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For further information please contact:
Website: http://www.jsea.or.jp
JAPAN SHIP EXPORTERS' ASSOCIATION
15-12, Toranomon 1-chome, Minato-ku, Tokyo 105-0001 Tel: (03) 6206-1661 Fax: (03) 3597-7800 E-Mail: postmaster@jsea.or.jp

Namura completes Dunkirkmax type bulk carrier, OCEAN ASIA

Namura Shipbuilding Co., Ltd. delivered the OCEAN ASIA, a 182,090DWT bulk carrier, at its Imari Shipyard & Works on September 13, 2022. The vessel is the sixth of the newly-developed 182,000DWT type bulk carrier with the following features.

The principal dimensions have been optimized focusing on the restrictions of the Port of Dunkirk in France. Further improvement of propulsion performance and fuel saving are achieved with the adoption of two energy saving devices, the Namura flow Control Fin (NCF) and the Rudder-Fin developed by Namura, an electronically controlled main engine, the latest model of high efficiency propeller, and low friction type anti-fouling paint.

For environmental protection, the vessel is equipped with a main engine and generator engines compliant with the Annex VI of MARPOL 73/78 regulations to reduce NO_x emissions, and an air seal type stern tube sealing device is adopted to reduce the risk of oil leakage. In addition, the vessel also complies with the SOLAS Chapter II-1 Regulation 3-12, Code on noise levels on board ships to improve the environment of onboard living quarters.

The ballast water treatment system to control the quality of ballast water is equipped for protection of the marine environment to comply with the International Convention for the Control and Management of Ships' Ballast Water and Sediments. The vessel has class notation IHM (Inventory of Hazardous Materials) for compliance with the ship recycling convention according to the Guidelines for the Inventory of Hazardous Materials.

The vessel has several storage tanks for appropriate management and discharge of drainage, sewage, rain water, and water used for cleaning cargo holds and to satisfy port restrictions on such discharges.

Principal particulars

L (o.a.) x B (mld.) x d (mld.): 291.92m x 45.0m x 18.2m
DWT/GT: 182,090t/93,721
Main engine: MAN B&W 6G70ME-C9.5-EGRBP diesel x 1 unit
Complement: 25
Classification: ClassNK
Registry: Hong Kong
Completion: September 13, 2022

Naikai completes 5,200GT passenger/vehicle carrier, AOI

Naikai Zosen Corporation completed construction of the AOI, a 5,200GT passenger/vehicle carrier powered with a single-engine/shaft-propulsion unit, at the Setoda Shipyard for the co-owners, Jumbo Ferry Co., Ltd. and Kato Kisen Co., Ltd., on September 30, 2022.

The AOI has been designed with larger hull form than its predecessors to provide improved amenities for the passenger cabin as well as increased vehicle loading capacity. Annexed facilities are also provided for passengers, which include panoramic bathroom, footbath, pet room, cycle pit, etc.

Embarking and disembarking of passengers are conducted via a shore-boarding bridge connected to the starboard gangway of the C-Deck. An elevator is provided at the starboard side for aged and disabled passengers.

Vehicles roll on and off the ship through the bow and stern rampway doors for the car deck. Cargo vehicles mainly include trailer-chassis, trucks, and passenger cars. Rough-terrain crane trucks can be loaded as well.

Part of the engine casing and funnel are arranged to slightly overhang the sea at the port side. This design provides wider space for accomodation of vehicles to increase loading capacity and vehicle-handling efficiency. The funnel incorporates a SO_x scrubber to consider environmental conservation.

To improve energy saving, the reaction-type marine Schilling rudder and stern bottom wedge are employed. Two Schilling rudders with a large rudder angle allow excellent ship maneuvering in port together with the use of CPP and bow and stern thrusters.

