

JMU delivers “TARA”, Newly developed VLCC (“N-Malacca”)



Japan Marine United Corporation (JMU) has delivered the tanker “TARA”, which was built at its Ariake Shipyard.

“TARA” is the first ship of NSY’s newly developed next generation “Malaccamax” Type VLCC, “N Malacca” - capable of carrying the maximum cargo through the Strait of Malacca. The vessel is designed as the successor to JMU’s conventional Malaccamax VLCCs. By incorporating the latest regulations, the N Malacca series has been developed to achieve further improvements in fuel efficiency and greenhouse gas (GHG) emission reductions compared with previous designs, while maintaining the proven concept of its predecessor.

JMU’s own latest energy saving technologies—including the new SSD[®], SURF-BULB[®], and Multi ALV-Fin[®]—are adopted as standard features. In addition, the vessel is equipped with the SP-Bow[®] bow form, which enhances performance in both calm water and actual sea conditions, together with newly developed in-house high efficiency propellers. Furthermore, by adopting a low fuel consumption electronically controlled main engine compliant with the IMO NOx Tier III regulations, along with low friction hull coatings, the vessel has significantly improved propulsion and fuel saving performance compared with previous generations.

In terms of the EEDI (Energy Efficiency Design In-

dex), the vessel takes into account in advance and satisfies the Phase 3 requirements applicable to ships contracted from 2025 onward. This contributes to improved environmental performance and reduced GHG emissions. The vessel is also equipped with an SOx scrubber and an SCR (Selective Catalytic Reduction) system, ensuring full compliance with the IMO regulations on SOx emissions and NOx Tier III requirements.

Furthermore, the vessel is designed to support cadet training as a unique feature. A dedicated spacious “Lecture Room” is provided within its accommodation area. The room is fitted with large panoramic view windows and projector screens, allowing cadets to observe actual VLCC operations on board while attending lectures. The special partitionable room arrangement enables two classes to be conducted simultaneously, enhancing on-board education and training.

<Principal Particulars>

L (o.a.) x B(mld.) x D(mld.):	339.44m x 60.00m x 28.60m
GT:	Approx. 164,209
Service Speed:	14.5 kt
Main engine:	WinGD 6X82-2.0-LP SCR
Complement:	58
Classification:	NK
Port of Registry:	Monrovia, Liberia



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Kawasaki Delivers LPG-powered LPG/NH₃ Carrier LUCENT PATHFINDER

Tokyo, 30 January 2026 — Kawasaki Heavy Industries, Ltd. announced the delivery of the LUCENT PATHFINDER (Kawasaki hull no. 1767), an 86,700m³ liquefied petroleum gas (LPG) and ammonia (NH₃) carrier powered by LPG fuel, to TSURUGI MARITIMA S.A.

Boasting an increased cargo capacity compared with existing 84,000 m³ LPG carriers as well as an ammonia loading capability, the LUCENT PATHFINDER is the eleventh unit in Kawasaki's newest-design series of 86,700m³ capacity LPG-fueled LPG/NH₃ carriers. Kawasaki has completed eighteen LPG-propelled vessels to date, and the LUCENT PATHFINDER is its eighty-first LPG carrier.

This carrier is equipped with separate cargo tanks and capable of simultaneously transporting LPG, which is already in widespread use as a low-carbon-emission energy source, and ammonia, which is expected to serve as a new useful fuel amid widespread efforts toward the realization of low- and zero-carbon-emission societies. Furthermore, this carrier is designed to increase its cargo tank capacity, while keeping its principal dimensions like LOA and beam similar to conventional-type vessels so that it can be berthed at major LPG terminals around the world.

In consideration of increasingly strict environmental regulations around the world, and based on action plans such as the Sustainable Development Goals (SDGs), Kawasaki will continue to develop and provide customers with environmentally friendly ship technologies with a focus on LPG and LPG/NH₃ carriers powered by LPG, as well as other types of merchant vessels that comply with the latest environmental regulations—including carriers for liquefied hydrogen, a fuel that is gaining popularity as a next-generation energy source. This way, Kawasaki will contribute toward



The LUCENT PATHFINDER – an LPG-powered LPG/NH₃ carrier

the realization of low- and zero-carbon-emission societies.

