

# REPORT OF SURVEY FOR REPAIRS, &c., OF ENGINES AND BOILERS

(Received at London Office 24 NOV 1949)

Date of writing Report 19-11-49. When handed in at Local Office 19-11-49. Port of Antwerp.

No. in Survey held at Antwerp. Date First Survey 24th March. Last Survey 3rd November 1949. (No. of Visits 72)

10683 on the Machinery of the ~~Wood, Iron & Steel~~ "GEORGY SEDOV"

Gross Tonnage 1538. Vessel built at Glasgow. By whom W.W. Henderson & Co. Ltd. When 1909.

Net Tonnage 548. Engines made at Glasgow. By whom do. When 1909.

Nominal Horse Power M.N. Boilers, when made (Main) 1930 (stated). (Auxiliary) 1940.

of Main Boilers 2. Owners U.S.S.R. Owners' Address Moscow.

Donkey Boilers 1. Managers. Port Antwerp. Voyage Murmansk.

Main Boilers 200 lb. If Surveyed Afloat or in Dry Dock Both Harbour & No 10 City D. Dock. Voyage Murmansk.

Donkey Boilers do.

Report No. Port

Particulars of Examination and Repairs (if any) LMC 1149 etc for Reclassification

Particulars of Classification (which must be inserted precisely as in Register Book & Supplements).

CHARACTER for Special Survey, Date of last Survey and of Periodical Surveys.	Years assigned now expired	Machinery and Boiler Surveys (including date of N.B., if any)
+ SS: Riv. 403 1-20.		
		Reclass. compl. 1949

Special means, in the absence of internal examination, were adopted by the Surveyor to assure himself of the thorough efficiency of those parts of each Boiler? Yes.

Test date of internal examination of each boiler Main 10-49. Aux. 10-49.

Surveyor examine the Safety Valves of the Main Boilers? Yes. To what pressure were they afterwards adjusted under steam? 200 lbs/sq. in.

Surveyor examine the Safety Valves of the Donkey Boilers? Yes. To what pressure were they afterwards adjusted under steam? 200 lbs/sq. in.

Surveyor examine all the manholes, doors and their fastenings of the Main Boilers? Yes.

Surveyor examine the drain plugs of the Main Boilers? Yes.

Surveyor examine all the mountings of the Main Boilers? Yes.

Screw shaft now been drawn and examined? Yes. Has it a continuous liner? Yes. Is an approved oil retaining appliance fitted at the after end? No.

Oil retaining appliance fitted at the after end? No. State date of examination of Screw Shaft 6-49. State the wear down in the bush Keewooded. Is electric light and/or power fitted? Yes. If so, did the Surveyor examine the generators, motors, switchgear, cables and fuses? Yes.

Insulation resistance of the generators, circuits and apparatus been tested and found to be not less than 100,000 ohms? Yes (see 1st Survey attached).

Survey is not complete, state what arrangements have been made for its completion and what remains to be done. Complete.

Done:- Vessel in Drydock - Examined Propeller - after end of stem tube - under water fastenings - Sea Pumps + Valves opened up - Tail Shaft drawn in.

Examined opened up - Main Engine - Cylinders - Pistons + Rods - Valves + Linings - Crank - Thrust + Intermediate shafts with bearings - Attached pumps - Pumping arrangements - Steam Pipes (led to Kule Kaps) - Steering gear + Winches - Auxiliary pumps - Main Condenser (tested).

Main + Auxiliary boilers, in their entirety with doors + mountings opened up. Safety Valves afterwards adjusted under steam to above pressure.

In accordance with Approved Plans + Specs. Letters - the scantlings of the Main Boilers (stated to have been constructed in 1930) have been checked + repairs as over effected (1st Survey Report attached).

An Auxiliary boiler - constructed in 1940 - now fitted - with details as per attached Amsterdam Survey Report - No 10726. - the existing Auxiliary boiler having been found beyond repair. P.T.O.

Observations, Opinion, and Recommendation:- The Machinery of this Vessel - in my opinion - is suitable for records LMC 1149 + Notations TS:CL (New) 649, + Aux B. 1940 fitted 1949, 2MB.F.D. fitted 1949 (stated).

Reclass. Fees applied for 22-11-1949

Received by me, 19

Signature: J.G. Martin, Engineer Surveyor to Lloyd's Register of Shipping.

signed LMC 1149 made '30

SN 649 CL 2 NB fitted '34 refitted 1149

CERTIFICATE WRITTEN + NB (aux) made '40 fitted 1149

FRI. 30 DEC 1949

Insert Character of Ship and Machinery precisely as in the Register Book.

208741 - 008719 - 0113 1/4

is a Certificate required? If so, to be sent to Antwerp office



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The Electrical Installation was in such poor condition that it was decided to renew the whole Installation including fitting of two new steam driven generators & one emergency stand-by Diesel driven set. A copy of the relative Certificate for the Steam driven sets attached - the emergency stand-by Diesel set was accepted as per Sects. Letters dated 23-6-49 & 15-8-49. A copy of the Approved Plan of Brankshaft attached together with 1st Entry Report 13. Satisfactory Insulation Resistance - Running & governing tests were witnessed on completion.

Repairs etc. All Propeller blades (C. Steel) & Capnuts - renewed. Propeller boss faces skinned up also all remaining Capnut faces. The Propeller statically balanced after assembly.

A new Stem frame now fitted - boss bored out & alignment checked. The Stern tube - skinned up & refitted with new Stern bush - lignum vitae & nut.