Principal particulars

L (o.a.) x B x D x d: 131.76m x 21.00m x 13.05m x 5.50m (full load)
DWT/GT: 2,713t/5,110
Accomodation capacity
Passengers: 800 people (Within 3-hr navigation)
Complement: 20
Passenger cars: 20 units
12m-long trucks: 84 units
8m-long trucks: 3 units
Main engine: MAN B&W 8S35ME-C9.7 diesel x 1 unit
MCR: 6,610kW x 167.0min^{-1} x 1 unit
Speed, service: 18.6kt
Classification: JG (Limited to coastal service)
Registry: Kobe, Hyogo Pref.

Kawasaki delivers 84,000m³ LPG carrier, LUPINUS PLANET, to NYK

Kawasaki Heavy Industries, Ltd. has delivered the 84,000m³ capacity liquefied petroleum gas (LPG) carrier, LUPINUS PLANET (Hull No. 1753), to Nippon Yusen Kabushiki Kaisha (NYK). This vessel is a dual-fuel LPG carrier using LPG and low-sulfur fuel oil, and their fifth 84,000m³ LPG carrier adopting a dual-fuel main engine as well as the 68th LPG carrier built by the company.

In recent years, more vessels have been adopting liquefied gases as an alternative to heavy fuel oil on a global scale to effectively reduce emissions of greenhouse gases (GHG) from international shipping. This very large LPG carrier is powered by LPG, which reduces GHG emissions and is expected to significantly reduce its environmental impact. The design is based on the Kawasaki Group's accumulated knowledge in building LPG and liquefied natural gas (LNG) carriers, and LNG-fueled vessels.

Kawasaki plans to develop and build more LPG-fueled LPG carriers, LPG/NH_3 carriers, and other commercial vessels that meet environmental standards as well as to develop and offer other eco-friendly marine technologies to contribute to the establishment of a low-carbon/decarbonized society. These products include vessels for transporting liquefied hydrogen, considered to be the next-generation energy source.

Features

1. This LPG carrier operates using both LPG and low-sulfur fuel oil. Use of LPG as fuel greatly reduces the emission volumes of sulfur oxides (SO_x), CO_2 and other pollutants compared with use of marine fuel oil. Consequently, the new vessel will meet SO_x emission standards[*1] which were strengthened in January 2020, and EEDI[*2] Phase 3 regulations which will further strengthen CO_2 emission standards.
2. To satisfy restrictions on NO_x Tier III controls[*3] emissions as implemented by the IMO, the main engine and generator are equipped with a Selective Catalytic Reduction (SCR) System, and an exhaust gas purification system to reduce NO_x, which allows the ship to navigate in Emission Control Areas (ECAs).
3. Installation of LPG fuel tanks on the ship's upper deck allows loading of fuel-use LPG separate from the cargo LPG. Moreover, a piping system connecting the LPG fuel tanks and LPG cargo tanks enables transfer of extra LPG to the LPG fuel tanks if necessary.
4. This vessel adopts the Kawasaki rudder bulb system with fins (RBSF) and the semi-duct system with contrafins (SDS-F) which contribute to reducing fuel consumption.

(Remarks)

*1 SO_x emission standards: Since January 2015, SO_x emission restrictions in North American and European emission control areas (ECAs) have limited sulfur content in fuels to 0.1% or less. Starting in January 2020, regulations have required ships operating in all other parts of the world to use fuel with sulfur content levels of 0.5% or less, or alternatively use equipment to reduce SO_x in exhaust gases to an equivalent level.

*2 Energy Efficiency Design Index: Compulsory international regulations requiring energy-effiiciency compliance in newly built ships based on EEDI values, which specify CO_2 emissions in grams for transporting one ton of cargo for one mile. EEDI regulation values apply in increasingly strict phases based on the construction-contract conclusion date and finished-ship delivery date. Phase 3 regulations (30% CO_2 emissions reduction compared with baseline levels) will be introduced for certain ship types including large LPG carriers and LNG carriers contracted to be built in 2022 or later.