<Specifications>

Length overall:	229.90m
Molded breadth:	37.20m
Molded depth:	21.90m
Molded draft:	11.65m
Speed:	Approx. 17.0knots
Crew complement:	30
Gross tonnage:	49,561t
Deadweight:	56,360t
Cargo tank capacity:	86,938m ³
Main engine:	One set of Kawasaki-MAN B&W 6G60ME-C10.5-LGIP diesel engine
Classification/country of registration:	Nippon Kaiji Kyokai (ClassNK)/Panama
Delivery date	30 January 2026

<Features>

1) This carrier is equipped with Kawasaki-MAN B&W 6G60ME-C10.5-LGIP, a Kawasaki-made electronically controlled LPG-injection marine diesel engine (ME-LGIP engine). By utilizing LPG as fuel, it is possible to significantly reduce sulfur oxide (SO_x) and CO₂ emissions in exhaust

gas compared with ships running on conventional marine fuel oil, complying with SO_x emission standards and the EEDI phase 3 regulations.

- 2) The propulsion system is compliant with the nitrogen oxide (NO_x) Tier III requirements and utilizes EGR and SCR equipment. Thanks to this system, the vessel is able to travel in NO_x emission control areas (ECAs) even when operating on conventional low-sulfur fuel.
- 3) Fuel consumption is reduced through the installation of the Kawasaki RBS-F (Rudder Bulb System with Fins), the Kawasaki SDS-F (Semi-Duct System with contra Fins), and energy-saving fins around the propeller.
- 4) The concept design for a system that utilizes ammonia as fuel on this vessel has been approved by Nippon Kaiji Kyokai (ClassNK). Therefore, it is possible to modify ship design specifications to enable the use of ammonia as fuel in the future.

Imabari Shipbuilding Delivers LNG-Powered PCC LAZULITE ACE

Imabari Shipbuilding Co., Ltd. delivered the LNG-powered 7,000-CEU pure car and truck carrier (PCTC) LAZULITE ACE on 6 March 2026, which had been constructed at its affiliate Tadotsu Shipyard Co., Ltd.

Burning LNG instead of heavy fuel oil, the vessel can reduce the emission of CO₂, a greenhouse gas (GHG), by approximately 25% to

30%. When LNG is consumed, in addition, it can cut down the emission of sulfur oxide (SOx), which causes air pollution, by almost 100%. Nitrogen oxide (NOx) emissions can be lowered by 80% to 90% when an exhaust gas recirculation (EGR) system is used together.

Another eco-friendly feature of the vessel is dual-fuel power generators and auxiliary boilers, which help it

make use of the boil off gas generated in its LNG tanks without waste.

A bulkhead-less hold design is adopted so that the vessel arranges slopes straight that are wider than conventional ones, making vehicle driving routes simpler and easier to see for greater safety and loading/unloading efficiency.

A liftable deck, which can adjust its height, allows the vessel to accommodate not only passenger cars, but trucks, trailers, and other tall cargo vehicles as well.

<Principal Particulars>

Measurements: 199.93m in LOA x 38.00m in breadth x 38.76m in depth

DWT: 18,435t

GT: 77,695

Main Engine: 6S60ME-C10.5-GI

Service Speed: Abt. 18.0 kt

Classification: Nippon Kaiji Kyokai (ClassNK)

Registry: Liberia



Mitsubishi Shipbuilding Ships First Units of Systems for Marine Ammonia-Fueled Engines

- Contributing to Maritime Decarbonization with Ammonia Fuel Supply and Gas Abatement Systems -
Equipment can be remotely operated and automatically controlled, enhancing operational efficiency and safety

Mitsubishi Shipbuilding Co., Ltd., a part of the Mitsubishi Heavy Industries (MHI) Group, has shipped an ammonia fuel supply system (AFSS) and an ammonia gas abatement system (AGAS) for Japan Engine Corporation (J-ENG). Both systems are designed for the first ammonia-fueled marine engine model 7UEC-



50LSJA-HPSCR manufactured by J-ENG and represent the first such units produced by Mitsubishi Shipbuilding. Commissioning work for the systems will begin in due course.

