



Kawasaki delivers newly developed LNG transport vessel, LNG SAKURA

Kawasaki Heavy Industries, Ltd. delivered the LNG SAKURA (HN: 1731), a 177,000m³ capacity LNG transport vessel for use by The Kansai Electric Power Company, Inc. (KEPCO) and Nippon Yusen Kabushiki Kaisha (NYK Line).

The first of Kawasaki's line of 177,000m³ capacity LNG carriers to be commissioned, this ship is designed to enable passage through the newly expanded Panama Canal, which opened for full operations in 2016. The LNG SAKURA will be used by KEPCO to transport LNG procured via the Cove Point LNG Project in the U.S. The vessel features standard LNG carrier hull dimensions in order to enable docking at major LNG terminals around the world while offering larger cargo tanks for increased transport capacity, thus cutting LNG transport costs and facilitating more flexible LNG trade operations by ship-owners.

Kawasaki has optimized the hull structure to decrease overall ship weight, enhanced the hull-shape design, and adopted a two-engine, twin-screw propulsion system (the first of its type in a large-size Kawasaki vessel), all of which help achieve the best propulsive performance possible. In addition, the company integrated a DFD electric propulsion system* for the first time in any Moss type LNG carrier worldwide, which increases fuel efficiency at all speeds.

Features

This large-scale LNG carrier is equipped with four independent Moss LNG tanks for a total cargo capacity of 177,377m³. By increasing the LNG tank diameter of existing 164,700 m³ LNG carriers to the maximum installable limit and utilizing stretched tanks, Kawasaki has successfully expanded the maximum LNG carrying capacities of carriers designed to pass through the newly expanded Panama Canal.

The LNG SAKURA is the first completed and delivered LNG carrier that uses a DFD* electric propulsion system, which enables greater fuel efficiency than the existing steam turbine plant design. Moreover, the inclusion of a two-engine, twin-screw propulsion system enables high propulsive performance at a wide range of speeds.



The thermal insulation system of the LNG tanks adopts the proprietary Kawasaki Panel System developed in-house, which offers outstanding heat insulation performance for an LNG boil-off rate of no more than approximately 0.08% per day.

The cargo tank section is protected by a double-hull and double-bottom design, so even if the hull were to sustain damage the LNG tanks within would remain safe and undamaged.

The bridge is designed with state-of-the-art electronic navigation equipment concentrated in one location for greater ease of operation as well as panoramic windows offering a 360-degree view to the outside.

(Note: * The dual fuel diesel (DFD) engine, operable on both oil and gas)

Principal Particulars

L (o.a.) x L (b.p.) x B x D x d:

300.00m x 286.00m x 48.90m x 27.00m x 11.80m

DWT/GT: 82,137t/135,977

Cargo tank capacity: 177,377m³ (at -163°C, 100% capacity)

Main propulsion system:

2 sets of main propulsion motor, 2 sets of one input and one output, with single stage reduction gear

Speed: Approx. 19.5kt

Complement: 38

Classification: ClassNK

Registry: Bahamas

Delivery: February 26, 2018



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Imabari completes 178,000m³ LNG carrier for Spanish owner

Imabari Shipbuilding Co., Ltd. completed construction of the 178,000m³ class LNG carrier, CASTILLO DE MERIDA, for delivery to Empresa Naviera Elcano, S.A., a Spanish shipowner, at the Saijo Shipyard on March 27, 2018. The ship is the first LNG carrier built at the Saijo Shipyard.

The CASTILLO DE MERIDA measures 296.9m in overall length and 48.7m in width which permits passing through the new Panama Canal and has sufficient capacity to meet the diversified demand of the LNG market worldwide as an advanced LNG carrier.

The cargo containment system (CCS) is the GTT Mark III Flex type, the No.1 tank of which is the world's first trapezoidal shape adapted for the ship's bow form as the Mark III Flex type. This tank arrangement has secured approximately 4,000m³ greater cargo hold capacity compared with the conventional arrangement.

