

Report of Survey for Repairs, &c., of Engines and Boilers.

No. 12111

Surveying Report Nov. 23rd 1938 When handed in at Local Office Nov. 24th 1938 Port of Gothenburg
Survey held at Gothenburg Date, First Survey 2nd June Last Survey 10th November 1938
on the Machinery of the Wood, Iron or Steel 3/3 L/SS (No. of Visits 22)

Gross 5925 Net 3578 Vessel built at Haverton Hill on Taff by whom Turners L.D. Co. Ltd When 1921-8.
Engines made at Middlesbrough By whom Richardsons, Westgarth & Co When 1921.
Boilers, when made (Main) 1921 (Donkey)
Owners Roderi & S. Krezimasko Owners' Address
Manager Mr. H. Mathiesen Port Gtö Voyage
If Surveyed Afloat or in Dry Dock Both Göfaverken
(State name of Dock.)

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. ☒ LMC 8,34
3,37 BS 3,37
S.S. Cl. No. 3-8,34 CL 3,37
Carrying Petroleum in bulk
Fitted for oil fuel 721
F.P. ABOVE 100° F.

Port No. Port
Particulars of Examination and Repairs (if any) Annual, L.M.C.T.S. S.R. list & Alteration.
Surveys, when held, must be reported in detail and serialisation in the terms of the Rules. State clearly the pairs, if any, and, in detail, the nature and extent of examinations and subsequent repairs. Repairs on damage (the cause of which must be stated) should be separated from repairs due to other causes; and if detailed in the body of the report, should be briefly summarised at the end of the report. State also the initials of any letters respecting this case. H. 7.1.38 H. 12.1.38 & 7.5.38.
Cases where the Surveyor has not made a special damage report he is required to state whether he has performed his services for this purpose, and why they were declined. Offered to Owners, Not required
Damage report made by anyone else? If so, by whom? None made.
Surveyor personally go inside each Main Boiler separately and make a thorough examination at this time? Yes
" Donkey " " " " " " "

It done, state for what reasons?
Parts of the Boilers could not be thus thoroughly examined?
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?
Date of internal examination of each boiler 15.6.38 Present condition of funnel Good
Surveyor examine the Safety Valves of the Main Boiler? Yes To what pressure were they afterwards adjusted under steam? 180 lbs/□"
Surveyor examine the Safety Valves of Donkey Boiler? " To what pressure were they afterwards adjusted under steam? "
Surveyor examine all the manholes, doors and their fastenings of the Main Boilers? Yes, and of the Donkey Boilers? "
Surveyor examine the drain plugs of the Main Boilers? None, and of the Donkey Boilers? "
Surveyor examine all the mountings of the Main Boilers? Yes, and of the Donkey Boilers? "
Shaft now been drawn and examined? Yes Is it fitted with continuous liner? Yes Is an approved appliance fitted at the after end of the shaft to permit of it being efficiently lubricated? No
When been changed? No If so, state reasons

When now fitted been previously used? Has it a continuous liner? Is an approved appliance fitted at the after end of the shaft to permit of it being efficiently lubricated?
Examination of Screw Shaft 21.10.38 State the distance between lignum vitae or bearing metal of stern bush and top of after bearing of screw shaft 4.0 mm.
Parts, when referred to by numbers, should be counted from forward. Is electric light and power fitted? Yes
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
If not complete, state what arrangements have been made for its completion and what remains to be done Complete.

Propeller, propeller shaft, sea cocks and valves and fastenings of the sea connections
Cylinders, pistons, slide valves with casings, covers and rods, crank, thrust and intermediate
Condensers, bedplate, all pumps and the pipes, cocks, valves and strainers of the pumping
Electric installation examined and tested as per Rule.
Three main boilers examined in- & externally with safety valves and mountings and their
Valves adjusted under steam as above. All main and auxiliary steam pipes above 3" bore
Tested with water pressure to 360 lbs/□" and replaced on board. /Cont./

Observations, Opinion, and Recommendation:— The machinery of this vessel is eligible
To remain as now classed in the Society's Register Book and to have fresh record
1.38 and the notation of "Tail shaft seen" 10.38 without special conditions.

