

# SEA-Japan

No. 308 Dec. - Jan. 2005

*Season's Greetings*

*T. Okano*

Toshimichi Okano  
President



*(Photo courtesy of the Port Promotion Section, Hakata Port and Harbor Bureau, Fukuoka City)*



For further information please contact:

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

**JAPAN SHIP EXPORTERS' ASSOCIATION**

15-16, Toranomom 1-chome, Minato-ku, Tokyo 105-0001 Tel: (03) 3508-9661 Fax: (03) 3508-2058 E-Mail: [postmaster@jsea.or.jp](mailto:postmaster@jsea.or.jp)

## Kawasaki completes LNG carrier, *Lalla Fatma N'soumer*

Kawasaki Shipbuilding Corporation delivered the 145,445m<sup>3</sup> LNG carrier, *Lalla Fatma N'soumer* (HN: 1534), to Algeria Nippon Gas Transport Corporation on Oct. 29, 2004. The LNG carrier is the third of the 145,000m<sup>3</sup> class developed by Kawasaki and designed with 10,000m<sup>3</sup> larger capacity than the conventional 135,000m<sup>3</sup> type carrier, although the ship dimensions are almost the same as the conventional type. Therefore, the LNG carrier can visit many LNG terminal ports worldwide. Four LNG cargo tanks are of the independent

spherical MOSS type. The heat insulation is the Kawasaki panel system that demonstrates a high heat insulation effect. This insulation system maintains the BOG rate at approximately 0.15% a day. The cargo tanks are installed inside the compartment built with double side shells and double bottom to ensure safety so that the cargo tanks are not damaged directly. The wheel-house is equipped with advanced integrated navigation equipment, which has improved ship operation. Windows around the wheel-house 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 IMCS (Integrated Management Control System) is installed for monitoring and controlling the cargo handling operation as well as monitoring engine conditions. The Kawasaki IMCS is very easy to use since it was developed by incorporating experience and opinions from many operators.

### Principal particulars

L (o.a.) x L (b.p.) x B x D x d: 289.50m x 277.00m x 49.00m x 27.00m x 11.90m

DWT/GT: 77,379t/118,363t

Cargo tank capacity: 145,445m<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: approx. 19.3kt

Classification: BV

Complement: 43



## MES completes LNG carrier, *Dukhan*, for Qatar Gas LNG project

Mitsui Engineering & Shipbuilding Co., Ltd. (MES) has delivered the 135,000m<sup>3</sup> LNG carrier, *Dukhan* (HN: 1561), to Qatar LNG Transport Ltd. at its Chiba Works. The *Dukhan* is now engaged in LNG transport for the Qatar Gas LNG project. This is the 13th LNG carrier built by MES.

The ship was designed to meet the requirements of major LNG terminals in North America, Europe, and Japan. A polystyrene material is used for heat insulation of the aluminum alloy spherical cargo tanks and stainless steel for the supports to achieve a low boil-off rate of below 0.15% a day. LNG evaporators are installed to use LNG as a fuel for the main propulsion plant. Two safety valves are provided for each cargo tank to release gas if the pressure in the tanks gets dangerously high owing to extraordinary gas evaporation. A soft-start system with

an inverter is used for the cargo pump to reduce impact to the pipes when starting the pump. The ship is designed for one-man-bridge operation.

### Principal particulars

L (o.a.) x L (b.p.) x B x D x d: 297.50m x 283.00m x 45.75m x 25.50m x 10.95m

DWT/GT: 72,533t/111,162t

Cargo storage capacity: approx. 135,000m<sup>3</sup> at low temperature

Main engine: MHI MS40-2 x 1 unit

MCR: 26,800kW x 89rpm

Speed, max. trial: 21.32kt

Complement: 46

Classification: NK

Completion: Oct. 12, 2004



## USC completes 82,000m<sup>3</sup> LPG carrier, *Oriental Queen*

Universal Shipbuilding Corp. (USC) has delivered the 82,000m<sup>3</sup> type LPG carrier *Oriental Queen* to Phoenix Navigation Limited (Hong Kong) at the Tsu Shipyard. This ship is the first LPG carrier built by USC and the 20th built by the former NKK and HZC.

