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## Kawasaki completes LPG carrier, LOTUS GAS

Kawasaki Shipbuilding Corporation has completed the LPG carrier, LOTUS GAS (HN: 1620), for delivery to LPG Horizon Panama S.A. The LPG carrier is the Fifth of the same type and 44th of the Kawasaki LPG carrier series built so far.

The LPG carrier is designed with the new bow type called SEA-ARROW developed by the company. This can minimize the wave-making resistance at the bow during navigation, increasing the propulsion performance greatly.

Four independent LPG tanks are installed in each hull compartment. This tank system allows cryogenic contraction of the cargo tanks sepa-

rately from the hull.

The cargo tanks employ special steel resistant to LPG cryogenic temperatures down to minus 46 degree C. The tanks are insulated with urethane foam to

prevent heat penetration.

The main engine is the super longstroke, two-cycle, and low-speed diesel engine for energy saving. The Kawasaki rudder bulb with fins (RBS-F) is used. These combined effects contribute to reduction of the energy consumption.

Principal particulars 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 at full load DWT/GT: 53,067t/45,811 Cargo tank capacity:  $80,185m^3$  Main engine: Kawasaki MAN B&W

7S60MC-C diesel x 1 unit MCR: 14,000kW x 94rpm Speed, service: about 17.0kt Complement: 29

Classification: NK Completion: Sept. 30, 2008



# Universal completes Mediterranean Max type LNG carrier, CHEIKH BOUAMAMA

Universal Shipbuilding Corporation has completed the 75,500m<sup>3</sup> Mediterranean Max LNG carrier, CHEIKH BOUAMAMA (HN:088), for Skikda LNG Transport Corporation (SLTC) at the Tsu Shipyard. The carrier is the second of two Mediterranean Max types, the order of which was placed by SLTC, a joint venture company formed by SONATRACH, HYPROC (SONATRACH's shipping arm), Mitsui OSK Lines, and ITOCHU Corp. in 2005. After the naming ceremony at the Tsu Shipyard, successful gas trials were conducted at the Sodegaura LNG Terminal (Chiba Pref.) of Tokyo Gas Co., Ltd.

The carrier was put in service for transport of LNG produced in Algeria to European countries (France, Italy, and Spain) located along the Mediterranean Sea coast. The carrier is designed to have the optimal size (75,000m³) for the Mediterranean Sea area, and is called Mediterranean Max. This ship type will contribute to reduction of LNG transport costs and increase in efficiency.

The CHEIKH BOUAMAMA features are: All main Mediterranean LNG receiving terminal ports can accept the Mediterranean Max. The use of the SURF BULB/SSD system demonstrates further energy saving. Employment of a large capacity bow thruster provides easy ship maneuverability within a port. LNG cargo containment facilities use the GTT Mark III membrane type with high reliability. A highly-reliable steam

turbine plant is used as the main engine.

$$\begin{split} & \text{Principal particulars} \\ & L\left(\text{o.a.}\right) \times L\left(\text{b.p.}\right) \times B \times D \times \text{d: } 219.95\text{m} \\ & \times 35.00\text{m} \times 22.55\text{m} \times 9.75\text{m} \end{split}$$

DWT: 38,127t GT: 52,855t

Cargo tank capacity: 75,758m³ Main engine: Steam turbine x 1 unit

Speed, service: 17.5kt Classification: BV



# Sanoyas completes 4.35 mil.cubic ft chip carrier, SHEARWATER

Sanoyas Hishino Meisho Corp. has completed the SHEARWATER (HN: 1260) for Forester Shipping S.A. at the Mizushima Works and Shipyard. The vessel has a cargo hold capacity of 4.35 million cubic feet (about 123,000m<sup>3</sup>), suitable to transport wood chips.

This vessel is the first vessel of this class and is one of the largest wood chip carrier with flush deck developed by Sanoyas. Six cargo holds are arranged along the centerline, and the living quarters and the engine room are located aft. Cargo holds and structural members are appropriately designed to facilitate loading and unloading of wood chips.

Wood chips, which have low density, require larger cargo hold capacity than conventional bulk cargo. Therefore, the SHEARWATER has a greater depth than the bulk carrier of the same deadweight tonnage class.

