulk carrier
 L (o.a.) x L (b.p.) x B x D x d: 189.99m x 185.79m x 32.26m x 17.62m x 12.425m
 DWT/GT: 54,274t/30,983
 Main engine: Kawasaki-MAN B&W 6S50MC-C diesel x 1 unit
 Output: 8,208 kW x 110.0rpm
 Speed, service: 14.5kt
 Classification: NK
 Completion: June 11, 2008

**MARIELENA**

Owner: Fidinco Ltd.
 Builder: Universal Shipbuilding Corporation
 Hull No.: 097
 Ship type: Bulk carrier
 L (o.a.) x B x D x d: 224.90m x 32.26m x 20.00m x 14.408m x
 DWT/GT: 81,354t/42,747
 Main engine: Hitachi MAN B&W 7S50MC-C diesel x 1 unit
 Speed, service: 14.6kt
 Classification: DNV
 Completion: Aug. 22, 2008