This ship is designed to transport LPG at low temperature and normal atmospheric pressure in 4 cargo tanks of the independent type which are strengthened enough to load LPG without any restriction of liquid level. The cargo tanks are constructed with low temperature steel resistant to -46°C and insulated with polyurethane foam.

Cargo pipings are designed to enable loading/unloading of 2 types of liquefied cargo simultaneously and stainless pipe is used for the piping on the upper deck to reduce maintenance work. Main valves, required for

operation during loading/unloading and voyage, are hydraulic valves enabling remote control from the cargo control room.

Eight main cargo pumps (2 sets/tank) are provided in the cargo tanks, 4 reliquefaction plants in the reliquefaction plant room, and a large capacity inert gas generator in the engine room. A low fuel consumption type diesel engine is employed for the main engine and the Surf Bulb is applied to increase propulsion efficiency.

The fuel supply system is common for the main engine and diesel generator engines with the mono-fuel system.

Principal par-

ticulars

L (o.a.) x B x D x d: 225.00m x 36.60m x 21.8m x 11.25m

DWT/GT: 53,194t/47,279

Cargo tank capacity: 82,524m<sup>3</sup>

Main engine: Mitsui MAN-B&W 6S70MC Mk6) x 1 unit

MCR: 14,000kW x 103rpm

Speed, service: approx. 16.75kt

Complement: 30

Classification: NK



## New bulk carrier Oshima Ultra Handymax Bulker debuts

Oshima Shipbuilding Co., Ltd (Oshima) recently developed the 60,000 DWMT type bulk carrier, named "Ultra Handymax Bulker," as a next world de-fact standard handymax bulk carrier. In the past, the Panamax bulk carrier used to fill this role. The Ultra Handymax Bulker has achieved the old Panamax class deadweight under the overall-length limitation of 190m as in the existing Handymax class. In this meaning,

"Ultra Handymax" could perform as "Five Holds, Geared Panamax". The "Ultra Handymax Bulker" also has superior technical features, i.e. improved cargo loading/unloading efficiency, environment protection, reduced fuel oil consumption and less maintenance work, and improved safety for ship operation. The deadweight is increased by about 1,800MT at the same draft compared with the current 52,500 DWMT type

Handymax bulk carriers. For efficient cargo handling, 18.6m wide hatch openings for Nos.1 through 5 cargo holds and four sets of 30MT x 26m reach deck cranes are provided. For environmental protection and reduction of fuel oil,

the Oshima WA-FIN (Wake Acceleration Fin) is equipped for improvement of the propulsive performance and more economical transportation. The Seaworthy Bow of excellent seaworthiness is adopted to improve speed performance in rough weather conditions. To improve ship maneuverability and course keeping ability, the Oshima High-Lift Rudder composed of the mariner type Schilling rudder and rotary vane type steering gear is equipped, which was developed in cooperation with Japan Hamworthy Co., Ltd.