The main engines of the carrier



are two units of ME-GI engines operated on natural gas fuel. Compared with electric or steam drive propulsion units, the ME-GI diesel engine can reduce fuel consumption substantially. Moreover, re-liquefaction equipment installed on the ship ensures the flexibility of ship operation along with LNG market demand.

The CASTILLO DE MERIDA is now operated by Elcano for LNG transport service under the Sabine

Pass Liquefaction Project conducted by Gas Natural SDG, S.A.

Principal particulars

Builder: Imabari Shipbuilding Co., Ltd.

Hull No.: S-8177

Ship type: LNG carrier

L (o.a.): 296.98m

Breadth: 48.70m

Depth: 27.0m

Cargo hold capacity: 178,000m³

Completion: March 27, 2018

MES delivers 16th Eco-Ship neo66BC, CHRISTINA

Mitsui Engineering & Shipbuilding Co., Ltd. (MES) completed and delivered the 66,000DWT type bulk carrier, CHRISTINA (HN: 1919), at its Tamano Works to Ostria Marine Co., Marshall Islands, on March 15, 2018. This is the 16th ship of the neo66BC series, the wide beam and shallow draft type of the MES neo series.

The vessel has four cranes and five cargo holds, and retains the superior usability of the 56BC type. The vessel is designed with deadweight of more

than 66,000 tons and capacity of more than 82,800 cubic meters for loading various cargoes such as coal, ore, grain, as well as lengthy/heavy cargoes such as steel pipes and hot coils.

Fuel oil consumption is less than that of the conventional Supramax bulk carrier despite its enlargement. Research and interviews with ship owners and operators, and investigations at ports all over the world and present trade patterns suggest that the wide beam (over-Panamax) and

shallow draft allow wide flexibility for operations and high transport efficiency.

The new hull form maintains good performance under rough sea conditions as well as calm sea condition and shows better

maneuverability. The hatch openings are the largest for this type of vessel in terms of both length and width. The main engine, a Mitsui-MAN B&W 7S50ME-B9.3 diesel, complies with the MARPOL NO_x restriction (Tier-II) for exhaust gas emissions, and has superior fuel oil consumption over a wide range of outputs. The ship has low sulfur fuel oil tanks, which are designed for operation in ECA (Emission Control Areas) considering the strengthened restrictions for SO_x emissions.

Principal particulars

L (o.a.) x B x D: 199.99m x 36.00m x 18.45m

DWT/GT: 66,653t/38,237

Main Engine: Mitsui-MAN B&W 7S50ME-B9.3 diesel x 1 unit

Speed, service: about 14.5kt

Complement: 24

Classification: ClassNK

Registry: Marshall Islands

Delivery: March 15, 2018



MHIMSB completes Ropax, FERRY TOSHIMA 2, for domestic owners

Mitsubishi Shipbuilding Co., Ltd. (MHIMSB) delivered the Ropax, FERRY TOSHIMA 2, to the co-owners, Japan Railway Construction, Transport and Technology Agency and Toshima Village on March 1, 2018.

The vessel designed and built at MHIMSB Shimonoseki Shipyard, and began its services in April 2018 between Kagoshima on the mainland, Tokara Islands and Amami-

Ohshima Island which is located about 430 kilometers south-west of Kagoshima.

The combination of state of the art hull form using vertical stem and high efficiency propellers has improved the propulsion efficiency. The vessel fitted with two bow-thrusters and two schilling rudders, which enable smooth berthing at 16 times per one round trip, and barrier-free facilities and a set of fin-stabilizer

contribute to the comfortable voyage for passengers.