Main & all Auxiliary injection valve chests (brasses) - all shipside pads - ice cocks & one overboard discharge valve chest - renewed.

Minor repairs & renewals effected to all remaining parts of Sea Connectors.

Tail Shaft - fractured at top of cone & lower excessively worn - renewed with coupling bolts.

The whole of the Machinery & Boilers removed from the Vessel.

Main engine:- The Condenser body cast integral with the back columns - now dispensed with & new separate back C.I. columns fitted - the remaining front columns - faces skinned up also Cylinder feet faces. All Cylinders bored out & all Cylinder Joint faces skinned up - re-pointed & stemmed & the whole re-erected & aligned.

The H.P. Piston Valve Chamber bored out & Piston valve renewed.

M.P. & L.P. Valves & Cylinder Valve faces - skinned up. also all Pistons - rings renewed.

All Piston & Valve Rods - I.P. Crosshead Pin - L.P. Connecting Rod - M.P. Ahead etc. Rod -

Top end & Valve gear brasses - four Guide Plates - renewed.

All Crosshead Guide Shoes - remaining connecting rod & ecc. rod feet & palms. -

2 Guide Plates - Crosshead pins (H.P. & L.P.) - skinned up. Guide Shoes & eccentric Straps re-metalled.

The Brankshaft Journals & pins skinned up & all main & bottom end bearings re-metalled to suit - the Brankshaft afterwards bedded & aligned.

All Brankshaft keys - Eccentric Sheave & strap bolts & nuts H.P. astern & M.P. ahead & astern eccentric Sheaves - renewed. Remaining eccentric Sheaves skinned up.

The all round reversing engine removed & dispensed with & in lieu a "Brown" type Combined Steam & Hydraulic reversing engine fitted.

The weigh-bar shaft - renewed - mounting levers etc adapted to suit.

Thrust Shaft - excessively worn in way of collars - renewed. Shoes & Thrust Block Bearings re-metalled. Minor repairs & renewals effected to other parts of Thrust Block.

All Intermediate Shafts - skinned up in way of bearing parts & couplings & all coupling bolts - renewed. The Int. Shaft bearings re-metalled.

Attached Pumps - Renewed - Lever gudgeon + bearings - All link braces -  
Air Pump body, bucket + rod - Bilge Pump rams - all suction + delivery valve lids  
+ valve body covers - relief valve springs - Feed Pump suction + delivery valve lids  
- relief valve springs

Skimmed up - Lever link pins - Feed Pump rams - Feed + Bilge pump suction +  
delivery valve seats.

Main Condenser :- A new independent circular Condenser with E.V. fabricated  
steel plate body + eduction pipe now fitted complete with all new tubes etc  
+ tube plates + tested under water pressure.

Pumping Arrangements :- Port Tank + Bilge piping - valves + fittings - all Main + Auxiliary  
feed + blow down piping - renewed, fitted + tested in accordance with Approved Plans  
+ Rule Regts.

Steam Pipes :- Main + Auxiliary renewed + tested to Rule Regts.

Steering Engine :- Both Cylinders - Control + Piston Valve chambers - bored out.

Renewed :- All Piston - rings - valves + spindles - Top, bottom end + main bearings -  
Crankshaft with worm - guide flippers - ecc. rod pins + bushes.

Skimmed up - Both Piston Rods - guides.

Minor repairs + renewals effected to other working parts.

Wurlass :- Renewed - Both Steam Cylinders with covers - Piston Rings - Control Valve  
+ Lever - Piston Valve spindles - Crosshead + ecc. rod. pins + bushes - both guide shoes +  
one guide bar - Cable lifter + 2nd reduction shaft bearings - one cable lifter.

The control Valve chest bored out - the cable lifter + 2nd reduction shafts skimmed up in  
way of bearings. Minor repairs + renewals effected to other working parts.

Auxiliary Pumps

Independent Feed - A new pump fitted (List attached).

Ballast

Independent Circulating

Ash Ejector

Bilge + Sanitary - Steam Cylinders + water end chambers - bored out.

Renewed - Water end liners - buckets + rams - Steam pistons + rams - Piston, bucket  
+ Valve rods - Valve gear pins + bushes - suction + delivery valve spindles.

Skimmed up - All suction + delivery valve seats + lids - Steam valve chest + valve  
faces - Minor repairs effected to other working parts

General Service - Steam Cylinders + water end chambers bored out.

Renewed - Steam + water end liners - Piston + bucket rams - Piston, bucket +  
Valve rods - Valve gear pins + bushes - suction + delivery valve spindles

Skimmed up - Pistons + buckets - All suction + delivery valve seats + lids - Steam  
valve chest + valve faces

Main Boiler - Renewed - All Furnaces (List attached) - Combustion Chambers in their  
entirety - Plain + Stay tubes - Internal Feed + Run pipes - Manhole door dogs +  
studs - Part reworking of after end plate seams - Air preheater tubes + tube plates + etc.

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All Main & Aux Feed - Blow down - Steam & Safety Valve lids - seats - Stools in their entirety.

Minor repairs & renewals effected to all other parts of boiler mountings  
boilers examined under hydraulic test (1 1/2 wt. 150) on completion of repairs.

Auxiliary boiler :- Examined under hydraulic test (1 1/2 wt. 150). Minor caulking repairs effected - I.C.C. screwed stay - screwed together with stools in their entirety.

Main & Auxiliary Machinery & Boilers afterwards satisfactorily re-installed & on completion of the foregoing repair alterations - satisfactory Basin Sea trials were witnessed.

*AS*



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