The AFSS supplies ammonia fuel to the engine in a stable and safe

manner, while the AGAS safely processes surplus ammonia generated during fuel switching from ammonia to conventional fuel oil. Both systems support remote operations and automatic control through an integrated control system, enhancing

operational efficiency and safety.

The early market introduction of these systems will enable an onboard verification with a combination of J-ENG's ammonia-fueled marine engine model 7UEC50LSJA-HPSCR, the first mover in engines running on next-generation advanced fuels, with Mitsubishi Shipbuilding's AFSS and

AGAS. This combination is expected to further accelerate decarbonization efforts across the maritime industry.

Mitsubishi Shipbuilding will continue strengthening its business structure to meet the growing demand for ammonia-fueled vessels.

NAMURA completes newly developed Dunkirkmax-type bulk carrier, FRONTIER RINDO

Namura Shipbuilding Co., Ltd. delivered the FRONTIER RINDO, a 182,000DWT bulk carrier, at its Imari Shipyard & Works on 16 January 2026. The vessel is the third in a newly developed Dunkirkmax-type bulk carrier series, combining excellent operational performance with advanced energy-saving capabilities.

The vessel's principal dimensions are optimized to meet the restrictions of the Port of Dunkirk in France.

Improved propulsion performance and fuel saving are achieved through Namura's proprietary Namura flow Control Fin (NCF), Rudder-Fin and additional fins installed behind the NCF, combined with the latest high-efficiency propeller-fully compliant with the IMO EEDI Phase 3 regulations.

In response to environmental regulations, the vessel is equipped with a ballast water treatment system compliant with the International



Convention for the Control and Management of Ships' Ballast Water and Sediments, a main engine and a generator engines meeting the Nitrogen Oxides(NOx) emission regulations Tier 3 requirements within the Emission Control Areas (ECAs).

In addition, an Inventory of Hazardous Materials (IHM) is prepared in accordance with the Ship Recycling Convention and its Guidelines, minimizing environmental impacts.

<Principal particulars>

L (o.a.) x B (mld.) x d (mld.):	291.92m x 45.0m x 18.2m
DWT:	182,691t
GT:	94,634
Main engine:	MAN B&W 7S60ME-C10.6-EGRBP diesel x 1 unit
Complement:	24
Registry:	Marshall Islands
Classification:	NK
Completion:	16 January 2026

Oshima Shipbuilding Obtains AiP for Bulk Carrier with Membrane Separation OCCS System from ClassNK

Oshima Shipbuilding Co., Ltd. has developed a concept design for a bulk carrier equipped with an onboard carbon capture and storage (OCCS) system with support from Fuji Electric Co., Ltd. Into the system, membrane separation is adopted, which is expected to reduce costs for downsizing equipment plants and capturing CO₂. For the concept design, the shipbuilding company has obtained

an approval-in-principle (AiP) from Nippon Kaiji Kyokai (ClassNK).

OCCS is a technology for controlling greenhouse gas (GHG) emissions into the atmosphere by separating and capturing CO₂ from exhaust gas that main engines emit and temporarily storing it on board. It is expected to curtail GHG emissions from vessels running on conventional fuels.

Based on technological requirements and safety viewpoints, the AiP proves the feasibility of OCCS on board the bulk carrier. CO₂ captured on board will be unloaded at ports of call for storage and/or reuse. Enabling vessels to cut down CO₂ emissions while continuing to burn conventional fuels, it is drawing attention as an effective decarbonization means in the energy transition period.



PANAMAX Bulk Carrier “善樂 (HAPPINESS DIVA)” completed

PANAMAX bulk carrier M/V “善樂 (HAPPINESS DIVA)”, constructed at the Mizushima Shipyard of Shin Kurushima Sanoyas Shipbuilding Co., Ltd., was named and delivered on 11th March 2026.

