



**SEVERNOYE  
DESIGN  
BUREAU**



**LNG CARRIERS  
DESIGNED BY  
SEVERNOYE DB**

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# SEVERNOYE DESIGN BUREAU IS ONE OF RUSSIA'S LEADING COMPANIES IN THE SPHERE OF SHIP DESIGN.

THE COMPANY DEVELOPS BOTH NAVAL SHIPS AND CIVIL DESIGNS. THE BUREAU HAS DEVELOPED DRY CARGO CARRIERS, RESEARCH VESSELS, TANKERS AND TRAWLER SHIPS. TODAY, THE BUREAU DESIGNS LNG CARRIERS, ICE SHIPS, SUPPLY SHIPS AND OTHER TYPES OF VESSELS. ALL IN ALL, OVER 550 SHIPS AND VESSELS WITH AGGREGATE DISPLACEMENT OF ABOUT 1.5 MILLION TONS HAVE BEEN BUILT TO SEVERNOYE DESIGN BUREAU DESIGNS.

The company has wide connections with classification societies, shipyards and equipment manufactures both in Russia and abroad. Ships built to the bureau's designs have approved themselves as part of fleets of different countries among which are Finland, Poland, Bulgaria, Egypt, India, Vietnam, China, and Indonesia.

High scientific and technical potential, up-to-date production facilities as well as connections formed with leading research and development centers and shipbuilding companies allow the bureau to create high-technology, science-intensive and competitive samples of naval ships and commercial vessels and promptly respond to dictates of time and demands of both Russian and foreign customers.

Today the bureau faces the future with confidence. It is always open for mutually beneficial cooperation.

Best regards,  
General Director  
V. Spiridopulo

A stylized, handwritten signature in blue ink, likely belonging to V. Spiridopulo, the General Director mentioned in the text.



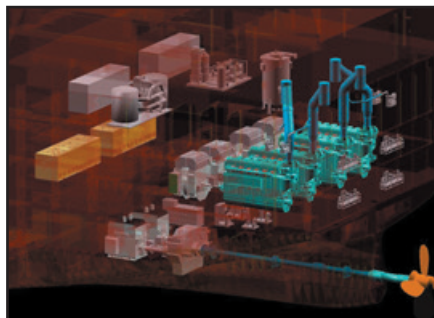
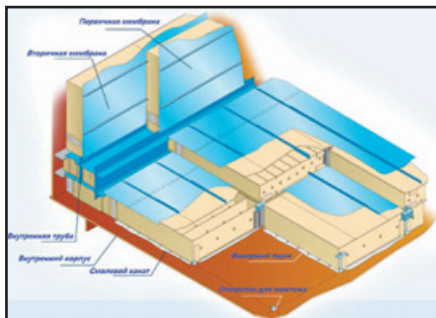