Principal Particulars

L (o.a.) x L (b.p.) x B x D x d: 190.00m x 186.00m x 32.26m x 18.55m x 13.04m

DWT: approx. 60,000MT

GT: 33,600

Main Engine: MAN B&W 6S50MC-C

Cargo-hold Capacity: 74,600m<sup>3</sup>

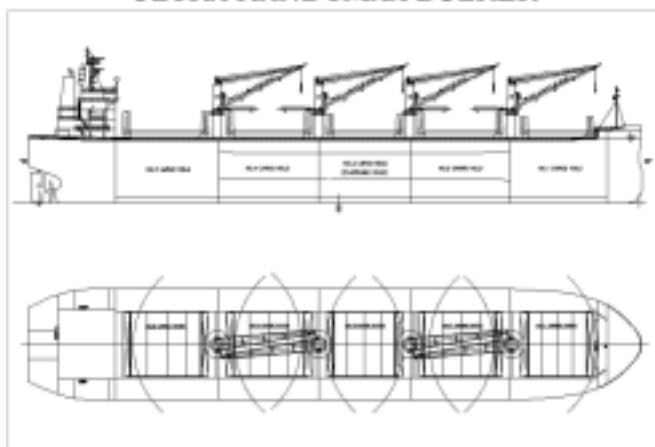
MCR: 11,400ps x 113.0rpm

Speed, service: 14.5kt

Classification: NK

Complement: 25

ULTRA HANDYMAX BULKER





## Imabari completes PCC, *Phoenix Leader*

Imabari Shipbuilding Co., Ltd. has completed *Phoenix Leader* (HN: 1423), a PCC with a car carrying capacity of 5,400 units of designated passenger cars, recreational vehicles, buses, and trucks, or equivalent to 6,501 passenger cars of the ordinary size, for Ohjin Shipholding S. A. at its Marugame Works. The *Phoenix Leader* is the third carrier of a series of five to be built for the owner.

The general arrangement of the carrier consists of four cargo holds and 13 car decks (including garage). The navigation bridge and living quarters are located on the uppermost deck of the fore part. The garage deck is located behind the living quarters, and the No. 6 deck is the roll-on/off deck (freeboard deck). Lifiable decks are provided for the Nos. 7 and 9 decks to cope with high roof vans.

The even-numbered decks from Nos. 6 through 12 decks have jump slopes instead of hold ramps of the usual design, which permit cars to go straight ahead on each car deck without turning. At the uneven-numbered decks, hold ramps are installed. These combinations facilitate roll-on and off work.

The Nos. 6 and 8 decks have the capacity to load heavy vehicles such



as buses and trucks, and all car decks except the first and second decks can accommodate recreational type vehicles.

Hull construction employs the one-low pillar system, which satisfies the requirements for effective deck clearance and bulkhead opening size as well as arrangement of fixed and movable hold ramps. This increases roll-on and off workability.

The center and stern ramps are installed on the starboard side, and the center ramp can be used with the No. 5 or No. 6 car deck, making roll-on and off work flexible.

Principal particulars

L (o.a.) x L (b.p.) x B x D x d: 199.94m x 190.00m x 32.26m x 34.80m x 10.00m

Gross tonnage (ICTM, 1969): 61,804t

Effective car deck area: abt. 55,484m<sup>2</sup>

Main engine: Kobe Diesel-Mitsubishi UE diesel engine, 8UEC60LSII x 1 unit

MCR: 15,540kW x 104rpm

NCR: 13,210kW x 98.5rpm (85% MCR)

Speed, service: abt. 20kt

Classification: Nippon Kaiji Kyokai (NK) NS\* (Vehicle Carrier) and MNS\*

Complement: 31

## Sanoyas completes Panamax bulker, *Loch Maree*

Sanoyas Hishino Meisho Corp. has completed the 75,798mt Panamax bulk carrier, *Loch Maree* (HN: 1220), for Legenda Maritime, S.A. at the Mizushima Works and Shipyard. This



vessel is the 49th of the Sanoyas Panamax bulk carrier series, or the 23rd of the 75,500mt type. The *Loch Maree* has seven cargo holds with topside tanks and a hopper bottom, and the living quarters and engine room are located aft. This arrangement allows efficient loading and unloading of bulk cargoes. The hatch covers are the side rolling type driven by an electro-hydraulic motor and chains.

The main engine is a very low-speed, super long stroke, and 2-cycle diesel engine. The highly efficient and large diameter propeller assists in reducing fuel consumption.

