



Annual award given to RO-RO ship, WAKANATSU *Special Prize to LNG DREAM*



The Japan Society of Naval Architects and Ocean Engineers has awarded its 17th Ship of The Year 2006 Award to the WAKANATSU, a coasting Roll-on/Roll-off ship that can carry 170 vehicles, and the special prize was given to the LNG DREAM on June 14, 2007.

The WAKANATSU was highly evaluated with superior engineering technique that achieved effective use of the space below rampways bridging the upper and lower car decks, and a tall and low-speed diesel engine was also applied to reduce fuel consumption and increase ship stability. The ship was built by the collaboration of Onomichi Dockyard Co., Ltd. and Saiki Heavy Industries Co., Ltd. for the delivery to the local operator, Ryukyu Kaiun Kabushiki Kaisha.

The LNG DREAM drew the attention of the screening committee to the painting by Jimmy Onishi, an artist, and others, which illustrates the ship's important role in marine transport. The ship was constructed by Kawasaki Shipbuilding Corporation, and is now operated by Osaka

Gas Co., Ltd. Onishi's creative work was painted on the LNG tank outer shell as seen in the photo. The concept of the painting accorded with the policy of the committee "that makes maritime affairs more familiar to the public."

The WAKANATSU, designed by Onomichi and built by Saiki, is an energy- and labor-saving RO-RO cargo ship developed under the idea of "loading and unloading time reduction," and is the first ship employing the auto-lashing device in the world. The device reduces drastically the manual labor for lashing vehicles, development of which consumed eight years.

Onomichi improved the appearance of the ship besides the function and performance. 3-D computer graphic engineering was used to provide the ship with good outward stream lines that show the elegant and fast running of the ship. As a result, the ship features an elegant outward appearance and smoother running.

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MHI completes 8,100TEU container carrier, MOL CREATION



Mitsubishi Heavy Industries, Ltd. (MHI) has completed construction of the MOL CREATION (HN: 2225), a large container carrier capable of carrying 8,110TEUs, for delivery to Mitsui O.S.K. Lines, Ltd. (MOL) at its Nagasaki Shipyard & Machinery Works.

The MOL CREATION is the first of six vessels ordered by MOL. The vessel can load 3,494 TEUs in container holds and 4,616 TEUs (in maximum seven tiers) on the upper deck, and can cruise at a high speed of 25.25 knots with the most advanced fuel-

efficient 11 cylinder main engine in its class.

For improvements in ship's safety and reliability, this is the world's first ship adopting YP460MPa (47kgf/min²) higher tensile strength steel of E Grade, jointly developed by Nippon Steel Corporation and MHI. The use of the new steel improves reliability against brittle fracture while reducing thickness.

In addition, the Mitsubishi-Sulzer RT-Flex96C, electronically controlled engine, is adopted and capable of electronically maintaining optimal fuel

injection at any engine speed. This reduces fuel consumption during low-speed maneuvers and controls the emission of NO_x and soot (PM) with extremely high effectiveness to meet with strict environmental requirements effective in Europe and North America.

All fuel oil tanks are protected by double hull structures to reduce the risk of oil spills against damages to the outer shell.

Principal particulars

L (o.a.):	316.0m
L (b.p.):	302.0m
Breath:	45.6m
Depth:	25.0m
Draught, mld.:	14.5m
Deadweight tonnage:	90,678t
Gross tonnage:	86,692t
Main engine:	Mitsubishi Sulzer 11RT-Flex 96C diesel x 1 unit
MCR:	62,920kW x 102rpm
Speed, service:	25.25kt
Complement:	30
Classification:	NK
Completion:	June 29, 2007

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Principal particulars of WAKANATSU

Owner: Ryukyu Kaiun Kabushiki Kaisha

Designer/Builder: Onomichi Dockyard Co., Ltd. and Saiki Heavy Industries Co., Ltd.

Hull No.: 618 (SH-1156)

Ship type: Coasting RO-RO cargo ship
L (o.a.) x L (b.p.) x B x D x d: 168.71 x 155.00 x 26.00 x 6.00

GT: 6,890t

Main engine: MAN-B&W 8S50MC-C (Mk-8) diesel x 1 unit

MCR: 13,280 KW x 127 min⁻¹

Speed, service: 21.5kt

Classification: NK

Completion: Sept. 12, 2006

Principal particulars of LNG DREAM

Owner: Lloyds TSB Equipment Leas-

ing Limited

Builder: Kawasaki Shipbuilding Corporation

Hull No.: 1545

Ship type: LNG carrier

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 11.404m

DWT/GT: 71,845t/118,876t

Tank capacity: 145,254m³ (at -163°C, 98.5%)

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

MCR: 26,900kW

Speed, service: 19.5kt

Classification: NK

Completion: Sept. 13, 2006



Imabari completes combination ferry, ORANGE KYUSHU

Imabari Shipbuilding Co., Ltd. has completed ORANGE KYUSHU (HN: 448), a 2,950GT combination ferry for passengers and vehicles, at its group company, Nishi Shipbuilding Co., Ltd., for a Japanese domestic owner.

