

REPORT ON OIL ENGINE MACHINERY.

No. 39
31 OCT 1929

Received at London Office

Date of writing Report 25th OCT 1929 When handed in at Local Office

Port of Leningrad

No. in Survey held at Leningrad
Reg. Book.Date, First Survey 15th Nov 1927 Last Survey 21st Oct 1929

Number of Visits 97

34553 on the ^{Single}
^{Twin}
^{Triple}
^{Quadruple}

Screw vessel

SMOLNY

Tons { Gross 3767
Net 2164

Built at Leningrad

By whom built SEVERNEY SHIPBUILDING YARD

Yard No. 306 When built 1929

Engines made at Leningrad

By whom made RUSSIAN DIESEL WORKS

Engine No. 306 When made 1929

Boilers made at Leningrad

By whom made SEVERNEY SHIPBUILDING YARD

Boiler No. 306 When made 1929

Indicated Horse Power 2200

Owners SOVTORGFLOT

Port belonging to Leningrad

Nominal Horse Power as per Rule 692

Is Refrigerating Machinery fitted for cargo purposes YES

Is Electric Light fitted YES

Trade for which vessel is intended Leningrad - London.

L ENGINES, &c.—Type of Engines RUSSIAN DIESEL NOBEL TYPE 2 or 4 stroke cycle 2 Single or double acting SINGLE

Maximum pressure in cylinders 35 kg/cm² Diameter of cylinders 650 mm Length of stroke 860 mm No. of cylinders SIX No. of cranks SIX

Distance of bearings, adjacent to the Crank, measured from inner edge to inner edge 920 mm Is there a bearing between each crank YES

Revolutions per minute 115 Flywheel dia. 2300 mm Weight 8630 kilos Means of ignition COMPRESSION Kind of fuel used ABOVE 150°F

Crank Shaft, dia. of journals as per Rule 393 mm as fitted 400 mm Crank pin dia. 400 mm Crank Webs Mid. length breadth 600 mm Mid. length thickness 220 mm Thickness parallel to axis shrunk Thickness around eye-hole

Flywheel Shaft, diameter as per Rule 393 mm as fitted 400 mm Intermediate Shafts, diameter as per Rule 285 mm as fitted 320 mm Thrust Shaft, diameter at collars as per Rule 300 mm as fitted 340 mm

Main Shaft, diameter as per Rule as fitted Screw Shaft, diameter as per Rule 341 mm as fitted 350 mm Is the shaft fitted with a continuous liner No 2 liners

Liner Liners, thickness in way of bushes as per Rule 18.2 mm as fitted 20 mm Thickness between bushes as per rule Is the after end of the liner made watertight in the

propeller boss YES If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner TWO LINERS

If the liner does not fit tightly at the part between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive

If two liners are fitted, is the shaft lapped or protected between the liners YES Is an approved Oil Gland or other appliance fitted at the after

end of the tube shaft NONE Length of Bearing in Stern Bush next to and supporting propeller 1400 mm

Propeller, dia. 3950 mm Pitch 3800/4200 mm No. of blades 4 Material BRONZE whether Moveable YES Total Developed Surface 6.31 sq. metres

Method of reversing Engines COM. AIR Is a governor or other arrangement fitted to prevent racing of the engine when decelerated YES Means of lubrication

GRAVITY Thickness of cylinder liners 60 mm MAX. Are the cylinders fitted with safety valves YES Are the exhaust pipes and silencers water cooled or lagged with

conducting material YES If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine

Cooling Water Pumps, No. 4 TWO MAIN & BILGE & BALLAST PUMPS Is the sea suction provided with an efficient strainer which can be cleared within the vessel YES

Large Pumps worked from the Main Engines, No. ONE Diameter 110 mm Stroke 200 mm Can one be overhauled while the other is at work

Pumps connected to the Main Bilge Line No. and Size TWO 70 TON EACH, (INDEPENDENT) 200 x 350 mm STROKE DUPLEX

How driven ELECTRIC MOTORS BOTH BILGE PUMPS CONNECTED TO BALLAST LINE

Ballast Pumps, No. and size TWO 70 TON EACH, (INDEPENDENT) 200 x 350 mm STROKE DUPLEX Lubricating Oil Pumps, including Spare Pump, No. and size

two independent means arranged for circulating water through the Oil Cooler Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge

Pumps, No. and size:—In Machinery Spaces TWO @ 6" DIA. (DIRECT) 2 @ 3" DIA. TUNNEL WELL 3" DIA.

