



POLA MAKARIA: Multi-purpose dry cargo vessel

Shipbuilder: **OJSC Shipyard Krasnoye Sormovo**
 Vessel's name: **Pola Makaria**
 Hull No: **06001**
 Owner/Operator: **Pola Group**
 Country: **Russian Federation**
 Designer: **Marine Engineering Bureau**
 Country: **Ukraine**
 Flag: **Russian Federation**
 IMO number: **9849423**
 Total number of sister ships already completed (excluding ship presented): **4**
 Total number of sister ships still on order: **9**

Russia's vast territories are well served by rivers and canals providing a means for transporting all kinds of goods and commodities. Many of the vessels are deemed sea/river ships meaning they can navigate the river and canal system as well as navigate in open seas albeit with some restrictions as to distance allowed from a port of refuge.

The 7,679dwt *Pola Makaria* is the first of a new design labelled Project RSD59 developed by Marine Engineering Bureau-Design in Saint Petersburg. So far 10 of the type have been contracted at Krasnoye Sormovo shipyard and another five at Nevsky shipyard. Developed from the earlier RSD49 type, *Pola Makaria* and her sisters are the biggest multipurpose dry cargo vessels able to transit the Volga-Don canal. They have a length of 141m, a beam of 16.9m and a salt water draught of 4.53m. In comparison with the RSD49 projects, the newbuild RSD59 have an increased deadweight of 535tonnes at sea and 765tonnes in fresh water.

Pola Makaria is intended for carrying a wide range of cargoes from general cargoes and containers to bulk cargoes and large project cargoes. The ships have two cargo holds, the longest of which is 77.35m, and a hold height of 9m through the coamings to hatches. The former allows for carrying heavy and long project cargoes particularly to Caspian Sea energy projects, and the height permits three tiers of over-height 9' 6" containers to be loaded. The holds are covered with pontoon type removable hatch covers. Opening and closing of each section is carried out using a special gantry crane, which when stowed is located in the bow bulkhead deckhouse.

Propulsion is by a pair of Wärtsilä 6L20 four-stroke engines of 1,200kW each. All of the sea/river types are highly manoeuvrable and *Pola Makaria* is no exception being fitted with a pair of fully azimuthing Schottel rudder propellers.

TECHNICAL PARTICULARS

Length oa: 140.88m
 Length bp: 137.08m
 Breadth moulded: 16.90m
 Depth moulded
 To main deck: 6.00m
 Width of double skin
 Side: 2.33m
 Bottom: 0.98m
 Draught
 Scantling: 4.53 (at sea)
 Design: 3.60 (in river)
 Gross: 6,266gt
 Displacement: 10,395t
 Lightweight: 2,716t
 Deadweight
 Design: 5,272dwt (in river at draught of 3.60m)
 Scantling: 7,679dwt (at sea)
 Block co-efficient: 0.940 (draught 4.53m)
 Speed, service: 10knots
 Cargo capacity
 Bale: 11,292m³
 Grain: 11,292m³
 Bunkers
 Heavy oil: 365.3m³
 Diesel oil: 48.6m³
 Water ballast: 4,712m³
 Daily fuel consumption (tonnes/day)
 Main engine only: 8t/day
 Auxiliaries: 0.5t/day
 Classification society and notations: Russian Maritime Register of Shipping (RS) KM (★) Ice2 R2 AUT1-ICS CONT (deck, cargo holds Nos.1,2) DG (bulk, pack)
 % high-tensile steel used in construction: 80% (hull – 100%)
 Main engines
 Design: Diesel engine
 Model: 6L20
 Manufacturer: Wärtsilä
 Number: 2
 Type of fuel: HFO
 Output of each engine: 1,200kW
 Gearboxes
 Output speed: 1,000rpm (direct ME to rudder-propeller)
 Propeller(s)
 Designer/Manufacturer: Schottel SRP 340FP
 Number: 2

Fixed/controllable pitch: Fixed
 Diameter: 1,900mm
 Speed: 307rpm
 Diesel-driven alternators
 Number: 2
 Engine make/type: Volvo Penta / D13
 Type of fuel: MDO
 Output/speed of each set: 332kW / 1,500rpm
 Output/speed of each set: 332kW / 1,500rpm
 Boilers
 Number: 1
 Type: Steam boiler
 Make: Aalborg CHB-750
 Output, each boiler: 0.75t/h
 Other cranes
 Number: 1
 Make: Sormec
 Type: Gantry crane
 Tasks: Cargo holds hatch covers
 Mooring equipment
 Number: 2 anchor-mooring bow winches, 1 aft anchor-mooring winch
 Make: Adria Winch
 Type: Electro-hydraulic
 Special lifesaving equipment
 Number of each and capacity: .1 x 14 persons
 Make: Davit International
 Type: Free-fall lifeboat
 Hatch covers
 Design: Marine Engineering Bureau
 Manufacturer: OJSC Shipyard
 Type: .. Pontoon type moving by gantry crane
 Containers
 Lengths: 20'/40'
 Heights: 9.5'
 Total TEU capacity: 248
 On deck: 56
 In holds: 192
 Homogeneously loaded to 14t: 248
 Tiers (maximum)
 On deck: 1
 In holds: 3
 Ballast control system
 Make: Valcom
 Type: TSS/Control
 Water Ballast Treatment System
 Make: Alfa Laval, PureBallast 3.1
 Capacity: intake 125 – 500m³/h, discharge 60 – 500m³/h
 Complement
 Officers: 6
 Crew: 5
 Supernumeraries/Spare: 3
 Single/double/other rooms: . 11/reserve berth 3/pilot
 Stern appendages/special rudders: 2 full-revolving rudder propellers with fixed-pitch propellers in nozzles SRP-340FP Schottel
 Bow thrusters
 Make: Schottel STT 0170 FP
 Number: 1
 Output (each): 230kW
 Fire detection system
 Make: MRS Electronics
 Type: PS-220-5A
 Fire extinguishing systems
 Cargo holds: CO₂
 Make/Type: Wilhelmsen
 Engine room: CO₂
 Make/Type: Wilhelmsen
 Cabins: Water
 Public spaces: Water
 Radars
 Number: 2
 Make: JRC
 Model(s): JMA-5300MKII
 Integrated bridge system: Yes
 Make: Valcom
 Model: TSS/Bridge alarm
 Waste disposal plant
 Sewage plant
 Make: JOWA
 Contract date: 05 September 2017
 Launch/float-out date: 20 April 2018
 Delivery date: 24 May 2018