per Section 29) XX Kr. 360:— Fees applied for 24/11 1938
Repair Fee (if any) XX " 45:— Received by me, 19
of fee " 40:—
Expenses (if chargeable) £ " 200:—
Machinery Electric
Machinery Electric
FRI. 30 DEC 1938
+ Lmb. Ind 11.38 without
Ad. 6.38 Spl. Cond

FOLKE CASSEL
Engineer Surveyor to Lloyd's Register of Shipping.
Lloyd's Register Foundation
009920-009923-0138 1/3

rt of G O T H E N B U R G. Continuation of Report No. /2111. dated 23rd November, 1938 on the

Steel Single Screw Steamer "LISS", 5925 tons gross, of Oslo.

Repairs effected due to damage, stated to have been caused by heavy weather while on a voyage from Aruba to Vado and Neapel in January and February, 1938.

The propeller shaft ground in way of stuffing box and the packing in same renewed.

White metal in lower halves of all six main bearings of main engine renewed /cracked and badly worn/.

The alignment of the crankshaft and thrust shaft readjusted.

Repairs effected due to wear and tear:-

Boilers.

52 leaky tubes in centre tubenest and 5 in starboard of port boiler re-expanded.

7 ditto in port tubenest, 20 in centre and 1 in port of starboard boiler, and 38

in port, 10 in centre and 15 in starboard of aft boiler also re-expanded. Several

leaky stud bolts made tight by means of caulking.

The boilers tested by water pressure and found tight.

Some other repairs of minor importance were also carried out.

Alterations:-

The following alterations have been made in order to reduce the oil fuel consumption while maintaining the same IHP of the engine.

A turbo-compressor set, consisting of a low pressure steam turbine and a steam turbo compressor, both manufactured by Messrs. Aktiebolaget de Laval's Ångturbin, Stockholm, has been fitted on the condenser. The turbine, which is driven by exhaust steam from the LP cylinder, drives the turbo compressor. This one takes exhaust steam from the HP cylinder and delivers same with increased pressure and temperature to the IP cylinder, which diameter has been reduced from 45" to 38". In order to have this done the HP piston valve and liner have been made in conformity to a special construction allowing passage for the exhaust from the HP cylinder to a valve box, fitted on top of the HP and IP receivers. This valve box contains: 6 non-return valves giving the steam from HP cylinder free access to the IP side of the receiver when the set is not in use, also 2 emergency equilizer valves so regulated that difference of steam pressure on the two sides of the IP piston multiplied by the IP area will never be more than the boiler pressure multiplied by the HP area and also a safety valve on the IP side of the valve box.

It is also arranged that the exhaust steam from the LP cylinder can be led direct to the condenser without the turbo-compressor set in use.

The main condenser has been replaced by a new one of increased capacity. The top of the condenser is constructed as a seating for the turbo compressor set.

Another low pressure turbine, driven by exhaust steam from the LP cylinder has also been installed. This turbine, which also can be driven by fresh steam from boilers, drives a feed water pump (centrifugal) and an electric generator of 50 KW. Major part of this electric energy is intended for a new electric driven circulating pump.

A feed water heater of Götaverken's make Type No.16 has also been installed.

The centrifugal fan for forced draft has been altered to be electric driven by an electric motor of 12 - 15 BHP.

Port of G O T H E N B U R G. Continuation of Report No. 12111. dated 23rd November, 1938 on the

Steel Single Screw Steamer "LISS", 5925 tons gross, of Oslo.

In connection with the 50 KW generator, placed port side in the forward end of the engine room, a new main switchboard has been installed forward of same. This one is in connection with two other main switchboards placed starboard aft in the engine room. This new electric installation has been fitted on board in accordance with plans, approved the 5th July, 1938.

Certificate of the turbo compressor set is attached herewith. Certificates of the electric generator and electric motors will be forwarded within a few day's time from date.

Note:- The particulars of engines in column No.13 in the Register Book to be altered, viz:- T.3 Cy. 27", 38" & 75" - 51" (s) & Exhaust Turbine driving steam compressor.

S.R. List:-

The circulating pump with steam engine has been replaced by a new electric driven one as stated above. The insertion regarding circulating pump engine cylinder to be removed from the S.R. List.

Folke Cassel.



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