Sanoyas adopts the proven energy saving device "S.T.F" (Sanoyas tandem fin) on this vessel to take effective environmental measures. Increased propulsion efficiency and decreased fuel consumption are achieved which contribute to CO<sub>2</sub> reduction. Additionally, the newly developed High Lift Rudder Form (patented) provides better maneuverability in



comparison to the conventional rudder form. This rudder can reduce rudder area attributed to high lift force compared to the conventional one. Small rudder size also contributes to reduction of frictional resistance.

Cargo-handling installations include a 975t/h chip unloader, three cranes, four hoppers, and a main belt conveyor. The cranes and hoppers are mounted on the upper deck between the cargo holds, and the belt conveyor is laid on the cargo deck covering the full length. A shuttle conveyor is installed at the bow section to transport wood chips to a shore facility. Specific considerations are taken with the chip-handling equipment to unload wood chips smoothly. Each cargo hold uses a hydraulic-drive folding type hatch cover.

The main engine is a low-speed, long-stroke, 2-cycle diesel engine that can achieve improved fuel consumption, and the engine room meets the requirements for unattended engine operation.

Principal particulars L (o.a.) x L (b.p.) x B x D x d:209.99mx 204.00m x 37.00m x 22.85m x 12.029m (summer)

DWT/GT: 64,533t/49,720

Cargo hold capacity: 123,618m3

 $(4,365,558ft^3)$  (grain)

Main engine: MAN B&W 6S50MC-C

diesel x 1 unit MCR: 9,480kW

Speed, service: about 14.6kt

Classification: NK Complement: 28

Completion: Sept. 5, 2008

# Namura completes Panamax bulk carrier, ENERGY PYXIS

Namura Shipbuilding Co., Ltd. delivered ENERGY PYXIS, a 77,008 DWT bulk carrier, to Morning Daedalus Navigation, S.A. at the Imari Shipyard & Works on Aug. 20, 2008. The vessel is the 75th Panamax type bulk carrier built by Namura and

the strengthened hull offers flexible cargo loading of coal, grain, etc.

The vessel has seven cargo holds, seven hatches, and wide hatches with two panel box type side-rolling hatch covers. Five pairs of water ballast tanks and fore/aft peak tanks are pro-

> vided for permanent water ballast tank, and the No.4 Cargo Hold can be utilized as a water ballast tank for heavy ballast condition.

equipped with a MAN B&W

6S60MC type main engine with an alpha lubricating system for saving lubricating oil. The central fresh water cooling system is applied for main engine and auxiliary machinery.

**Principal Particulars** 

L (o.a.) x L (b.p.) x B x D x d: 224.99m x 217.00m x 32.26m x 19.50m x 14.04m

DWT/GT: 77,008t/40,690

Main Engine: MAN B&W 6S60MC

(Mark 6) x 1 unit M.C.R.: 9,930kW x 105rpm Speed, service: 14.1kt Complement: 25

The vessel is Classification: NK



# MARE ORIENS, 110,000DWT D/H tanker completed by MES

# —Largest DWT/cargo tank capacity with 42m beam—Shipbuilding rangement, which leads to the high-System (DGI

Mitsui Engineering & Shipbuilding Co., Ltd. completed and delivered an 110,000DWT type double hull crude oil tanker MARE ORIENS (HN: 1677) at its Chiba Works to Fratelli d'Amico Armatori S.p.A., Italy, in September 2008. This is the 9th Aframax Tanker of 42m beam with the largest deadweight and the largest cargo tank capacity.

The vessel has the newest hull form including bulbous bow and stern ar-

est propulsion performance for Aframax tankers. The cargo tank capacity of 127,000m³ and deadweight of 110,000 tons are the largest class for Aframax tankers with 42m beam.

Three kinds of oil can be loaded/un-

Three kinds of oil can be loaded/unloaded into/from cargo tanks simultaneously by three cargo pumps with self-stripping systems. The vessel has two ballast pumps, which enable easy ballasting and deballasting opera-

tions. The vessel has the RINA N o t a t i o n COVENT which enables sufficient ventilation in case of oil leakage in the ballast tank.

Two units of Differential Global Positioning System (DGPS) are installed for complete 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 safe navigation.