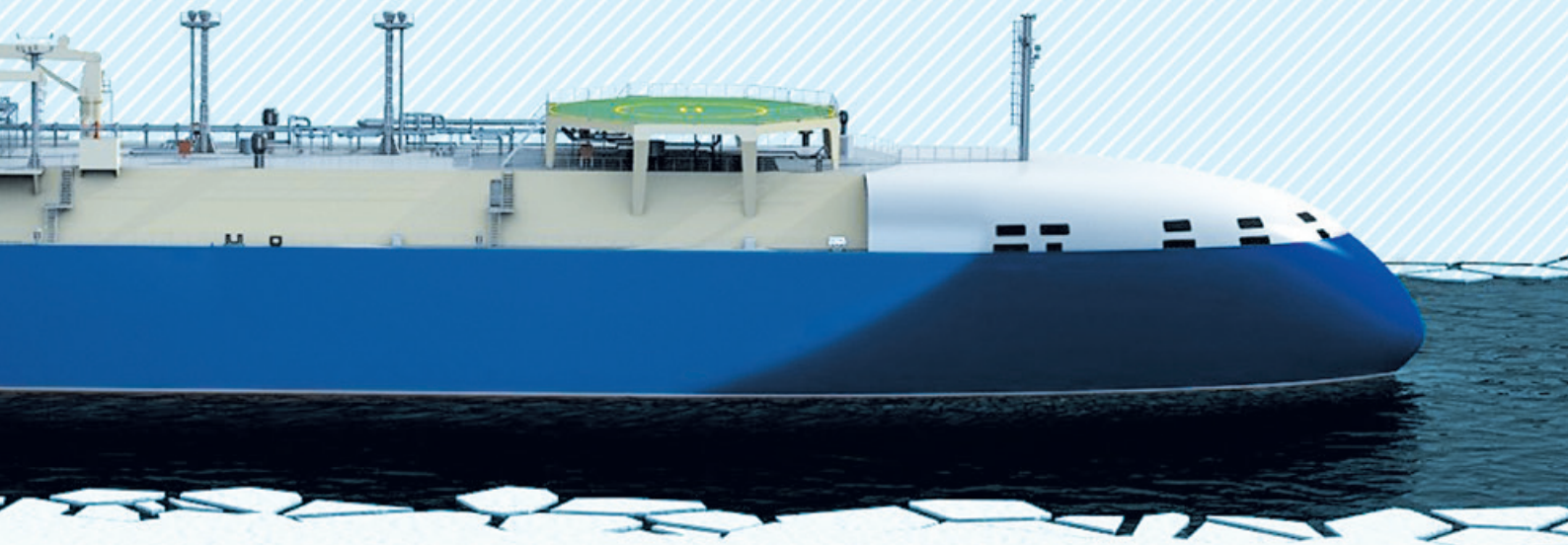
# LNG CARRIERS BY SEVERNOE DB FEATURES

Well proven and reliable cargo containment system (NO-96) designed by GTT company;

High efficiency and low emission dual fuel diesel-electrical or diesel-mechanical power plant;

High speed performance and low fuel consumption proven by CFD calculations and model tests;

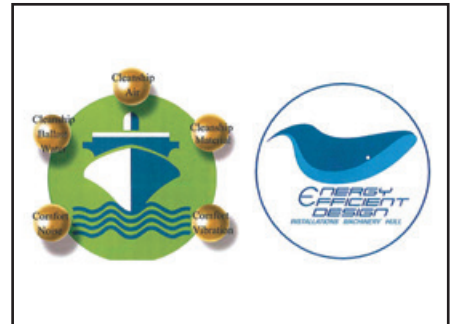
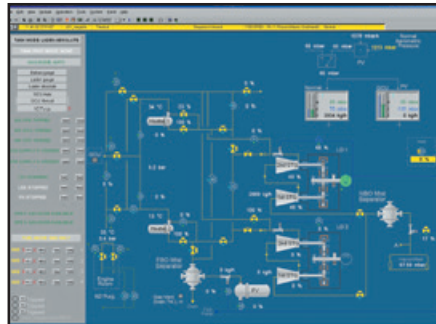
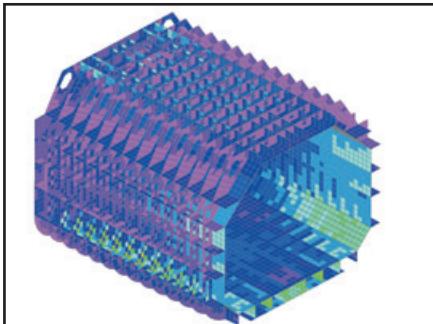




Improved hull structure based on whole ship analysis, fatigue and vibration analysis;

Advanced Integrated Automation System (IAS) providing propulsion plant control, power management system, cargo handling operations and fuel gas management;

Innovative engineering solutions in cooperation with our partners: Gaztransport & Technigaz, Bureau Veritas, Marine Service GmbH, Krylov State Research Centre and other.