Holds, &c. EACH HOLD 2 @ 3" DIA. PORT & STARBOARD

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size TWO P & S 6" DIRECT

All the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes YES Are the Bilge Suctions in the Machinery Spaces

from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges YES

All Sea Connections fitted direct on the skin of the ship WHICH CONNECTS WITH SEA THROUGH Are they fitted with Valves or Cocks BOTH

they fixed sufficiently high on the ship's side to be seen without lifting the platform plates KINASTON VALVE DOUBLE BOTTOM TANK

they each fitted with a Discharge Valve always accessible on the plating of the vessel YES Are the Blow Off Cocks fitted with a spigot and brass covering plate YES

at pipes pass through the bunkers NONE How are they protected

at pipes pass through the deep tanks NONE Have they been tested as per Rule

All Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times YES

The arrangement of valves and their connections such as to prevent the possibility of water passing from the sea or from water tanks into the cargo or machinery spaces, or from one

compartment to another YES Is the Shaft Tunnel watertight YES Is it fitted with a watertight door YES worked from MAIN DECK

In wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork

In Air Compressors, No. TWO UNITS L.P. & H.P. No. of stages THREE Diameters 280 mm H.P. 280 mm Stroke 580 mm Driven by ROCKING LEVERS

Auxiliary Air Compressors, No. TWO UNITS L.P. & H.P. No. of stages THREE Diameters 280 mm H.P. 280 mm Stroke 270 mm Driven by ELECTRIC MOTOR

All Auxiliary Air Compressors, No. ONE No. of stages TWO Diameters 188 mm H.P. 80 mm Stroke 170 mm Driven by ELECTRIC MOTOR

Serving Air Pumps, No. TWO DOUBLE ACTING Diameter 1050/300 x 1050 mm Stroke 700 mm Driven by ROCKING LEVERS

Auxiliary Engines crank shafts, diameter as per Rule APPROVED LONDON LETTERS 11/12/26 & 23/3/26 as fitted 165 mm

RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule YES

The internal surfaces of the receivers be examined YES What means are provided for cleaning their inner surfaces REMOVABLE ENDS & USE OF STEAM

Is there a drain arrangement fitted at the lowest part of each receiver YES

High Pressure Air Receivers, No. TWO "AUX." Cubic capacity of each 250 LITRES Internal diameter 400 mm thickness 18 mm

Seamless, lap welded or riveted longitudinal joint SEAMLESS Material S.M. STEEL Range of tensile strength 52/56 kg/cm² Working pressure by Rules 105 kg/cm²

Starting Air Receivers, No. TEN Total cubic capacity 4000 LITRES Internal diameter 400 mm thickness 18 mm

Seamless, lap welded or riveted longitudinal joint SEAMLESS Material S.M. STEEL Range of tensile strength 52/56 kg/cm² Working pressure by Rules 105 kg/cm²

IS A DONKEY BOILER FITTED? YES YARROW TYPE & ALSO WASTE HEAT BOILER

If so, is a report now forwarded? YES

PLANS. Are approved plans forwarded herewith for Shafting 14/4/26

Receiver 26/7/27 & 31/10/28

Separate Tanks 2/3/28

Donkey Boilers YARROW BOILER 9/4/29 (If not, state date of approval)
WASTE HEAT BOILER 20/2/28 General Pumping Arrangements 31/7/28

Oil Fuel BURNING Arrangements 2/11/28

SPARE GEAR/MAIN MOTOR :- 1 Cylinder cover complete with all valves, casings, springs etc, 1 complete set of extra cylinder cover valves, 3 Fuel valve spindles, 1 Piston complete with rings, 1 set of skew wheels for cam shaft drive (4), sets of coupling bolts for Crank & Intermediate shafts, set of fuel pump parts plungers, valves & springs, 1 set of main compressor piston rings & 1/2 set of valves, a number of lengths of different diameter high pressure piping, 1 set of studs and nuts for cylinder cover, a quantity of assorted bolts & nuts.

AUX. MACHINERY :- 1 Set of Piston rings and half set of valves for each compressor.

60 Kw Dynamo engines connecting rods and main bearing bolts, 1 set of piston rings and working parts for fuel pump also fuel valve. One set of valves and other spares for water circulating pump and also bilge pump.

This spare gear has been supplied in accordance with the 1925/6 Rules for Diesel engines.