*3 The Tier III controls apply only to the specified ships while operating in Emission Control Areas (ECA), requiring 80% NO_x emissions reduction compared with Tier I controls.

Principal particulars

Length (o.a.):	229.90m
Breadth (mld.):	37.20m
Depth (mld.):	21.90m
Draft (mld.):	11.60m
Gross tonnage:	49,943
Deadweight:	55,091t
Cargo tank capacity:	84,172m³
Main engine: Kawasaki-MAN B&W 7S60ME-C10.5-LGIP diesel x 1 unit	
Speed:	Approx. 17.0kt
Complement:	30
Classification:	ClassNK
Registry:	Panama
Delivery:	September 22, 2022

Shin Kurushima Sanoyas builds Panamax bulker, EVER RADIANCE

Shin Kurushima Sanoyas Shipbuilding Co., Ltd. completed building of the Panamax bulk carrier, EVER RADIANCE (HN: 1382), at its Mizushima Shipyard and delivered the carrier on September 9, 2022.

This is the 12th vessel of a series of the Sanoyas newly developed 82,000DWT type Panamax bulk carriers. The vessel complies with the latest rules such as CSR B&T, NO_x Tier III regulations, and SO_x emission regulations, but also has the equivalent level of deadweight with shallower draft than the builder's previous design. The vessel exceeds 20% reduction in CO_2 emissions by IMO's EEDI (Energy Efficiency Design Index: grams CO_2 per ton nautical mile) regulation and is close to the 30% reduction that will apply to ships for which the building contract is placed on or after 2025.

For improvement of propulsion efficiency, the vessel is equipped with a low-speed, long-stroke electronically controlled main engine combined with a high-efficiency propeller and rudder appendages. Furthermore, patented energy saving devices such as the STF (Sanoyas-Tandem-Fin) and ACE DUCT (Sanoyas Advanced flow Controlling and Energy saving DUCT) are applied. These energy saving devices have achieved about 8% reduction in energy consumption and CO_2 emissions.

Other eco-friendly features include various countermeasures such as the main engine with SCR compliant with the NO_2 emission Tier III limit for the prevention of air pollution, dedicated low sulphur gas oil tank to cruise in ECAs (Emission Control Areas), and classification code IHM (Inventory of Hazardous Materials) concerning the inventory of hazardous materials. In addition, countermeasures such as the Ballast Water Treatment System and independent holding tanks for rainwater on the upper deck for protection of the marine environment are also incorporated.

Furthermore, for improvement of the vessel's maintenance, access trunks are arranged to gain easy access from upper deck to double bottom even under laden conditions. Accommodation compliant with the latest IMO noise reduction regulations can provide an improved comfortable working and living environment for officers and crew on board the vessel.

Principal particulars

L (o.a.) x B (mld.) x D (mld.) d (ext.): 229.00m x 32.24m x 20.15m x 14.594m
DWT/GT: 81,951t/43,453
Cargo hold capacity:97,019m^3 (grain)
Classification: ClassNK
Complement: 24
Speed, service: about 14.2kt
Delivery: September 9, 2022

Onomichi builds cargo ship, MAPUTI, for MOL Drybulk Co.

Onomichi Dockyard Co., Ltd. completed building the MAPUTI, a 17,500DWT cargo ship of a 'tween-decks type, for MOL Drybulk Co., Ltd. on September 6, 2022. This is the first of three ships of the same-type series being built for MOL Drybulk Co.

This new ship was designed with an optimized hull, large-diameter propeller, and J-ENG highly efficient main engine which satisfy the EEDI Phase 3 requirements in advance. The ship hull form is the wider beam and shallow draught type to reduce the ship-rolling motion and permits transporting cargoes safely and improves accommodation conditions for the crew.

The cargo holds have two 30m long hatches and employ wide-hatch box-shape type holds, and two 50-t hoisting-capacity deck cranes are installed amidships to handle large and small cargoes efficiently.