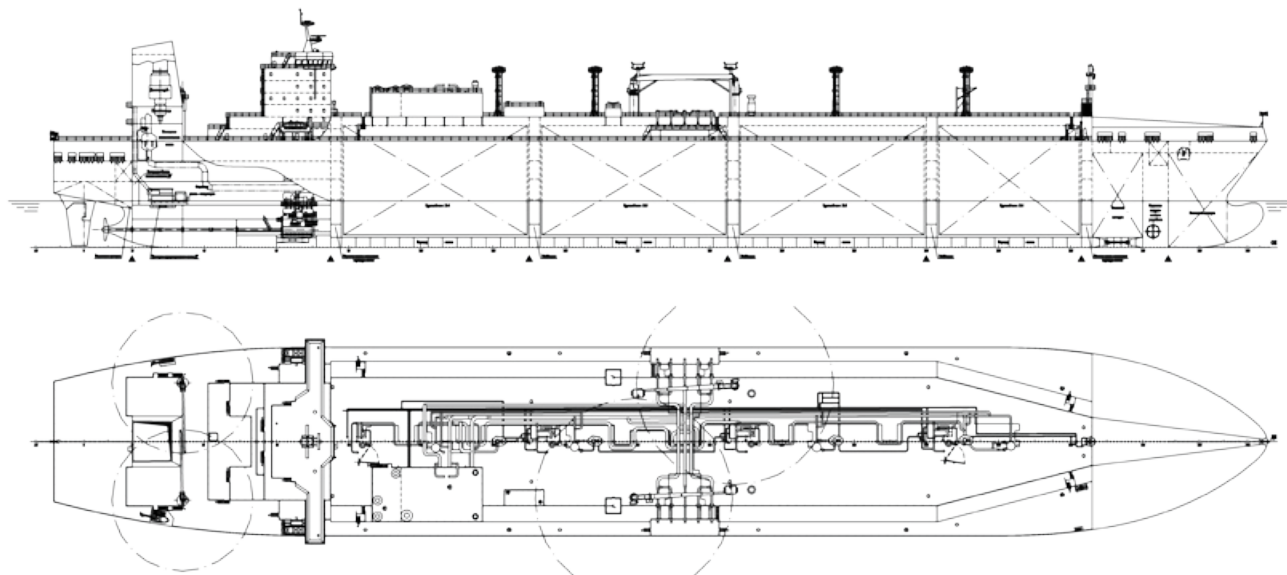
# CONVENTIONAL SIZE LNG CARRIER

170 000 M<sup>3</sup> LNG CARRIER WITH DUAL FUEL DIESEL-ELECTRIC OR DIESEL MECHANICAL  
PROPULSION PLANT, BALTIC ICE CLASS (IB)



## MAIN PERFORMANCE DATA

Main dimensions:	Length O.A.	302.5 m
	Length B.P.	285.0 m
	Breadth, mld	47.0 m
	Depth, mld	26.5 m
	Designed draught	11.5 m
Deadweight and capacity	Deadweight	approx. 85 000 t
	Cargo capacity (100% full)	170 000 m <sup>3</sup>
Cargo containment system	Cargo tanks	4 membrane type NO-96 (GTT)
	B.O.R.	approx. 0.15%/day
Speed	Service speed 85%MCR	18 kn
Cruising	Cruising range	12 000 nm
	Endurance	30 days
Complement	30 persons + 6 persons (extra worker)	





# MED-MAX SIZE LNG CARRIER

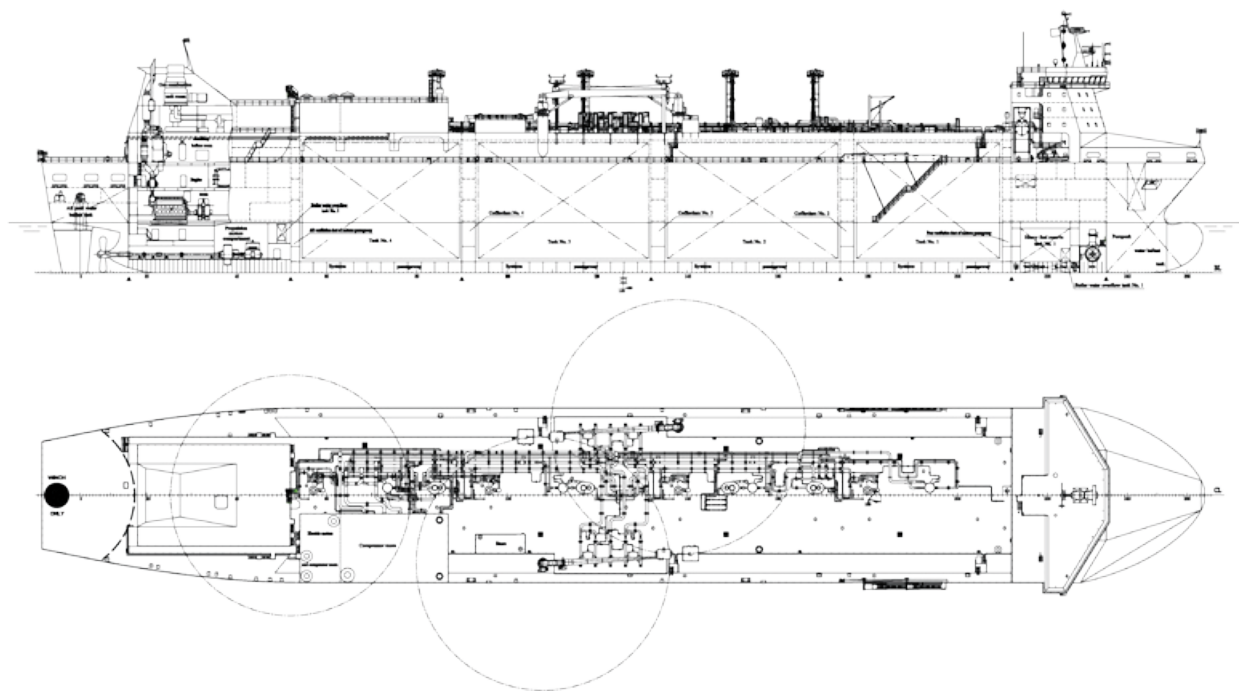
79 000 M<sup>3</sup> LNG CARRIER WITH DUAL FUEL DIESEL-ELECTRICAL PROPULSION PLANT,  
BALTIC ICE CLASS (IB)