The ORANGE KYUSHU is the first of two sister ships, which are replacement for predecessors due to increasing service and transportation requirements as a combination ship that can carry passengers, passenger cars, heavy trucks, and trailers. The ship is now plying between Yahatahama in Ehime Pref., Shikoku Island and Usuki in Oita Pref., Kyushu Island.

The ship employs a new design to satisfy both performance requirements as a passenger ship and Ro/Ro cargo ferry including safety and environmentally-friendly concepts developed by Imabari.

The two main engine propulsion system with two propellers and two rudders design concept was applied to the ship after closed investigation by the tank tests, etc. to cope with the severe requirements of the specifications such as shallow draft issues including ship maneuverability and safe operation.

The ship has two car-loading decks, the lower is the No. 1 Deck for heavy vehicles, and the upper is the No. 2 Deck for passenger cars. The No.1 Deck has three loading facilities, a bow ramp door (SWL 40t) with bow visor, the rule-required bow door, and stern ramp doors (SWL 40t), drive-through access, and one side-port door on the No.2 Deck located in semi-aft starboard, which are suitably installed for car loading/unloading at the port. Passenger cars can drive from No.1 Deck to No.2 Deck through a hinge-up type internal rampway fixed at No.2 Deck located amidships the port side.

Loading capability:

No.1 Deck for trucks**:
37 trucks
(8.50m L x 2.50m W x 20 T)

No.2 Deck for passenger cars:
37 cars
(4.70m L x 1.70m W x 2.0 T)

** Design base for deck strength is ap-



plied to trailer truck (15.00m L x 2.50m W x 40.0 T)

The car decks are designed as completely non-pillar construction for efficient loading and unloading of the cars except areas around the internal rampway. The non-pillar concept facilitates not only trailer roll-on/roll-off work but also general passenger car handling in the car decks.

Ship's maneuverability at both ports has become easier with one bow thruster, two controllable pitch propellers, and two stern rudders. The bow thruster blades can be controlled by the fixed controller in the wheel house or the fixed type joystick panels at both wings.

The ship has one pair of retractable fin stabilizers installed amidship, which ensures stable and safe navigation.

The accommodation space for passengers are suitably arranged on the second and third decks for 485 passengers and the fourth deck for 15 crew members, and the maximum accommodation capacity is 500 people.

The accommodations are arranged for all passengers shown in the Table below.

The No.4 Deck provides accommodation for all crew who have private cabins with a common lavatory except one woman's cabin with private lavatory.

The ship provides cozy accommodation despite only two hours cruising, and passengers will be freed from the stress of driving and can relax in comfort, viewing the ocean panorama from the aft view lounge on the third deck.

Principal particulars

L (o.a.) x L (b.p.) x B x D (No.2) x D (No.1) x d (ext): 119.91m x 110.00m x 16.40m x 11.00m x 6.00m x 4.731m GT: 2,924t (JG)

DWT: 957mt

Main engine: (P) DAIHATSU DIESEL 6DKM-360 x 1 unit (S) DAIHATSU DIESEL 6DKM-360L x 1 unit

MCR: 3,309 kW x 600/210rpm

NCR: 2,815 kW x 567/199rpm

Speed, service: 19.85 knots (without fin stabilizer)

Classification: JG (Restricted Greater Coasting Service, Non-International, Category II)

Special class	2 people	Western type suite	1 cabin
First class	42 people	Japanese type dormitory	2 cabins
		Western type dormitory	2 cabins
Second class	441 people	Japanese type dormitory	13 cabins
		Western type dormitory	3 cabins
		Driver's dormitory	2 cabins

OS-MAX 120 for coal and iron ore**Oshima Shipbuilding develops new 120,000DWT class bulk carrier**

Oshima Shipbuilding Co., Ltd. recently developed OS-MAX 120, a newly designed post-Panamax bulk carrier with a capacity of 120,000DWT. In considering the expansion of the Panama Canal, OS-MAX 120 have a maximized deadweight tonnage with a shallow draft feature and target significant fuel efficiency.

OS-MAX 120 is designed with the maximum overall length of 250m and the navigable draft of 15.25m (50ft), which allow passing through the expanded Panama Canal providing the carrier with the maximum loading capacity of 120,000mt. The new bulk carrier has seven cargo holds, and the

hull structure is strengthened to allow jumping load of iron ore, besides coal.