Principal particulars

L (o.a.) x L (p.p.) x B x D x d (des):	93.47m x 87.00m x 15.80m x 9.80m x 4.55m
GT:	1,953 (Japanese tonnage)
Machinery:	Main diesel engine x 2 units
Propeller:	Controllable pitch propeller x 2 units
Speed, service:	19.0kt
Complement	
Passenger:	297persons
Crew members & others:	30persons
Cargo Loading Capacity	
Container:	26 units
12m Truck:	3 units
Car:	15 units
Cargo Loading Equipment	
Thomson derrick crane	x 1 unit
Stern rampway	x 1 unit
Flag:	Japan
Registry:	Kagoshima



JMU completes mega container ship, NYK WREN

Japan Marine United Corporation (JMU) delivered the NYK WREN, a mega container ship, to Vanilla Shipholding LLC at its Kure Shipyard on March 28, 2018. This is the ninth vessel of 15 vessels in a series newly constructed by JMU, based on its expertise and experience and data on the actual operation of the Far East - Europe route.

The vessel can load a total of 14,000TEUs (including 1,120 reefer containers), 18 rows across and 11 tiers high in the cargo hold, and 20 rows across and 9 tiers high on deck.

High propulsion efficiency is achieved through its sophisticated lower resistance hull form and JMU's original energy saving devices such as the Surf-Bulb (Rudder Fin with Bulb) and L.V. fin (Low Viscous resistance Fin). The vessel is designed to operate with minimum ballast water under loading conditions, due to the superior stability and hull strength.

The hull construction adopts a

structural brittle crack arrest design for ultra large container ships developed by JMU and JFE Steel Corporation. The Diesel United Wartsila W9X82 engine, which is electronically controlled with common rail system and environmentally friendly, helps to reduce the fuel oil consumption in various speed ranges.

Principal particulars

L (o.a.) x B (mld) x D (mld) x d (mld):	364.15m x 50.6m x 29.5m x 15.75m
DWT/GT:	139,335t/144,285
Main engine:	WARTSILA W9X82 x 1 unit
Speed:	22.5kt
Complement:	30
Classification:	NK



Namura completes 115,000DWT-type Aframax tanker, SPERCHIOS

Namura Shipbuilding Co., Ltd. delivered the 114,516DWT crude oil carrier, SPERCHIOS, built at its Imari Shipyard & Works to Jasmine Shipholdings Inc. on February 9, 2018. The vessel is the tenth Aframax tanker complied with Common Structural Rule for Namura.

The vessel also complies with the latest requirements of the international regulations, such as IMO PSPC-COT and PSPC-WBT for corrosion protection of cargo oil tanks and water ballast tanks to increase safety of the vessel.

The propulsion performance has greatly been improved by adoption of energy saving devices independently developed by Namura, which include the Namura flow Control Fin (NCF) and Rudder Fin attached to the stern,

together with low-friction type anti-fouling paint applied to the outside shell, and an electronically controlled main engine reducing fuel oil consumption.

For environmental safety, the vessel is equipped with main engine and generator engine compliant with the Annex VI of MARPOL 73/78 regulations (Tier II) to reduce NO_x emission.

The vessel has three large capacity cargo oil pumps that enable loading and unloading three grades of cargo oils and automatic unloading system for unloading cargo oils more efficiently.



The ballast water treatment system to control the quality of ballast water is equipped for protection of marine environment to comply with the International Convention for the Control and Management of Ships' Ballast Water and Sediments.

Principal particulars

L (o.a.) x B (mld.) x D (mld.) x d (mld.):
249.97m x 44.00m x 21.20m x 14.80m
DWT/GT: 114,516t/63,487
Main engine: MAN B&W 6G60ME-C9.5 diesel x 1 unit
Speed, service: about 14.4kt
Complement: 30 + 6 (workers)
Registry: Republic of Liberia
Classification: ABS

Naikai completes 775GT passenger/car ferry for domestic owner

Naikai Zeosen Corporation completed the short-haul passenger/car ferry of 775GT, NANASHIMA, at the Setoda Shipyard for Nakajima-Kisen Co., Ltd. of Japan on February 28, 2018. The ferry is now serving on the route between the Nakajima Shoto Islands and Matsuyama (Mitsuhaman Port) in Seto Inland Sea.

The ferry is the twin-engine and twin-screw type and the stern hull form is the ordinary type with improved propulsion and sea-keeping performance. The ferry is equipped with a bow thruster so can easily achieve berthing and unberthing even in a small port. The propellers use the eco-cap as an energy-saving fitting.