 Length, o.a.:
 245.50m

 Length, b.p.:
 34.00m

 Breadth, mld.:
 42.00m

 Depth, mld.:
 21.50m

 Draught, mld.:
 14.95m at full load

 DWT:
 110,295t

Cargo tank capacity (100%):

GT:

127,760m<sup>3</sup>

59,611

Main engine: Mitsui-MAN B&W

7S60MC diesel x 1 unit

MCR: 14,280kW x 105rpm Speed, service: 14.9kt Complement: 29 Classification: RINA/LR



## Shin Kurushima completes product tanker, ARIAKE MARU

Shin Kurushima Dockyard Co., Ltd. has completed ARIAKE MARU (HN: 5456), a 45,920DWT product tanker, for co-ship owners of Solar Shipping and Trading S.A. and Asahi Tanker Co., Ltd. The vessel is designed to carry mainly fuel oil, gasoline, jet fuel, and naphtha as well as crude oil.

The ship hull form is based on the performance verified with scale model tests, and alleviation of noise and vibration and increase in propulsion performance are achieved. The A.S. Fin and Turbo Ring are attached to the stern to improve fuel consumption.

The tanker has 14 cargo tanks and two slop tanks. This arrangement allows efficient cargo loading. A residue tank is separately from these tanks to prevent the marine pollution. The cargo tanks are constructed with corrugated bulkheads and bulkhead stools for the lower sections, and the shell side is double hull construction. The deck longitudinals and trans-

verses are installed on the upper deck side, thus eliminating any projections such as members inside the cargo tanks. This facilitate tank cleaning and maintenance.

The tanker has four electric-drive cargo pumps, the revolving speed of which is controlled by inverter to increase cargo handling efficiency.

The Man Zero notification is applied to the engine room. The main engine and related machinery can re-

motely be operated from the bridge, or the engine control room. Thus centralized control can be achieved easily. The navigation and radio systems are the latest models complying with the international rules.

#### Principal particulars

Length, o.a.: 179.88m
Length, b.p.: 172.00m
Breadth, mld.: 32.20m
Depth, mld.: 18.70m
Draught, mld.: 12.05m
DWT/GT: 45,920t/28,097
Main engine: B&W 6S50MC-C Mk 7
diesel x 1 unit

Speed, service: abt. 15.2kt Classification: NK Completion: August 2008



# Tsuneishi completes Aframax tanker, TH SONATA



Tsuneishi Holdings Corporation completed the 107,500DWT type Aframax size crude oil tanker, TH SONATA on Oct. 2, 2008. The vessel complies with the new regulation of IACS Joint Tanker Project Common Structural Rules for Double Hull Oil Tankers (except performance standard for protective coatings for ballast tanks).

The cargo handling system has three segregation groups with double valves. Cargo oil is handled by three steam turbine-drive cargo oil pumps having

a capacity of 3,000m<sup>3</sup>/h with a self-stripping device. The vessel is equipped with a newly developed energy saving device, MT-FAST.

Principal particulars: Ship type: Crude oil tanker  $L(o.a.) \times L(b.p.) \times B \times D \times d$ : 243.80 m  $\times$  237.00 m  $\times$  42.00 m  $\times$  21.30 m  $\times$  14.55 m

stem DWT/GT: 107,510t/60,195
stem Main engine: MAN B&W 6S60MC-C
egre(Mk 7) diesel x 1 unit
MCR: 13,560kW x 105rpm
ble NOR: 11,530kW x 99.5rpm
go oil Speed (max. trial): 16.03kt

(service): abt. 15.4kt (at d = 12.19m)

Complement: 30 Classification: ABS

Handling gear: Hose handling crane x 1 unit (Electric hydraulic driven type) 15mt x 10m/min. (at 15mt) Cargo pump: 3,000m³/h x 130mTH

(Based on sea water) x 3 units

Loading capacity(tank): Cargo oi

Loading capacity(tank): Cargo oil (100% incl. slop tank): 127,517.3m<sup>3</sup>

# Koyo completes 8,102TEU container carrier, MOL COSMOS

Koyo Dockyard Co., Ltd. of Imabari Group delivered the MOL COSMOS, an 8,102TEU type container carrier, on July 20, 2008 to Luster Maritime S.A./Higaki Sangyo Kaisha Ltd. The MOL COSMOS is the first 8,102TEU type container carrier built by Koyo dockyard. The vessel can carry 3,498TEU in container holds and 4,604TEU on the upper deck. The holds can stow nine tiers (including two tiers of high cube containers) in 16 rows, and the upper deck can stack seven tiers and 18 rows of containers.

