

70.000 tdw Arctic Shuttle Tanker

MT "Mikhail Ulyanov" "MT Kirill Lavrov"



"Mikhail Ulyanov" is the first of two new Aker Arctic DAS™ double acting shuttle tankers for the Russian Arctic offshore in the Pechora Sea.

As a result of a unique collaboration involving an overseas designer and a Russian shipbuilder, the 70,000 dwt Mikhail Ulyanov is owned by OAO Sovcomflot and was delivered by OAO Admiralty Shipyards in early 2010. The state of the art vessel, designed completely by Aker Arctic Technology, will be plying one of the harshest of trades, shuttling oil from the Prirazlomnoye oil field development in the Pechora Sea to a Floating Storage and Offloading (FSO) unit moored off Murmansk.

Sister ship Kirill Lavrov is also planned to service an area which is covered in ice during the entire winter navigation season. During hard winter seasons temperatures can fall

as low as minus 40 C° and ice can form over 1.2 metres in thickness.

Hull structures for ice strengthening of the ships is in accordance with Russian Maritime Register of Shipping ice category Arc 6 , with the stern of the vessel strengthened for bow design ice loads for double acting operation.

All equipment are designed to be exposed to ambient temperature of minus 40°C.

The underwater hull form incorporates an icebreaking bow for operation ahead in young ice and thin first year ice conditions. The bow shape is derived from a compromise of both ice operational performance as well as open water sea-keeping and performance.

The propulsion solution comes from ABB Marine, in the shape of twin Azipods®. The azimuthing thrusters enable the ships to penetrate cross ridged ice when

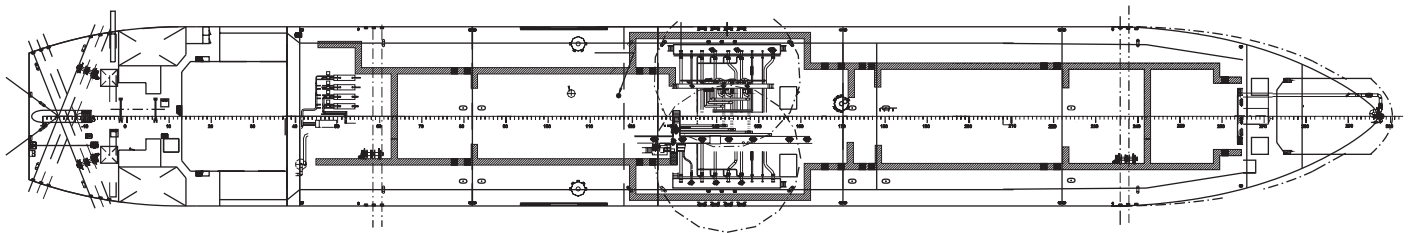
running astern with a continuous slow speed, where conventional ships ram when running ahead. "Mikhail Ulyanov" and "Kirill Lavrov" are able to achieve 3 knots speed astern in first year level ice, 1.2 m thickness with 0.2 m of snow layer and 3 knots speed ahead in first year level ice, 0.5 m thickness.

They will also need to shuttle at speeds of up to 16 knots, with occasional voyages to Atlantic destinations.

The bridges have been outfitted with state of the art equipment, supplied by Transas. The electronics will include communication equipment for GMDSS area A4, two radars for extreme temperatures, two ECDIS 3000-I systems, six information displays with Navi-Conning, Automatic Identification System, Voyage Data Recorder, log, and echosounder.

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Main dimensions

length over all abt	257 m
length betw. perp.	236 m
breadth	31 m
depth	20,8 m
draught summer load line	14,0 m
draught scantling	14,0 m
draught ballast open water	8,93 m
deadweight	70 000 t
trial speed	16 kts

Main engine particulars

totally four (4) main engines;
engines driving generators at
constant speed
all engines designed for flexible
mounting

make and type	Wartsila 9L38
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main particulars

max continuous rating (MCR)	6 525 kW
speed	600 rpm

Bow thruster particulars

two ice class LU6 bow thrusters
data values
classification, ice class LU 6
drive configuration electric
maximum output power 2000 kW
nominal speed of e -motor 600 rpm

Propulsion particulars

two Azipod propulsors, size V23
classification, ice class LU 6
type of operation pulling
maximum output 8 500 kW
propeller diameter abt. 5,6 m
propeller material stainless steel

Russian Register of Shipping - class notation

KM (*) ARC6 I2IAUT1 EPP OIL
TANKER (ESP)

L'loyds Register of Shipping (LR) - class notation

+ 100 AI DOUBLE HULL OIL
TANKER, ESP, ShipRight (SOA,
FDA, CM), L1, +LMC, UMS, IGS,
NAV 1, IBS, ICC, SPM, BLS,
HELICOPTER LANDING AREA,
EP(P), DP(AA), WINTERIZATION
0(-40)

notes:

1. DP capability is redundant only in limited environmental conditions.
2. Winterization notation shall be assigned on the basis of the agreed technical measures, between the builder and buyer as defined in the specification requirements on "arctic specialities"
3. Statements of compliance with VECS requirements (USCG 46, CFR 39 OND IMO MSC EIRE. 585) and DnV-FAMC requirements and LR descriptive class *notations*: Pechora Sea (Prirazlomnoye) to Murmansk service, port higher tensile steel, ice class (RMRS LU6), centralized operation station for liquid cargoes, ShipRight (PCWBT), ETA

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