Development of OS-MAX 120 was carried out by emphasizing the safety to be compatible with updated regulations including the Bulk Carrier Safety Rules, fuel oil tank protection, CSR and PSPC.

Thus the new bulk carrier was designed by aiming at the maximization of deadweight, shallow draft, decreased fuel oil consumption, and improvement of the ship safety. With these features, the carrier has good adaptability to cargoes of various types and can visit various local ports worldwide via the Panama Canal.

Other features include employment of the Oshima Flipper Fin as appendage for greatly improved fuel efficiency in addition to the newly designed hull form, increased safety by compliance with new bulk carrier safety regulations, and adoption of the Seaworthy Bow for improved navigation performance in rough sea conditions.

Summary of OS-MAX 120

Ship type: 120,000DWT class bulk carrier

L (o.a.) x B x D x dd/ds = abt. 249.94m x 43.0m x 21.72m x 13.22m/15.25m

Deadweight (at dd/ds): 100,000t/120,000t

Cargo hold capacity: approx. 145,000m³

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

Ship speed: 14.5kt

Fuel oil consumption: 44.0t/day

7S60MC-C diesel x 1 unit

MCR: 14,000kW x 94rpm

Speed, service: 17kt

Classification: NK

Kawasaki completes LPG carrier, BW BROKER

Kawasaki Shipbuilding Corporation has delivered BW BROKER (HN: 1583), a 80,126m³ LPG carrier, to Fair Wind Navigation S.A. at the Sakaide Shipyard. The carrier is the 41st of the Kawasaki LPG carriers, or the second ship of the same series.

The carrier was built with a new bow design called the Kawasaki SEARROW (Sharp Entrance Angle bow as an Arrow). This minimizes wave-making resistance during navigation to drastically increase propulsive performance, reducing fuel consumption.

Four independent cargo tanks are provided, which can contract freely

the heat insulator made of urethane foam is applied to the surrounding barriers.

The main engine is an energy-saving type, super long, and 2-cycle low speed diesel engine, and Kawasaki RBS-F (Rudder Bulb System with Fins) is installed to improve propulsion.

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

DWT/GT: 53,293/45,805

Cargo tank capacity: 80,126m³

Main engine: Kawasaki-MAN B&W

from the hull construction when exposed to very low-temperature cargo. The LPG cargo tanks uses a special steel durable to very low temperature of minus 46°C, and

JSEA moves to new office

The Japan Ship Exporters' Association (JSEA) moved to a new office building on Oct. 8, 2007.

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Universal completes Mediterranean Max type LNG carrier, CHEIKH EL MOKRANI

Universal Shipbuilding Corporation has completed the 75,500m³ Mediterranean Max LNG carrier, CHEIKH EL MOKRANI (HN: 055), for Mediterranean LNG Transport Corporation (MLTC) at the Tsu Shipyard. The carrier is the first of two Mediterranean Max types, the order of which was placed by MLTC, a joint venture company formed by SONATRACH, HYPROC (a SONATRACH's subsidiary), Mitsui OSK Lines, and ITOCHU Corp. in 2004. After the naming ceremony at the Tsu Shipyard, successful gas trial was 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 carriers are designed to have the optimal

size (75,000m³) for the Mediterranean Sea area, and are called Mediterranean Max. This ship type will contribute to reduction of LNG transport costs and the increase in efficiency.

Other features include: Every main Mediterranean LNG receiving terminal ports can accept the Mediterranean Max. Energy-saving type design with the use of SURF BULB/SSD. 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.

Principal particulars
 L (o.a.) x L (b.p.) x B x D x d: 219.95m
 x 35.00m x 22.55m x 9.75m
 DWT: 38,164t
 GT: 52,855t
 Cargo tank capacity: 75,759m³
 Main engine: Steam turbine x 1 unit
 Speed, service: 17.5kt
 Classification: BV

NAMURA completes Bulk Carrier, RTM WAKMATHA, for Rio Tinto Shipping Limited

Namura Shipbuilding Co., Ltd. delivered RTM WAKMATHA, a 90,338 DWT bulk carrier, to Rio Tinto Shipping Limited at its Imari Shipyard & Works on Aug. 10, 2007. The RTM WAKMATHA has suitable principal dimensions for navigation of the inner route of the Great Barrier Reef, which is particularly known as an area of sensitive shallow sea. Therefore, to improve maneuvering performance, a high lift rudder is fitted and echo sounders are located at both fore

