

## REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

Date of writing Report 8<sup>th</sup> Oct 1927 When handed in at Local Office19 Port of LENINGRADNo. in Survey held at LENINGRADDate, First Survey 24<sup>th</sup> Feb. 1926 Last Survey 7<sup>th</sup> Oct. 1927

Reg. Book.

(Number of Visits 72)on the S/S "TOVARISTCH KRASSIN"Gross  
Tons  
NetBuilt at LENINGRAD By whom built BALTIC SHIPBUILDING & ENG<sup>s</sup> WORKS Yard No. 168 When built 1927Engines made at LENINGRAD By whom made Do. Do. Engine No. 168 when made 1927Boilers made at LENINGRAD By whom made Do. Do. Boiler No. 168 when made 1927Registered Horse Power Owners SOVIET MERCANTILE FLEET Port belonging to LENINGRADNom. Horse Power as per Rule 192 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted YESTrade for which Vessel is intended TIMBER CARRYING

ENGINES, &c. Description of Engines STEAM INVERTED RECIPROCATING Revs. per minute 90

Dia. of Cylinders 450 x 740 x 230 Length of Stroke 900 mm No. of Cylinders 3 No. of Cranks 3

Crank shaft, dia. of journals as per Rule 243 mm as fitted 250 mm Crank pin dia. 250 mm Crank webs Mid. length breadth 278 mm Thickness parallel to axis 160 mm Mid. length thickness 160 mm Thickness around eye-hole 160 mm

Intermediate Shafts, diameter as per Rule 231.4 mm as fitted 235 mm Thrust shaft, diameter at collars as per Rule 243 mm as fitted 250 mm

Tube Shafts, diameter as per Rule 16 mm as fitted 17 mm Screw Shaft, diameter as per Rule 270.4 mm as fitted 285 mm Is the screw shaft fitted with a continuous liner No 2 liners

Bronze Liners, thickness in way of bushes as per Rule 16 mm as fitted 17 mm Thickness between bushes as per Rule 16 mm as fitted 17 mm 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 YES

If two liners are fitted, is the shaft lapped or protected between the liners PAINTED BETWEEN LINERS 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 1200 mm

Propeller, dia. 3900 mm Pitch 3300 mm No. of Blades 4 Material CAST STEEL whether Moveable SOLID Total Developed Surface 5.06 sq. ft.

Feed Pumps worked from the Main Engines, No. TWO Diameter 78 mm Stroke 435 mm Can one be overhauled while the other is at work YES

Bilge Pumps worked from the Main Engines, No. TWO Diameter 78 mm Stroke 435 mm Can one be overhauled while the other is at work YES

Feed Pumps { No. and size ONE DUPLEX 7 1/2" x 5" x 6" How driven STEAM CYLINDERS Pumps connected to the Main Bilge Line { No. and size TWO, BILGE 9" x 7" x 8", BALLAST 10" x 8 1/2" x 8" How driven STEAM CYLINDERS

Ballast Pumps, No. and size ONE, 100 TON, 10" x 8 1/2" x 8" Lubricating Oil Pumps, including Spare Pump, No. and size ONE, 100 TON, 10" x 8 1/2" x 8"

Are two independent means arranged for circulating water through the Oil Cooler YES Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge Pumps;—In Engine and Boiler Room ENGINE ROOM 4 @ 100 mm, BOILER ROOM 1 @ 100 mm & TUNNEL WELL 100 mm DIA.

In Holds, &c. AFT HOLD 4 @ 100 mm, FOR<sup>d</sup> HOLD 2 @ 100 mm DIA.

Main Water Circulating Pump Direct Bilge Suctions, No. and size 1 @ 170 mm DIA Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 2 @ 100 mm DIA. Are all the Bilge Suction Pipes in holds and tunnel well fitted with strum-boxes YES

Are the Bilge Suctions in the Machinery Space led from easily accessible mud-boxes, placed NEAR the level of the working floor, with straight tail pipes to the bilges YES

Are all Sea Connections fitted direct on the skin of the ship YES Are they fitted with Valves or Cocks BOTH

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates YES Are the Overboard Discharges above or below the deep water line ABOVE

Are 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

What Pipes are carried through the bunkers SANITARY, AIR PIPES & SCUPPERS How are they protected STEEL CASINGS

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

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

Is 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

MAIN BOILERS, &c. — (Letter for record S) Total Heating Surface of Boilers 2754 sq. m. 185 sq. ft.