Principal particulars

L (o.a.) x L (b.p.) x B x D x d: 225.00m x 217.00m x 32.26m x 19.30m x 13.994m

DWT/GT: 75,798mt/38,871t

Cargo hold capacity: 89,201m<sup>3</sup> (grain)

Main engine: MAN B&W 7S50MC-C diesel x 1 unit

MCR: 12,200ps

Speed, service: Approx. 14.5kt

Classification: NK

Complement: 25

Completion: Sept. 17, 2004

## MES markets full-mission onboard ship handling simulator

Mitsui Engineering & Shipbuilding Co., Ltd. (MES) and its subsidiary, Akishima Laboratories (MITSUI ZOSEN) Inc., have jointly developed a next-generation full-mission onboard type ship handling simulator. This simulator has been developed using many technical achievements in the manufacture of compact ship handling simulators and radar & ARPA simulators with visual display systems.

The first unit was installed on the training ship, *Ginga Maru*, which was completed at the Chiba Works and delivered to the National Institute for Sea Training in June this year. Since then the simulator has indicated good results for training on board the ship, which has encouraged MES to market the simulator.

The features of the new simulator are as follows: The simulator is used at berthing or stopping, and navigation equipment and meters of the training ship can be used for the handling simulation purpose (Patent pending). Linking the simulator equipment with the ship's equipment in the training wheelhouse makes the simulation facility compact.

The onboard simulator has the same functions as the fully equipped shore ship maneuvering facility. Three 80-inch screens suspended from the ceiling of the training wheelhouse

and high-precision projectors reproduce the 3-dimensional view image. By interlocking the steering wheel operation and the ship motion corresponding to the rudder angle, the simulator creates the same movement on the screen as seen during the actual ship maneuver.

The simulation program of the ship motion is constructed based on the detailed models that Akishima Lab. has developed based on R&D achievements and tank tests for many years. The view projected on the screen is based on major 10 sea areas in Japan, and the visual quality is almost natural. Thus, the simulator can provide ship handling training close to reality. Moreover, a variety of simulations can be achieved by providing a ship operation scenario in an unexpected situation.

The training scenario is easily furnished using the actual ship operation data from the inboard information management system (Inboard LAN) besides those provided by the instructors. With the actual ship operation data, the ship operation status of a skilled crew can be simulated to enhance training effects.

The simulator is also provided with a training evaluation assist system, which consists of remote evaluation, remote monitoring, and communication evaluation systems. The system

is used for evaluation of training with the simulator.

The remote evaluation system particularly allows the instructor in the ITS room of the bridge to estimate training performance, which is monitored through a video image and audio, based on data for the maneuvering status, view image, radar image, and sea area. The state at training is displayed on the screen in the briefing department, where other trainees can watch the training.

The communication evaluation system enables simulation evaluation between two ships, or a ship and a shore facility due to provision of two sets of international VHF radios on the bridge and on the instructor's desk.

MES says that the new simulator provides the world's top level of both functions and operability, and will further enhance the performance of onboard ship handling simulator training.



### To our readers

- Please notify us of any change in address by letter or telefax together with the old mailing label to ensure you continue to receive SEA-Japan.
- We welcome your comments about SEA-Japan. Please address all correspondence to the Japan Ship Exporters' Association (JSEA), or the Japan Ship Centre in London.
- Address (Tokyo): 15-16, Toranomon 1-chome, Minato-ku, Tokyo 105-0001 / Tel: (03) 3508-9661 Fax: (03) 3508-2058  
E-mail: [postmaster@jsea.or.jp](mailto:postmaster@jsea.or.jp)
- Address (London): Ground Floor, 9 Marshalsea Road, London SE1 1EP, UK / Tel: +44 (0) 20 7403 1666 / Fax: +44 (0) 20 7403 1777  
E-mail: [info@jsc.org.uk](mailto:info@jsc.org.uk)  
URL: <http://www.jsc.org.uk>