Particularly for the aged and the disabled, an elevator is installed as a barrier-free facility at the portside, which directly leads passengers from the car decks to the promenade deck. Cargo vehicles can embark and disembark

through the ramp doors at the bow and stern.

Principal particulars

L (o.a.) x B x D x d: 55.13m x 13.00m x 9.10m x 2.90m (scantling)
DWT/GT: 346t (at scantling)/765
Vehicle carrying capacity:
Seven 12m-long trucks
One 8m-long truck
31 passenger cars (No trucks loaded)
Passengers: 494 (Within 6-hour navigation)
Crew members: 6
Main engine: Daihatsu 6DEM-23 diesel x 2 units (twin propellers)
MCO: 1,235kW x 750/235min-1 x 2 units
Speed, service: about 13.5kt
Classification: JG (Limited to still water area)



Japan Marine United moves to new office



Japan Marine United Corporation moved the principal office to the following address on May 2018.

New address:

Yokohama Blue Avenue Building,
4-2, Minatomirai 4-Chome, Nishi-ku, Yokohama-City, Kanagawa,
220-0012, Japan
Phone No.: +81-45-264-7200

Posidonia 2018 held successfully

The Japan Ship Exporters' Association (JSEA) took part in the 26th International Shipping Exhibition Posidonia 2018 with support from The Nippon Foundation. The exhibition was held from Monday June 4 through Friday June 8 at the Metropolitan Expo Centre in Greece. According to its organizer, 2,011 exhibitors from 92 countries participated in Posidonia 2018, which attracted 23,527 visitors, breaking the past high attendance registered in 2016. The JSEA set up a national stand in cooperation with the Japan Ship Machinery and Equipment Association (JSMEA) as in previous years, and individual Japanese exhibitors could engage in active public relations activities in their own booths.

Opening Ceremony

The opening ceremony (top photo) of the Japanese stand was held on June 4 with the participation of senior executives of the JSEA and JSMEA member companies, presided over by Yasuhiro Shimizu, Japanese Ambassador to Greece (center), JSEA president Shigeru Murayama (2nd from left), JSMEA chairman Shinzo Yamada (2nd from right), SAJ chairman Yasuhiko Katoh (extreme left), and ClassNK chairman Koichi Fujiwara (extreme right). Mr. Alexis Tsip

ras, the Greek Prime Minister, together with honorable guests from related circles visited the Japanese stand.

Seminar

On Tuesday June 5, from 13:00, the hosting organizations held a seminar entitled the JAPAN Seminar at Posidonia 2018 - Maritime Innovations for Greek shipowners and other interested parties in collaboration with the Shipbuilding and Ship Machinery Division of the Ministry of Land, Infrastructure and Transport (MLIT), other interested bodies and the Union of Greek Shipowners (UGS) and other organizations. More than 170 people mainly consisting of Greek shipowners participated. At the seminar, three shipbuilding companies and seven marine equipment manufacturers introduced environmentally friendly ships and gave presentations on SOx scrubbers, energy-efficiency technology and related products. In the second part of the seminar, Mr. Stephen Gordon of Clarkson Research Services gave a keynote lecture on the shipbuilding market, and Mr. Tomohito Takeuchi, director of the International Affairs Division, Maritime Bureau of MLIT, Mr. Seiichi Gyobu, Corporate Officer of ClassNK and Mr. Panos Zachariadis representing UGS gave presentations on environmental topics and environmental friendliness approaches at IMO, and the current and future concerns of shipowners, respectively.

These presentations were followed by a panel discussion by six participants including Mr. Gordon, Mr. Takeuchi, Mr. Gyobu, Mr. Zachariadis, Mr. Yoshio-Otagaki, advisor to Japan Marine



Tape cut by Japanese ambassador and executives



Japanese stand

United Corp. (JMU) and Mr. Katsuhiko Fujiwara, vice chairman of JSMEA. Mr. Hiroshi Iwamoto, Counselling Staff of Corporate Planning Dept. of JMU, conducted the Panel Discussion of the Seminar as the moderator.