and aft parts of the vessel so that the sea depth can be checked simultaneously. The Namura flow Control Fin (NCF) and N-PAI propeller are also equipped for improving propulsion performance and fuel oil saving. The vessel has a forecastle, five cargo holds, five hatches and five pairs of water ballast tanks. The midship section has double sided skin construction with large bilge hopper and topside, suitable for loading/unloading bauxite at Australian ports. The vessel is equipped with a B&W 6S60MC-C (Mark 7) type main engine with an alpha lubricating system, and an air seal type stern tube aft oil sealing device is adopted to prevent oil leak-

age. A permanent means of access for inspection is arranged in the bilge hopper and below cross decks, and free-fall lifeboat is also fitted, all of which comply with new SOLAS regulations. The regulations of the UK registry are applied under the Alternative Compliance Scheme (ACS) that simplified the approval procedure by collaboration of the Maritime and Coast Guard Agency (MCA) and LRS.

Principal particulars
 L (o.a.) x L (b.p.) x B (mld) x D (mld) x d (mld): 235.67m x 226.00m x 43.00m x 19.50m x 12.80m
 DWT/GT: 90,338t/53,988T
 Main engine: HITACHI-MAN B&W 6S60MC-C (Mark7) diesel x 1 unit
 MCR: 13,500 kW x 105rpm
 Speed, service: 15.0kt
 Complement: 25
 Classification: LRS
 Flag: United Kingdom
 Completion: Aug. 10, 2007



ALCANTARA SANTOS

Owner: Emodraga E.P.
Builder: Mitsubishi Heavy Industries, Ltd. (Kobe Shipyard)
Hull No.: 1259
Ship Type: Trailing Hopper Dredger
L (o.a.) x L (b.p.) x B x D x d: 68.68m x 65.00m x 14.00m x 4.70m x 4.0m
GT: 1,705t
Hopper Capacity: 1,000m³
Main Engine: Yanmar 6N21A-SV diesel x 2 units
Navigation Speed: 10.9kt
Classification: BV
Completion: June 27, 2007



MG COURAGE

Owner: Venus Sea Marine S.A.
Builder: Imabari Shipbuilding Co., Ltd.
Hull No.: 8036
Ship type: Bulk carrier
L (o.a.) x L (b.p.) x B x D x d: 299.94m x 291.40m x 50.00m x 24.50m x 18.105m
DWT/GT: 206,254t/104,721t
Main engine: Mitsui-MAN B&W 6S70MC-C diesel x 1 unit
MCR: 18,630 kW x 91rpm
Speed, service: about 15.1kt
Classification: NK
Completion: June 5, 2007



HANJIN QINGDAO

Owner: Mitsubishi Corporation
Builder: Naikai Zosen Corporation
Hull No.: 704
Ship type: Container carrier
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: 33,648t/27,104t
Cargo carrying capacity: 2,553TEUs
Main engine: Hitachi MAN B&W 7S70MC-C diesel x 1 unit
MCR: 21,735kW x 91min⁻¹ (91rpm)
Speed, service: about 22.2kt
Classification: NK
Completion: July 30, 2007



PRO GRACE

Owner: Forester Shipping S.A.
Builder: Sanoyas Hishino Meisho Corp.
Hull No.: 1255
Ship type: Wood chip carrier
L (o.a.) x L (b.p.) x B x D x d: 203.50m x 196.00m x 37.20m x 22.30m x 10.818m
DWT/GT: 53,896t/46,543t
Cargo capacity: 115,686m³
Main engine: MAN B&W 6S50MC-C diesel x 1 unit
MCR: 12,400ps
Classification: NK
Completion: July 19, 2007



BM MIMOSA

Owner: Asian Cruiser S.A.
Builder: Sumitomo Heavy Industries Marine & Engineering Co., Ltd.
Hull No.: 1331
Ship type: Tanker
L (o.a.) x L (b.p.) x B x D x d: 237.71m x 229.00m x 42.00m x 21.30m x 12.19m
DWT/GT: 105,576t/56,172t
Main Engine: DU Sulzer 6RTA58T diesel x 1 unit
MCR: 12,000kW x 103rpm
Speed, service: about 14.8kt
Classification: LRS
Completion: Sept. 10, 2007



TORENIA

Owner: Lepta Shipping Co., Ltd.
Builder: Mitsui Engineering & Shipbuilding Co., Ltd.
Hull No.: 1648
Ship type: Bulk carrier
L (o.a.) x L (b.p.) x B x D x d: 189.99m x 182.00m x 32.26m x 17.90m x 12.55m
DWT/GT: 56,049t/31,236t
Main Engine: Mitsui-MAN B&W 6S50MCC diesel x 1 unit
MCO: 9,480kW x 127.0rpm
Speed, service: 14.5kt
Complement: 24
Classification: NK
Completion: July 12, 2007