*Alrar*

**Owner:** SONATRACH Petroleum Corporation

**Builder:** Kawasaki Shipbuilding Corporation

**Hull No.:** 1546

**Ship type:** LPG carrier

**L (o.a.) x L (b.p.) x B x D x d:** 204.92m x 200.45m x 32.20m x 20.20m x 12.10m

**DWT/GT:** 44,445t/35,306t

**Cargo tank capacity:** 59,363m<sup>3</sup>

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

**MCR:** 13,560kW x 105rpm

**Speed, service:** Approx. 17.1kt

**Classification:** Det Norske Veritas (DNV)

**Completion:** Sept. 17, 2004

*Ioannis Zafirakis*

**Owner:** Capital Marine Co., Ltd.

**Builder:** Namura Shipbuilding Co., Ltd.

**Hull No.:** 224

**Ship type:** Bulk carrier

**L (o.a.) x L (b.p.) x B x D x d:** 224.89m x 215.00m x 32.20m x 19.30m x 13.966m

**DWT/GT:** 73,305t/39,037t

**Main engine:** Hitachi B&W 7S50MC-C diesel x 1 unit

**Output:** 10,371kw x 119.3rpm

**Speed, service:** 16.85kt

**Classification:** LRS

**Completion:** Aug. 25, 2004

*Stavanger Viking*

**Owner:** Stavanger Viking KS/Det Stavangerske Dampskibsselskab ASA

**Builder:** Sumitomo Heavy Industries Marine & Engineering Co., Ltd.

**Hull No.:** 1312

**Ship type:** Oil Tanker

**L (o.a.) x L (b.p.) x B x D x d:** 239.00m x 229.00m x 42.00m x 21.30m x 12.10m

**DWT/GT:** 105,400t/56,172t

**Main engine:** Diesel United-Sulzer 6RTA58T diesel x 1 unit

**Speed, service:** 15.25kt

**Classification:** LRS

**Completion:** Oct 21, 2004

*Bow Santos*

**Owner:** Long Life Shipping S.A.

**Builder:** Shin Kurushima Dockyard Co., Ltd.

**Hull No.:** 5315

**Ship type:** Chemical tanker

**L (o.a.) x B x D x d (summer):** 147.83m x 24.2m x 12.8m x 9.428m

**DWT/GT:** 19,997t/11,986t

**Main engine:** 7UEC45LA diesel x 1 unit

**Speed, service:** 14.8kt

**Classification:** NK

**Completion:** Nov. 5, 2004

*Lowlands Ghent*

**Owner:** White Rose Marine S. A.

**Builder:** Sasebo Heavy Industries Co., Ltd.

**Hull No.:** 711

**Ship type:** bulk carrier

**L (o.a.) x L (b.p.) x B x D x d:** 225.00m x 218.00m x 32.20m x 19.80m x 12.20m

**DWT/GT:** 76,801t/40,014t

**Main engine:** Mitsui B&W 7S50MC-C x 1 unit



**MCR:** 9,230kW x 106rpm

**Classification:** KRS

**Completion:** July 6, 2004

*Cook Strait*

**Owner:** Good Future International Holdings Limited

**Builder:** The Hakodate Dock Co., Ltd.

**Hull No.:** 797

**Ship type:** Bulk carrier

**L (b.p.) x B x D x d:** 167.00m x 29.40m x 13.70m x 9.56m

**DWT/GT:** 31,894t/19,779t

**Main engine:** Mitsubishi 6UEC52LA diesel x 1 unit

**Speed, service:** 14.3kt

**Classification:** NK

**Completion:** Aug. 5, 2004

*The Port of Hakata*

The photo shown on the front page is the Chuo Wharf of Hakata Port. This international port is located in Northern part of Kyushu Island, consisting of eight areas: Island City, Kashii Park Port, Hakozaiki Wharf, Higashihama Wharf, Chuo Wharf, Suzaki Wharf, Hakata Pier, and Aratsu Area.