Each hatch coaming has four hatch cover panels. 18 lashing bridges are installed for containers on the deck. The vessel can load 1,558 units of 45ft containers on the upper deck. A total of 630 plugs for air cooling type reefer containers are arranged on the upper deck. Moreover, container holds can carry dangerous goods including class 1 (explosives).

Fuel oil tanks are protected in accordance with MARPOL Annex I Reg. 12A "Fuel Oil Tank Protection." The fuel oil overflow piping is arranged in the 2nd deck passage space to avoid oil flow on the upper deck.

The crew can access the bosun

store, steering gear room, and container holds through the second deck passage. For economical operation, a turbo generator is equipped, and the propeller boss cap fin is equipped to improve propulsion efficiency. The stern tube air sealing device is installed to prevent marine oil pollution.

Principal particulars

L(o.a.) x B x D x d: 320.37m x 46.00m x 24.90m x 14.50m

DWT/GT: 90,466t/88,089

Main engine: Mitsui MAN B&W 11K98MC (MK VII) diesel x 1 unit

MCR: 66,100kw x 97.0rpm Speed, service: 25.5kt Complement: 30 Classification: LR Flag: Panama

Completion: Jul. 20 2008

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### SANKO KING

Owner: King Bulkship Limited Builder: IHI Marine United Inc.

Hull No.: 3235

Ship Type: Bulk carrier

L (o.a.) x B x D x d: 190.00m x 32.26m

x 18.1m x 12.7m DWT/GT: 56,678t/31,532

Main engine: DU-WARTSILA 6RT-

flex50 diesel x 1 unit Output: 8,890kW at 116.0 rpm Speed, service: 14.5kt

Classification: NK Completion: Jan. 23, 2008



#### OCEAN COBALT

Owner: Panamanian owner

Builder: Imabari Shipbuilding Co.,

Ltd. (Saijo Shipyard)

Hull No.: 8069

Ship type: Bulk carrier

 $L(o.a.) \times L(b.p.) \times B \times D \times d: 288.93m$ x 280.80m x 45.00m x 24.70m x

18.151m

DWT/GT: 180,200t/90,092

Main engine: MAN B&W 6S70MC-C

diesel x 1 unit

MCR: 18,630kW x 91.0rpm Speed, service: 15.35kt Classification: NK

Completion: July 11, 2008



# TOYOFUJI MARU NO. 2

Owner: Toyofuji Shipping Co., Ltd. Builder: Mitsubishi Heavy Industries,

Ltd.

Hull No.: 1128

Ship type: Car and general cargo car-

 $L(o.a.) \times B \times D \times d: 165.00 \text{m} \times 27.60 \text{m}$ 

x 24.15 m x 6.2 0 mDWT/GT: 6,090t/12,801

Car carrying capacity: 2,000 cars Main engine: Mitsubishi 7UEC52

LSE diesel x 1 unit Speed, service: 21.0kt Classification: NK

Completion: Aug. 26, 2008



### LR2 PIONEER

Owner: Heroic Aries Inc.

Builder: Sasebo Heavy Industries Co.,

Ltd.

Hull No.: 751

Ship type: Crude and petroleum prod-

uct carrier

L (o.a.)  $\times L$  (b.p.)  $\times B \times D \times d$ : 243.8m  $\times$ 234m x 42m x 21.5m x 15.62m

(summer draft mold)

DWT/GT: 115,273t (summer draft)/

59.172

Main engine: MAN B&W 6S60MC-C

diesel x 1 unit

MCR: 13,560kW x 105.0min<sup>-1</sup>

Speed, service: 15.1kt Complement: 25 Classification: ABS Completion: Aug. 20, 2008



### SAGA PIONEER

Owner: Saga Shipholding (Norway)

Builder: Oshima Shipbuilding Co.,

Ltd.

Hull No.: 10486

Ship Type: General Cargo Carrier L(o.a) x L(b.p.) x B x D x d: 199.20m x 194.70m x 30.50m x 16.40m x

11.80m

DWT/GT: 46,559t/29,758

Main engine: DU SULZER 7RTA52

diesel x 1 unit

Output: 12,930ps x 129.0rpm

Speed, service: 14.9kt Classification: DNV Completion: Aug. 4, 2008



### Sea trial in the dawn



The rising sun silhouettes the coastline. A 83,000DWT Panamax bulk carrier built by Sanoyas leaves for sea trials, with the sun glowing.