Principal particulars

Builder: Onomichi Dockyard Co., Ltd.
Ship type: General cargo ship of 'tween deck type
Hull No.: 779
L (o.a.) x B (mld.) x D (mld.) less than 130m x 23.60m x 15.85m
DWT/GT: 17,500t/13,300
Main engine: J-ENG 6UEC35LSE-B2 diesel x 1 unit
NCR: 2,625kW x 111.8min^{-1}
Classification: ClassNK
Registry: Philippines
Completion: September 6, 2022

JMU completes G-series Dunkirkmax bulk carrier, NAVIOS ASTRA

Japan Marine United Corporation (JMU) delivered the NAVIOS ASTRA, an 181,000DWT bulk carrier at the Ariake Shipyard on September 13, 2022. This vessel is the 9th of the newly developed G-Series of Dunkirkmax bulk carrier, called G181BC, which has been successful in both economic and environmental friendly design. The G181BC design conforms with MARPOL Annex VI NO_x Tier III regulations as well as H-CSR (Harmonized Common Structural Rules).

The vessel has larger deadweight and cargo hold capacity suitable for bulk cargoes of coal and iron ore in the nine cargo holds, based on JMU's expertise and long experience. The SSD® (Super Stream Duct®) and SURF-BULB® equipped fore and aft of the propeller, respectively, greatly improve the propulsion performance. The ALV-Fin® (Advanced Low Viscous Resistance Fin) equipped forward of the propeller controls stern water flow to gain better propulsive efficiency.

The unique bow shape, LEADGE-Bow®, can reduce the added resistance due to waves, and the well-refined shape of the superstructure can attain low wind resistance. This vessel is also equipped with a SO_x scrubber to comply with MARPOL Annex VI Regulation 14.

Principal particulars

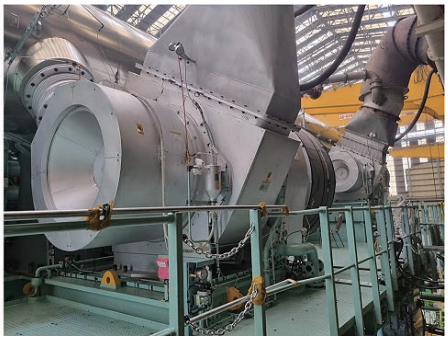
L (o.a.) x B (mld.) x D (mld.) x d (mld.): 292.00m x 45.00m x 24.55m x 18.234m
DWT/GT: 182,393t/93,297
Main engine: MAN B&W 7S65ME-C8.5-HPSCR diesel x 1 unit
Speed: 15.05kt
Complement: 25
Classification: ClassNK

MHI-MME completes shop trial of world's largest turbocharger

Mitsubishi Heavy Industries Marine Machinery & Equipment Co., Ltd. (MHI-MME) confirmed the completion of shop trials of a main engine equipped with its MET90MB Turbocharger (MET90MB), the world' s largest turbocharger, which achieved its planned performance, in July this year.

The MET90MB that underwent the shop trial was the first unit and was delivered from our plant in January this year. Twenty-two MET90MB units have been ordered for installation on the main engines of twenty-two 15,000TEU container ships, including 10 container ships of the same series. Sequential turbocharging[*1], which combines the use of two installed turbochargers (one MET90MB unit and one MET60MB unit in this case), was adopted for the main engine (MAN ES/8G95ME C10.5 EGRBP) used in this shop trial. Use of the MET90MB, a large turbocharger, will reduce the number of turbochargers needed, from three units in the past to two units, enabling both high degree of efficiency and lower maintenance costs.

MET90MB Turbocharger



The turbocharger installed on an main engine

MET turbochargers have already achieved the global top share in terms of the number of turbochargers installed on the main engines of mega containerships (11,000TEUs or greater). To deal with the growth in engine output resulting from the increasing size of container ships, MHI-MME made the decision to include the MET90MB in its MET-MB series lineup.