## MAIN PERFORMANCE DATA

Main dimentions:	Length O.A.	232.4 m
	Length B.P.	217.0 m
	Breadth, mld	35.0 m
	Depth, mld	22.0 m
	Designed draught	10.0 m
Deadweight and capacity	Deadweight approx.	39 000 t
	Cargo capacity (100% full)	79 300 m <sup>3</sup>
Cargo containment system	Cargo tanks	4 membrane type NO-96 (GTT)
	B.O.R.	approx. 0.18%/day
Speed	Service speed 85%MCR	17.5 kn
Cruising	Cruising range	6 500 nm
	Endurance	30 days
Complement	30 persons + 6 persons (extra worker)	



# SMALL SCALE LNG CARRIER

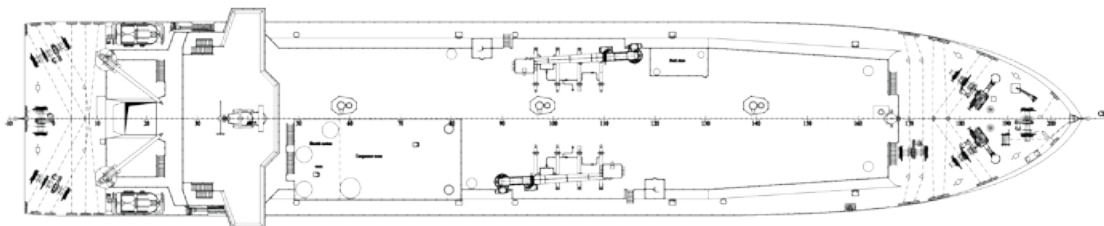
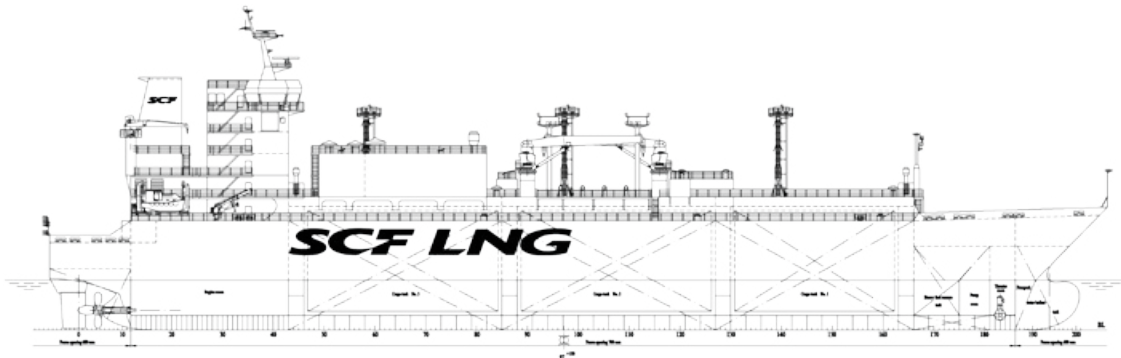
THE 19 000 M<sup>3</sup> LNG CARRIER IS DESIGNED FOR REGIONAL DISTRIBUTION OF NATURAL GAS. THE VESSEL HAS A DUAL FUEL DIESEL-MECHANICAL PROPULSION PLANT AND IS INTENDED FOR TRANSPORTATION OF SMALL AMOUNTS OF GAS FOR SATELLITE TERMINALS AND LNG BUNKER STATIONS.