Party

In the evening of June 6, Japanese Ambassador and Mrs. Shimizu, and JSEA president and Mrs. Murayama jointly hosted a reception at the Athenaeum InterContinental Hotel. This event was attended by 814 people. Major ship owners and ship brokers in Greece and other Western countries, the financial community, the press, the Greek government and foreign embassies in Greece were represented. Ambassador Shimizu delivered a welcome speech.



Party at Athenaeum InterContinental Hotel



Seminar (above) and panel discussion (below)



CSK ENTERPRISE

Owner: Splendor Navigation Pte. Ltd.
 Builder: Imabari Shipbuilding Co., Ltd.
 Ship type: Bulk carrier
 L (o.a.) x B x D: 299.95m x 50.0m x 24.7m
 DWT/GT: 208,660DWT/107,449
 Main engine: MAN B&W 6G70ME-C9.5 diesel x 1 unit
 Speed, service: 14.5kt
 Classification: ABS
 Completion: April 26, 2018

**SHINRYO MARU**

Owner: Kyoei Tanker Co., Ltd.
 Builder: Oshima Shipbuilding Co., Ltd.
 Hull No.: 10870
 Ship type: Bulk carrier
 L (o.a.) x B x D x d (ext.): 234.99m x 43.00m x 18.40m x 12.882m
 DWT/GT: 92,049t/52,156
 Main engine: Kawasaki-MAN B&W 6S60ME-C8.5 diesel x 1 unit
 Speed, service: 14.10kt
 Registry: Okinawa
 Classification: ClassNK
 Completion: March 9, 2018

**SEACHARM**

Owner: Fabiazzo Navigation Ltd.
 Builder: Sumitomo Heavy Industries Marine & Engineering Co., Ltd.
 Hull No.: 1390
 Ship type: Tanker
 L (b.p.) x B x D: 228.97m x 44.00m x 21.8m
 DWT/GT: 112,000t/60,200
 Main engine: Mitsui MAN B&W 6G60ME-C9.2 diesel x 1 unit
 Speed, service: about 15.2kt
 Classification: LR
 Completion: March 7, 2018

**AFRICAN KESTREL**

Owner: African Kestrel Shipping Co., Ltd.
 Builder: Kanda Shipbuilding Co., Ltd.
 Hull No.: 562
 Ship type: Log & cargo ship
 L (o.a.) x B x D x d (ext.): 179.9m x 30.0m x 15.0m x 10.527m
 DWT/GT: 37,787t/23,224
 Main engine: 6UEC45LSE-ECO-B2 diesel x 1 unit
 Speed, service: 14.0kt
 Registry: Bahamas
 Classification: ClassNK
 Completion: January 17, 2018

**SOC GLORY**

Owner: SOC Marine International (Panama) S.A.
 Builder: Shin Kurushima Dockyard Co., Ltd./Shin Kochi Jyuko Co., Ltd.
 Hull No.: S-7320/S-5960
 Ship type: Bulk carrier
 L (o.a.) x B x D: 137.03m x 23.00m x 11.40m
 DWT/GT: 16,201t/9,995
 Main engine: MAN B&W 6S35MC7.1 diesel x 1 unit
 Speed, service: 13.4kt
 Registry: Panama
 Classification: ClassNK
 Completion: March 26, 2018

**SUNNY RAINBOW**

Owner: Solar Shipping And Trading S.A.
 Builder: Sasaki Shipbuilding Co., Ltd.
 Hull No.: 698
 Ship type: Oil/chemical tanker
 L (o.a.) x B x D x d (ext.): 125.25m x 20.00m x 11.50m x 8.25m
 DWT/GT: 12,355t/8,081
 Main engine: Hitachi MAN B&W 6L35MC6.1 diesel x 1 unit
 Output: 3,300kW x 178min⁻¹
 Speed, service: 12.5kt
 Registry: Liberia
 Classification: ABS
 Completion: January 29, 2018