Is Forced Draft fitted YES No. and Description of Boilers TWO MARINE RETURN TUBE Working Pressure 13 kg/cm<sup>2</sup>

IS A REPORT ON MAIN BOILERS NOW FORWARDED? YES

IS A DONKEY BOILER FITTED? NONE If so, is a report now forwarded? YES

PLANS. Are approved plans forwarded herewith for Shafting 3/6/25 Main Boilers 3/6/25 Auxiliary Boilers YES Donkey Boilers YES

(If not state date of approval)

Superheaters 7/5/26 General Pumping Arrangements 17/6/26 Oil fuel Burning Piping Arrangements YES

SPARE GEAR. State the articles supplied:—

2 each, Connecting Rod top end bolts, bottom end bolts, main bearing bolts.

1 set each, Coupling bolts for Crank shaft and Propeller shaft.

1 set each, Feed pump valves, Bilge pump valves, Piston springs.

2 quantity of assorted bolts and nuts and iron of various sizes.

1 Crank shaft, 1 Propeller, 1 pair of Connecting rod brasses, 1 set of Link brasses.

1 Eccentric strap complete suitable for H.P. & L.P. valves. 1 Eccentric strap complete for L.P. Valve.

H.P. & L.P. Valve spindle, 1 set of Boiler check valves. 2 Dog. Boiler tubes.

3 Dog. each, Tubes for Main and Auxiliary Condensers.

1 set of springs for Boiler safety valves and cylinder escape valves.

Items underlined will be supplied on the vessels return to Leningrad.

The foregoing is a correct description,

B. Tofsky

Manufacturer.

005141-005153-0304

Lloyd's Register  
Foundation



1926  
 24/2, 1, 6, 13, 24, 29/3, 5, 8, 12, 13, 19, 22, 24, 27, 29/4, 13, 17, 20, 27/5, 3, 8, 14, 17, 28/6, 5, 13, 16, 20, 23, 26/7, 27, 30/7, 3, 4, 5, 10, 11, 13, 20, 24, 27, 30/8, 1, 3, 6, 7, 10, 13, 14, 15, 18, 20, 23, 25, 29/9, 11, 13, 15, 18, 21, 25/10, 5, 6, 8, 11, 15, 18, 20, 23, 25, 27, 29/11, 1927 4, 13, 17/1, 1, 22, 13, 5, 7, 11, 15, 18, 21, 29/4, 5, 13, 18, 20, 27/5, 16, 22/6, 4, 15/7

Dates of Survey while building

During progress of work in shops - -

During erection on board vessel - -

Total No. of visits 72.

Dates of Examination of principal parts—Cylinders 25/10/26 Slides 15/9/26 Covers 25/10/26

Pistons 15/9/26 to 5/11/26 Piston Rods 5/11/26 Connecting rods 15/9/26

Crank shaft 3/8/26 + 20/9/26 Thrust shaft 5/11/26 Intermediate shafts 5/11/26, 11/11/26 + 20/11/26

Tube shaft ✓ Screw shaft 26/7/27 SEE NOTE BELOW Propeller 26/7/27

Stern tube 26/7/27 SEE NOTE BELOW Engine and boiler seatings 30/9/26 Engines holding down bolts 27/1/27

Completion of pumping arrangements 21/9/27 Boilers fixed 7/10/27 Engines tried under steam 7/10/27

Main boiler safety valves adjusted 7/10/27 Thickness of adjusting washers P.B.S. 19 3/4" S.B.S. 22 3/4" P. 16 5/8" P. 19 1/4"

Crank shaft material STEEL Identification Mark 0034, H.R.H. WEL Thrust shaft material STEEL Identification Mark 0081 WEL. LLOYDS

Intermediate shafts, material STEEL Identification Marks 0082, 0085, 0096, LLOYDS. Tube shaft, material STEEL ✓ Identification Mark ✓

Screw shaft, material STEEL Identification Mark N. 069 Steam Pipes, material COPPER ✓ Test pressure 39 x 26 kg/cm<sup>2</sup> ✓ Date of Test 16/8/27 to 18/8/27

Is an installation fitted for burning oil fuel No Is the flash point of the oil to be used over 150° F. ✓

Have the requirements of the Rules for carrying and burning oil fuel been complied with ✓

Is this machinery duplicate of a previous case YES If so, state name of vessel "S. GREGORY ZINOVIEFF"

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

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 engine and boilers have been fitted on board the vessel in an efficient manner, examined under steam and everything found satisfactory and is in our opinion eligible to be classed with record of \* L.M.C. 10-27. Subject to the propeller shaft (two lines) being drawn for examination before the end of September 1928. See London letter E 23/6/27. Copy of Russian Registry Certificate for examination of propeller shaft attached. The machinery requirements for "Ice Navigation" have been carried out.

It is submitted that  
 this vessel is eligible for  
 THE RECORD. + LMC 10. 27. FD.

Subject to the screw shaft being examined  
 before the end of September 1928.

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

Committee's Minute

TUES. 18 OCT 1927

Assigned

thine 10. 27 J.D  
 subject

CERTIFICATE WRITTEN



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