This is the 27th vessel in a series of SANOYAS newly developed 82,000DWT type PANAMAX bulk carriers. The vessel applies the latest rules such as the CSR B&T, NOx Tier III and SOx emission regulations, but also has the equivalent level of deadweight with shallower draft than builder’s previous design. And the vessel already meets the 30% reduction of CO₂ emission (Phase3) by IMO’s EEDI (Energy Efficiency Design Index: the grams CO₂ per ton nautical mile) regulation in advance that shall apply to ships for which the building contract is placed on or after 2025.

For the improvement of propulsion efficiency, the vessel is equipped with 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 SANOYAS-developed “STF” (Sanoyas-Tandem-Fin) and the ACE DUCT (Sanoyas Advanced flow Controlling and Energy saving DUCT) are applied. These energy-saving devices which have been improved from previous designs have achieved an over-8% reduction of energy consumption so that EEDI Phase3 is surely satisfied.

Considering eco-friendliness, vari-



ous countermeasures such as a main engine with an EGR system that complies with the NOx emission Tier III limit for the prevention of air pollution and dedicated low Sulphur gas oil tanks for cruises in ECAs (Emission Control Areas), are applied. In addition, countermeasures such as a Ballast Water Treatment System and independent holding tanks for rainwater on its upper deck for the protection of the marine environment, are also incorporated.

Furthermore, to improve maintenance, access trunks are arranged to make it possible to gain access from the upper deck to the double-bottom even on a laden condition. Accommodation complying with the latest IMO noise reduction regulations contributes to more comfortable working and living environments for officers/crews of the vessel.

SANOYAS PANAMAXES continue to be around the seven seas as “ECO-ships”.

<Particulars>

Ship No.:	1411
Keel Laying:	2 September 2025
Launched:	8 January 2026
Delivered:	11 March 2026

Dimensions

Length (o.a.):	229.00m
Breadth (mld.):	32.24m
Depth (mld.):	20.15m
Summer Draft (ext.):	14.594m

Tonnage and Deadweight

Gross Tonnage:	43,455
Deadweight:	82,022mt
Cargo Hold Capacity (grain):	97,034m ³

Classification:

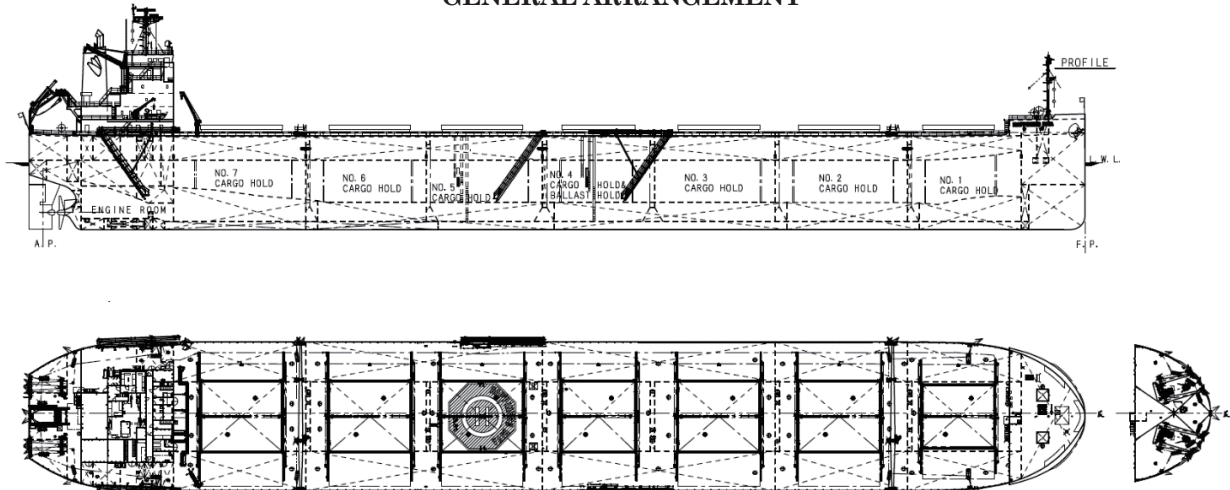
NIPPON KAIJI KYOKAI

Complement:

24

Service Speed (at C.S.O. with 15% sea margin): about 14.0knots

GENERAL ARRANGEMENT



JSEA Publishes ‘Shipbuilding and Marine Engineering in Japan 2026’

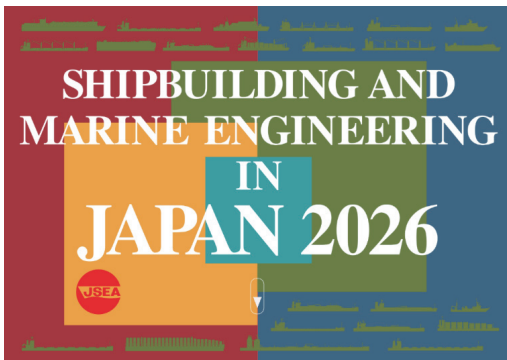
The Japan Ship Exporter's Association (JSEA) has published “Ship-

building and Marine Engineering in Japan 2026” which is available from the JSEA website (<https://www.jsea.or.jp/en/publications/sameij/>) or via the QR code below. Its book version is no longer published.

Major contents thereof include the current status of the Japanese shipbuilding industry, new completions by ship type, new shipbuilding technologies, navigation systems, energy-saving equipment and

systems, software for shipbuilding rationalization, and building and repairing facilities, focusing on the achievements over the past two years.

JSEA now provides digital publications for its readers, which include “Shipbuilding and Marine Engineering in Japan” (biennial edition) and “SEA-Japan” (bimonthly).



JSEA participates in Posidonia 2026

The Japan Ship Exporters' Association (JSEA) participated in the 29th International Shipping Exhibition, Posidonia 2026. The exhibition was successfully held with a sponsorship by Posidonia Exhibitions S.A. at the Metropolitan Expo Centre in Greece during the five days from Monday, 1st of June to Friday, 5th of June. JSEA participated in the exhibition with the cooperation of The Shipbuilders' Association of Japan (SAJ) and support from The Nippon Foundation.

According to the organizer, 2,244 exhibitors from 83 countries were present at Posidonia 2026, which also attracted 35,083 visitors, breaking the previous high attendance record registered in 2024. At this exhibition, JSEA set up a national pavilion in cooperation with the Japan Ship Machinery and Equipment Association (JSMEA).

Opening ceremony

The opening ceremony of the Japan Pavilion was held in the evening of 1st

of June, attended by executives from JSEA and JSMEA member companies. The ceremony was highlighted by a ribbon-cutting conducted by Mr. Koichi Ito, Japanese ambassador to Greece (centre of photo); Mr. Yoshinori Kanehana, JSEA president (second from right); Mr. Yu Fukada, JSMEA vice chairman (extreme left); Mr. Shin Imai, Deputy Director-General for Engineering Affairs, Maritime Bureau of Minister of Land, Infrastructure, Transport and Tourism (second from left); and Mr. Hayato Suga, ClassNK president (extreme right).

Seminar

In the afternoon of Tuesday, 2nd of June, JSEA held a seminar entitled “Future of shipbuilding and technology in Japan-Made in Japan again-” for Greek shipowners and related parties in the Seminar Room Central of the Metropolitan Expo Centre. The seminar started with opening remarks by Mr. Kanehana, followed by four keynote speeches by

Mr. Akira Fukaishi (MLIT), Mr. Yannis Triphyllis (the Hellenic Chamber of Shipping), Mr. Hideaki Saito (SAJ) and Mr. Yasushi Yamamoto (The Japanese Shipowners' Association, or JSA). After a short break, six presentations were given by ClassNK, four member companies from JSEA (Kawasaki Heavy

Industries, Ltd.; MITSUI E&S Co., Ltd.; Nihon Shipyard Co., Ltd., or NSY; and Oshima Shipbuilding Co., Ltd.) and Alberta Shipmanagement. They introduced their latest technologies, activities and insights of the Japanese shipbuilding industry. Live streaming of the seminar was provided through YouTube and the Japan pavilion via the JSEA Digital Platform.

