Tankers/LPG LATEST SHIPS BUILT IN JAPAN

## MARKO MARULIC 7,524 CBM LPG Carrier 16

Contents By Builder By Ship Type



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This is the first LPG carrier propelled by a dual-type LPG-fueled main engine bulit in Japan as a smaller ship than 11,000m<sup>3</sup> cargo loading capacity, and has two pressurized cargo tanks with total designed capacity of 7,500m<sup>3</sup>, and one LPG-fuel tank of 450m<sup>3</sup> capacity. The cargo tank is durable up to 17.65 bar as well as minus 10 degC.

The carrier is equipped with Sasaki patent stern fins in the front of the propeller. The stern fins control water flow before the propeller, resulting in improved propulsion performance and fuel reduction.

To achieve environmental load reduction and less pollutant emissions, the carrier has been designed to conform with requirements of EEDI III and BV's Clean Ship regulations, and is compliant with the class notation AUT-UMS of BV, which allows ship M0 operation and alleviates the work

PRINCIPAL PARTICU	JLARS	
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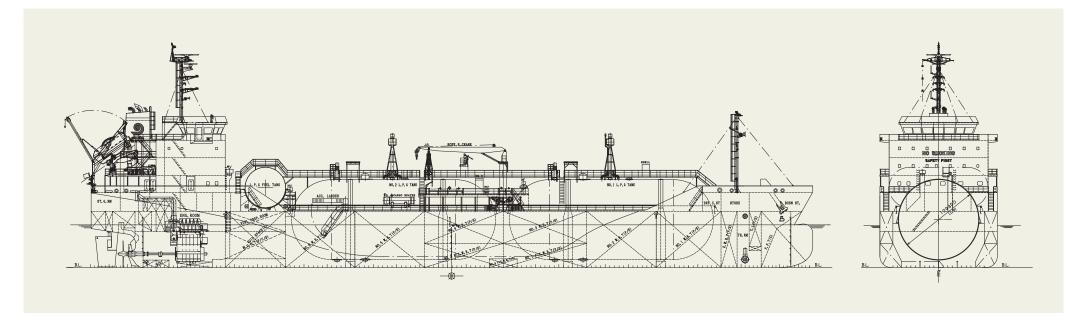
Length (o.a.)	116.82 m
Length (b.p.)	110.90 m
Breadth (mld.)	19.00 m
Depth (mld.)	9.10 m
Draft (mld.)	6.80 m
Gross tonnage	6,515
Deadweight	7,261 tons
Main engine HITACHI-MAN	N B&W 5S35ME-C9.7 LGIP

MCR (kw x rpm)	3,000 x 148
NOR (kw x rpm)	2,700 x 138
Speed (max. trial)	14.71 knots
(service)	13.00 knots
Complement	20 persons
Classification	BV
Cargo pump450 m3/l	$n \times 110 \mathrm{m} \times 180 \mathrm{kW} \times 2 \mathrm{sets}$
Loading capacity (tank)	7,524 m <sup>3</sup>
Builder	Sasaki Shipbuilding Co., Ltd.

load of the crew.

Moreover, the Croatia-registered carrier has been provided with a format of IHM-EU for the Ship Recycling Regulation (EU-SRR). According to the regulations, ships above 500GT

and flying the flag of an EU/EEA member state, or third-party flagged vessels calling at European ports, must carry a IHM certificate on board.



Tankers/LPG LATEST SHIPS BUILT IN JAPAN

# MORNING KATE 5,014 CBM LPG Carrier

Contents

By Builder

By Ship Type



Tankers/LPG LATEST SHIPS BUILT IN JAPAN

### MORNING KATE 5,014 CBM LPG Carrier 17

Contents By Builder By Ship Type

This vessel is designed as the 5,000cbm type LPG carrier with two cylindrical full-pressurized cargo tanks capable of loading liquefied petroleum gasses. The energy-saving hull form with stern fins is designed to produce economic propulsion.