# MAIN PERFORMANCE DATA

Main dimentions:	Length O.A.	145.7 m
	Length B.P.	133.7 m
	Breadth, mld	26.7 m
	Depth, mld	15.0 m
	Designed draught	6.5 m
Deadweight and capacity	Deadweight approx.	9 900 t
	Cargo capacity (100% full)	19 060 m³
Cargo containment system	Cargo tanks	3 membrane type NO-96 (GTT)
	B.O.R.	approx. 0.26%/day
Speed	Service speed 85%MCR	15.0 kn
Cruising	Cruising range	6 000 nm
	Endurance	30 days
Complement	30 persons + 6 persons (extra worker)	



# SHUTTLE LNG CARRIER FOR ARCTIC OPERATION

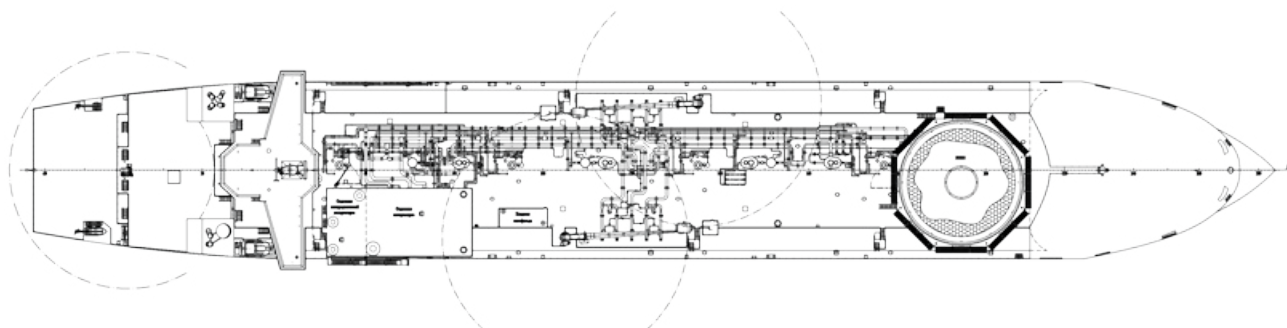
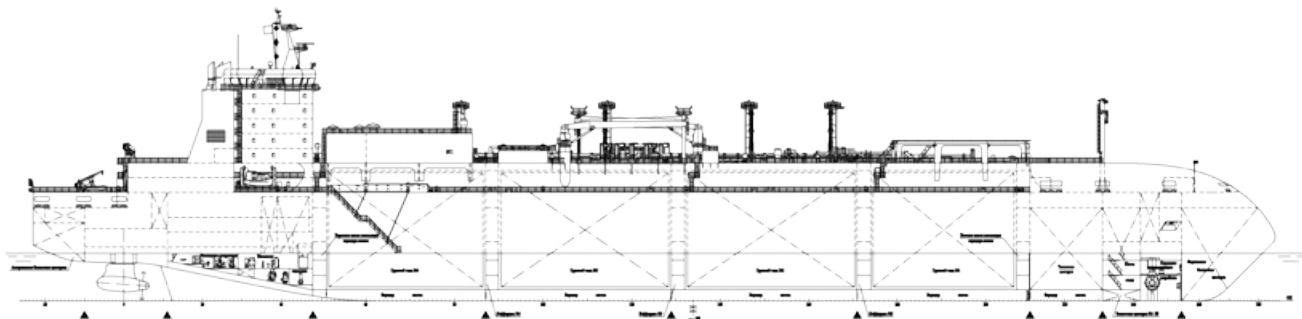
79 000 M<sup>3</sup> SHUTTLE LNG CARRIER FOR OPERATION IN HEAVY ARCTIC ICE CONDITIONS (ICE CLASS RS ARC7). THE VESSEL WITH A DUAL DIESEL ELECTRICAL PROPULSION PLANT AND TWO AZIMUTH THRUSTERS CAN GO AHEAD OR ASTERN IN ICE CONDITIONS.