The foregoing is a correct description,

B. Harytanovich Manufacturer.

Dates of Survey while building
During progress of work in shops - 1927: 15/3, 24/5, 6/7, 14/7, 22/9, 27/9, 11/10, 12/10, 14/10, 19/10, 9/11, 14/12, 24/12, 28/12. 1928: 4/1, 11/1, 26/1, 1/2, 8/2, 22/2, 23/2, 29/2, 7/3, 14/3, 21/3, 22/3, 28/3, 9/4, 11/4, 24/4, 15/5, 16/5, 22/5, 23/5, 24/5, 13/6, 14/6, 3/7, 12/7, 14/7, 29/8, 4/9, 5/9, 6/9, 11/9, 9/10, 15/10, 17/10, 27/10, 31/10, 15/11, 27/11, 28/11, 13/12. 1929: 2/1, 3/1, 9/1, 17/1, 23/1, 24/1, 5/2, 12/2, 20/2, 26/2, 5/3, 6/3, 20/3, 26/3, 27/3.
During erection on board vessel - 1927: 20/3, 2/4, 3/4, 9/4, 10/4, 13/4, 22/4, 25/4, 1/7, 19/7.
1928: 11/10, 15/10, 16/10. 1929: 12/1, 1929: 19/1, 12/2, 9/4, 16/4, 13/5, 28/5, 19/6, 16/7, 23/7, 6/8, 20/8, 19/9, 3/10, 21/10.
Total No. of visits 97.

Dates of Examination of principal parts - Cylinders To 11/4/28 Covers To 14/11/28 Pistons 3/9/27-18/4/28 Rods 3/9/27-23/4/28 Connecting rods 18/1/28

Crank shaft 12/1/27 PRAGE Flywheel shaft 6/9/28 Thrust shaft 6/9/28 Intermediate shafts 5/3/27-15/4/28 Tube shaft ✓

Screw shaft 5/3/29 Propeller 9/4/29 Stern tube 11/16/10/27 Engine seatings 10/1/29 Engines holding down bolts 17/23/7/29

Completion of fitting sea connections 11/10/27 Completion of pumping arrangements 2/10/29 Engines tried under working conditions 1-3/10/29

Crank shaft, Material STEEL Identification Mark C.R.H 12/1/27 Flywheel shaft, Material STEEL Identification Mark AS THRUST SHAFT

Thrust shaft, Material STEEL Identification Mark Lloyd's N° 0563 Intermediate shafts, Material STEEL Identification Marks SEE UNDER

Tube shaft, Material ✓ Identification Mark ✓ Screw shaft, Material STEEL Identification Mark N° 0636 N.H. 5/3/29

Is the flash point of the oil to be used over 150° F. YES

Is this machinery duplicate of a previous case YES If so, state name of vessel M/S "ALEXIS RYKOFF"

General Remarks (State quality of workmanship, opinions as to class, &c.)

INTERMEDIATE SHAFTS :- LLOYDS N° 0566 N.H. 11/9/28 LLOYDS N° 0567 N.H. 11/9/28 LLOYDS N° 0568 N.H. 11/9/28 LLOYDS N° 0569 N.H. 11/9/28 LLOYDS N° 0570 N.H. 15/11/28

STARTING AIR RECEIVERS :- N° 45, 46, 48, 51, 52, 54, 57, M.K. 30/4/27 431, 432 J.L. 28/4/27, 170 V.S. 25/4/27

MAIN BLAST AIR BOTTLES (2) AUX. STARTING BOTTLES (2) N° 137 & 146 P.K. 30/11/27 140 & 151 P.K. 30/11/27

N° 5 STAMPS ON THE ABOVE AIR RECEIVERS HAVE BEEN VERIFIED FROM COPY OF DUSSELDORF REPORTS DATED 3/5/27 & 2/12/27.

This machinery has been constructed under special survey in accordance with the Rules and approved plans. The materials and workmanship are sound and good, the machinery has been fitted on board the vessel in an efficient manner examined under working conditions and everything found satisfactory and is in my opinion eligible to be classed with record of L.M.C. 10-29 Propeller shaft has been fitted with two liners. The rule requirements for "Ice Navigation" have been carried out.

The amount of Entry Fee ... £ : : When applied for,
Special ... £ : : 19.
Donkey Boiler Fee ... £ : : When received,
Travelling Expenses (if any) £ : : 19.

Committee's Minute

Assigned

L.M.C. 10.29 (Oil Engines)
Subject

W.T. D.B. 7th. D.B. 7th.

A. M. Crisick

Engineer Surveyor to Lloyd's Register of Shipping.

FRI. 18 JUL 1930

CERTIFICATE WHEN

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Foundation