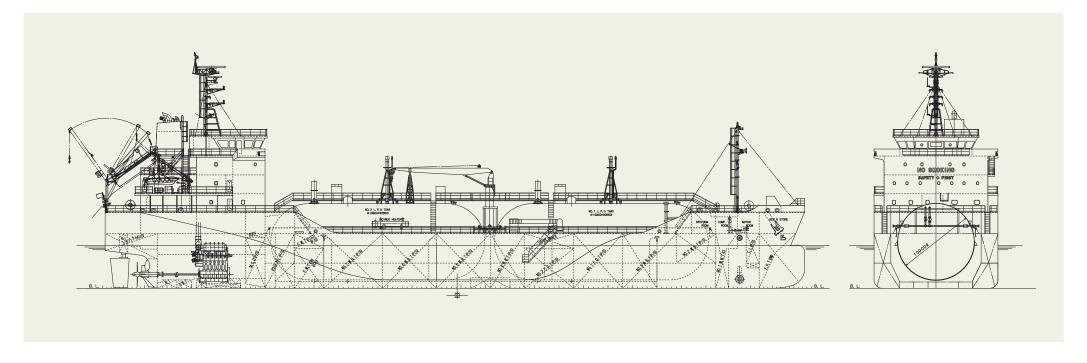
One stream line balanced hanging rudder (C type) is adopted and steering gear is of electro-hydraulic system, consisting of two rams, two cylinders with two hydraulic pump units.

The engine room is divided into some compartments in order to reduce the noise and vibration. All cabins are made as private room.

The consideration is also given to reduction of environmen-

PRINCIPAL PARTICULARS	MCR (kw x rpm)2,200 x 17	
Length (o.a.)99.98	m NOR (kw x rpm)1,980 x 17	
Length (b.p.)95.30	m Speed (max. trial)14.07 knot	
Breadth (mld.)17.70	m (service)13.40 knot	
Depth (mld.)7.80	m Complement20 person	
Draft (mld.)6.10	m ClassificationB	
Gross tonnage4,5	Cargo pump300 m3/h $ imes$ 110 m $ imes$ 130 kW $ imes$ 2 sets	
Deadweight5,274 to	ns Loading capacity (tank)5,014 m	
Main engine MAKITA-MITSUI-MAN B&W 5L35M	6 Builder:Sasaki Shipbuilding Co., Ltd	

tal burden such as installation of ballast water treatment system.



KIZUNA 21 8,015 DWT General Cargo Ship

Contents

By Builder

By Ship Type



### KIZUNA 21 8,015 DWT General Cargo Ship 71

Contents By Builder By Ship Type

One set of hydraulic twin type deck crane is installed on the vessel, which is available for hoisting load 80t on twin use condition.

Stern fins are installed on the stern frame to maintain a good water flow to the propeller to improve propulsion efficiency and reduce fuel consumption, which are patented proprietary technology of Sasaki. The vessel also complies EEDI phase III and has achieved to reduce environmental impact.

The ship vibration is suppressed as much as possible for crew comfort by conducting adequate analysis at the initial design stage, as well as low noise and good stability has been achieved.

PRINCIPAL PARTI	CULARS	NOR (kw x rpm)	2,475 x 172
Length (o.a.)	104.97 m	Speed (max. trial)	14.32 knots
Length (b.p.)	98.80 m	(service)	13.00 knots
- :	18.40 m	Complement	18 persons
Depth (mld.)	11.80 m	Classification	B\
Draft (mld.)	7.62 m	Handling gear	
Gross tonnage	6,267	Hydraulic twin deck crane 80T x 28m / R x 1 s	
Deadweight	8,015 tons	Loading capacity (grain)	12,866 m
Main engine	HITACHI-MAN B&W 5L35MC6.1	(bale)	11,195 m <sup>2</sup>
MCR (kw × rpm)	2,750 x 178	Builder:Sasaki S	Shipbuilding Co., Ltd