## MAIN PERFORMANCE DATA

Main dimensions:	Length O.A.	252.4 m
	Length B.P.	231.0 m
	Breadth, mld	36.0 m
	Depth, mld	22.0 m
	Designed draught	9.7 m
Deadweight and capacity	Deadweight approx.	approx. 39 000 t
	Cargo capacity (100% full)	79 300 m <sup>3</sup>
Cargo containment system	Cargo tanks	4 membrane type NO-96 (GTT)
	B.O.R.	approx. 0.18%/day
Speed	Service speed 85%MCR	18 kn
Cruising	Cruising range	6 500 nm
	Endurance	30 days
Complement	30 persons + 6 persons (extra worker)	



# BUNKERING LNG VESSEL

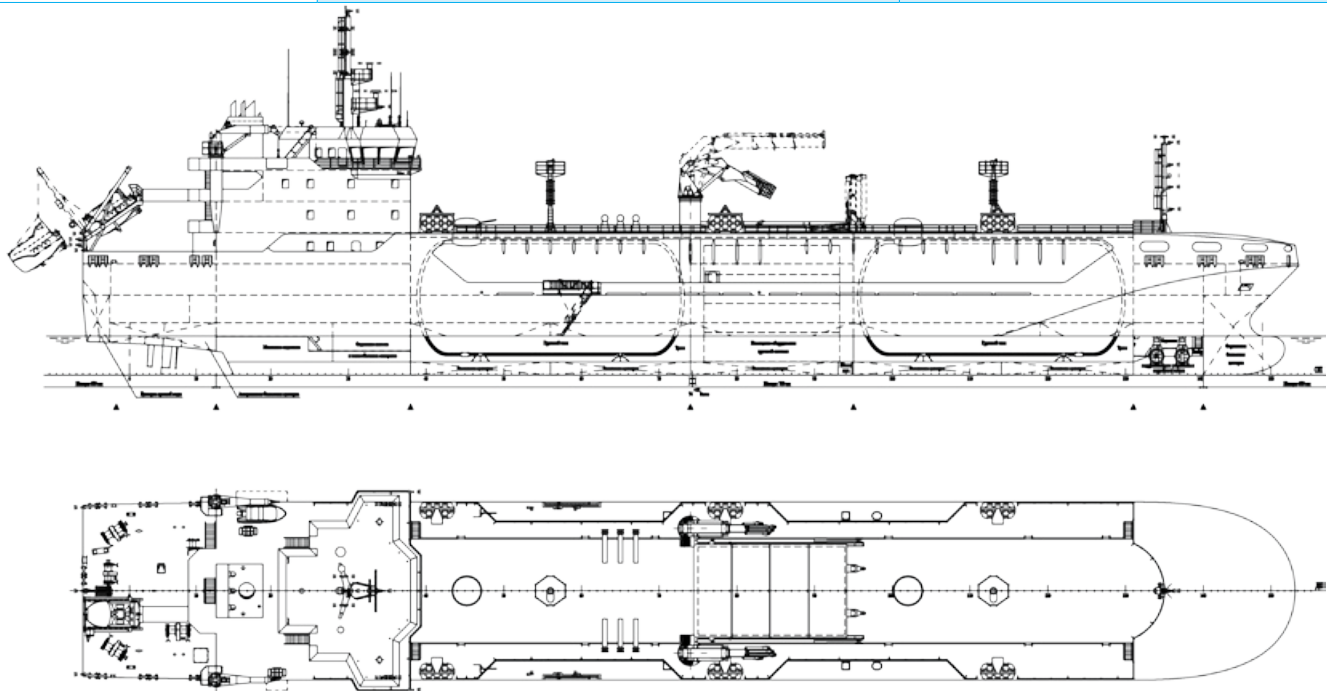
THE 3,000 M<sup>3</sup> BUNKERING LNG VESSEL IS DESIGNED FOR BUNKERING OTHER SHIP AND REGIONAL DISTRIBUTION OF SMALL AMOUNT OF NATURAL GAS. THE VESSEL HAS TWO IMO TYPE C CARGO TANKS AND A DUAL FUEL DIESEL-ELECTRICAL PROPULSION PLANT.





**MAIN PERFORMANCE DATA**

Main dimensions:	Length O.A.	109.5 m
	Length B.P.	102.0 m
	Breadth, mld	16.0 m
	Depth, mld	7.2 m
	Designed draught	4.2 m
Deadweight and capacity	Deadweight	approx. 2 100 t
	Cargo capacity (100% full)	3 020 m³
Cargo containment system	Cargo tanks	2 IMO Type C
Speed	Service speed 85%MCR	12.5 kn
Cruising	Cruising range	3 500 nm
	Endurance	20 days
Complement	16 persons	





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