Presentation in Japan Pavilion

In the afternoon of Wednesday, 3rd of June, JSEA held a presentation for visitors to the Japan Pavilion. Two member companies from JSEA (Kawasaki and NSY) and nine member companies from JSMEA (MOL Techno-Trade, Ltd.; MIURA CO., LTD.; BEMAC Corporation; Yanmar Power Solutions Co., Ltd.; Nabtesco Corporation; MITSUI E&S Co., Ltd.; DAIHATSU INFINEARTH MFG. Co., Ltd.; Mitsubishi Heavy Industries Marine Machinery & Equipment Co., Ltd.; and YDK Technologies Co., Ltd.) gave presentations and introduced their technologies, businesses, activities and more.

Reception

A reception jointly hosted by Mr. and Mrs. Ito and Mr. and Mrs. Kanehana was held in the evening of 3rd of June. This event was attended by 896 people including those from major shipowners and shipbrokers in Greece and other Western countries, the financial community, the press, the Greek government, and foreign embassies in Greece. Ambassador Ito and Mr. Vasilis Kikilias, Minister of Maritime Affairs and Insular Policy, delivered welcome speeches.



UM MINAMI

Builder: Minaminippon Shipbuilding Co., Ltd., of the Imabari Shipbuilding Group.
 Hull No.:
 Ship type: a 52,000-DWT Product Tanker
 L (o.a.) x B x D: 184.94m x 32.20m x 19.10m
 GT: 30,591
 Main engine: 6S50ME-C10.6
 Speed, service: about 14.5kts
 Classification: NK
 Registration: Panama
 Completion: 18 February 2026

**NISSOS DELOS**

Builder: Japan Marine United Corporation
 Ship type: 158,600DWT Type Crude Oil Tanker
 L (o.a.) x B (mld) x D (mld): 274.30m x 48.00m x 23.15m
 GT: 83,500
 DW: 158,958MT
 Main engine: Everllence-B&W 7S60ME-C10.6-EGRBP
 Complement: 28
 Classification: LRS
 Port of Registry: Marshall Islands
 Completion: 3 April 2026

**PAIWAN CHAMPION**

Builder: The Hakodate Dock Co., Ltd.
 Hull No.: 926
 Ship type: 40,000 DWT Type Bulk Carrier
 L (o.a.) x B (mld.) x D (mld.) x d (mld.): 179.95m x 32.20m x 15.00m x 10.50m
 DWT/GT: 39,785t/24,219
 Main engine: MAN B&W 6G45ME-C9.7-EGRBP
 Classification: NK
 Registration: Liberia
 Completion: 14 January 2026

**GUZIDE**

Builder: Oshima Shipbuilding Co., Ltd.
 Hull No.: 11133
 Ship type: Bulk Carrier
 L (b.p) x B x D: 180.00m x 32.26m x 15.00m
 DWT/GT: 42,809MT/25,856
 Main Engine: Japan Engine 6UEC-42LSH-Eco-D3-EGR (Derating)
 Speed, service: 14.0 kts
 Classification: ClassNK
 Registration: Malta
 Completion: 27 February 2026

**ROKKO GALAXY**

Builder: SHIN KURUSHIMA DOCKYARD CO.,LTD
 Hull No.: S-6291
 Ship type: Chemical Tanker
 L (b.p.) x B x D: 149.50m x 28.00m x 14.90m
 DWT/GT: 26,332/18,287
 Main engine: JE 6UEC42LSH-Eco-D3-EGR
 Speed, service: 14.3kts
 Classification: NK
 Registration: Panama
 Completion: 18 February 2026

**ECO NEBULA**

Builder: Sasaki Shipbuilding Co., Ltd.
 Hull No.: 728
 Ship type: LPG Carrier
 L (b.p.) x B x D : 114.00m x 20.60m x 9.60m
 DWT/GT: 8,047/8,043
 Main engine: HITACHI-MAN B&W 6S35MC-7.1-LPSCR
 Speed, service: 13.60kts
 Classification: BV
 Registration: Marshall Islands
 Completion: 25 February 2026