(Remark)

*1 *Sequential turbocharging:* Arrangement that enables efficient turbocharging by installing more than one turbocharger on an engine and concentrating the exhaust gas to one of the turbochargers at lower engine speeds to obtain turbocharging when the amount of exhaust gas is small. The exhaust gas is directed to either both turbochargers and/or to the larger turbocharger for effiicient turbocharging at a broader range of engine speeds when the amount of exhaust gas is large.

FEDERAL POWER

Owner: MK Centennial Maritime B.V.
Builder: Oshima Shipbuilding Co., Ltd.
Hull No.: 11012
Ship type: Bulk carrier
L (o.a.) x B x D x d (ext.): 182.998m x 32.26m x 15.00m x 10.542m
DWT/GT: 42,692t/25,831
Main engine: Mitsui-MAN B&W 5S50ME-C9.7-EGRBP diesel x 1 unit
Speed, service: 14.00kt
Classification: ClassNK
Registry: Malta
Completion: September 22, 2022

NEWBURY

Owner: Lundquist Shipping Company Limited
Builder: Sumitomo Heavy Industries Marine & Engineering Co., Ltd.
Hull No.: 1410
Ship type: Crude oil carrier
L (b.p.) x B x D: 228.96m x 44.00m x 21.80m
DWT/GT: abt. 112,100t/abt. 60,100
Main engine: Hitachi MAN B&W 6G60ME-C9.5 diesel x 1 unit
Speed, service: 15.0kt
Classification: LR
Registry: Bahamas
Completion: August 31, 2022

CHEMROAD JUPITER

Owner: Panamanian owner
Builder: Shin Kurushima Dockyard Co., Ltd.
Hull No.: S-6132
Ship type: Chemical tanker
L (b.p.) x B x D : 166.50m x 28.20m x 17.20m
DWT/GT: 35,722t/23,464
Main engine: JE / 6UEC50LSH-Eco-C3-EGR diesel x 1 unit
Speed, service: 14.5kt
Classification: ClassNK
Registry: Panama
Completion: October 13, 2022

Notice: JSEA Digital Platform

The Japan Ship Exporters' Association has developed the JSEA Digital Platform (JDP) for exhibitions with a virtual space to supplement local exhibitions such as Posidonia and NOR-SHIPPING. We have so far participated in these exhibitions and recently held a hybrid exhibition with JSEA Digital Platform (JDP). We are now intending to apply the hybrid approach for the next exhibition, NOR-SHIPPING 2023 (June 6th to 9th, 2023) in Oslo, together with JSEA Digital Platform (JDP). For more information, please access the QR code below.

JSEA Digital Platform (JDP)

Information from JSEA

Our news letter, SEA-Japan, is now available as e-mail. If anyone wishes to receive the digital edition (pdf format), please contact sea-japan@jsea.or.jp with the following information for identification:
1. Full name; 2.Company name/ oc-cupation, or freelance/others; 3. Your company address, or your country; and 4. E-mail address
You can also find back issues of SEA-Japan at our website:
https://jsea.or.jp

Correction

The ship dimensions were incorrectly reported in the brief news titled "SHURI" on Page 6 in the last issue (SEA-Japan No.415). In the fourth line, "L (o.a.) x B x D: 333.95m x 48.4m x 22.88m" should have read "L (o.a.) x B x D: 180.32m x 27.0m x 23.27m." We apologize for this error.

Cover Photo

World's 1st bulk carrier to be partially powered by wind

Oshima Shipyard delivered the SHOFU MARU, a 100,000DWT bulk carrier at the Oshima works on October 7, 2022. The vessel is fitted with a sail system, the so-called "Wind Challenger," which is being jointly developed with Mitsui O.S.K. Lines (MOL). The hard sail can rotate 180 degrees and is extended and contracted automatically in response to the wind conditions and ship motion. The hard sail converts wind energy directly to propulsive force and can significantly reduce fuel consumption, which in turn reduces GHG emissions by about 5-8%.