

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

16 OCT 1929

(Received at London Office)

Date of writing Report 12th Oct. 1929 When handed in at Local Office 19 Port of HAMBURG

No. in Reg. Book 19003 Survey held at Hiel Date, First Survey 14th June Last Survey 9th Oct. 1929 (No. of Visits 13)

19003 on the Machinery of the Wood, Iron or Steel S.S. "DELAWARE"

Tonnage { Gross 5453 Net 3287 Vessel built at Haverton Hill By whom Furness S.B. Co. Ltd. When 1920-12

Nominal Horse Power 538 Engines made at Lunderland By whom Richardsons & Ferguson When 1920

No. of Main Boilers 3 Boilers, when made (Main) 1920 (Donkey) ✓

No. of Donkey Boilers - Owners' Address (if not already recorded in Appendix to Register Book.)

Steam Pressure in Main Boilers - Managers - Port - Voyage -

in Donkey Boilers - If Surveyed Afloat or in Dry Dock Afloat & Dry Dock (State name of Dock.) Howald's werke.

Last Report No. - Port -

Particulars of Examination and Repairs (if any) REINSTATEMENT L.M.C. Refilling

(Periodical Surveys, when held, must be reported in detail and seriatim in the terms of the Rules. State clearly the cause of Repairs, if any, and, in detail, the nature and extent of Examinations and subsequent Repairs. Repairs on account of Damage (the cause of which must be stated) should be separated from Repairs due to other causes; and besides being detailed in the body of the report, should be briefly summarised at the end of the report. State also the dates and initials of any letters respecting this case.)

In damage cases where the Surveyor has not made a special damage report he is required to state whether he offered his services for this purpose, and why they were declined?

Was a damage report made by anyone else? If so, by whom?

Did the Surveyor personally go inside each Main Boiler separately and make a thorough examination at this time? yes

Do. " Donkey " " " " "

If this was not done, state for what reasons? ✓

And what parts of the Boilers could not be thus thoroughly examined? none

Also what 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? ✓

Did the Surveyor examine the Safety Valves of the Main Boiler? yes To what pressure were they afterwards adjusted under steam? 180 lbs.

Did the Surveyor examine the Safety Valves of Donkey Boiler? ✓ To what pressure were they afterwards adjusted under steam? ✓

Did the Surveyor examine all the manholes, doors and their fastenings of the Main Boilers? yes, and of the Donkey Boilers? ✓

Did the Surveyor examine the drain plugs of the Main Boilers? ✓, and of the Donkey Boiler? ✓

Did the Surveyor examine all the mountings of the Main Boilers? yes, and of the Donkey Boiler? ✓

Has screw 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? ✓

Has shaft now been changed? no If so, state reasons -

Has the shaft 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? ✓

State the distance between lignum vitae or bearing metal of stern bush and top of after bearing of screw shaft a fit, rewooded.

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

Examined new bronze propeller, propeller shaft in lathe, stern bush fully rewooded, sea connections dressed up and their fastenings, and found all of these parts in good order.

The whole machinery including intermediate, thrust and propeller shafts, auxiliary machinery and boiler has been removed from board and taken to shop.

Examined here all cylinders, pistons, slide valves and chests, cover rods with top and bottom end brasses, link motion, crankshaft, lifted main bearings, bed plate, thrust shaft, and block, intermediate shafts, condenser, pumps and auxiliary machinery, all opened up, the boiler internally and externally and found all of these parts in order.

General Observations, Opinion, and Recommendation:

(State clearly what alteration, if any, is suggested to be made in the existing classification of the vessel's machinery in the Register Book, consequent upon this survey, and also any alteration required to be made in the records of the vessel's machinery, boilers, working pressures, &c.: thus, for example, B.S. 9,11, B.A.M.S. 9,11, or L.M.C. 9,11, 140 lb., F.D., &c.)

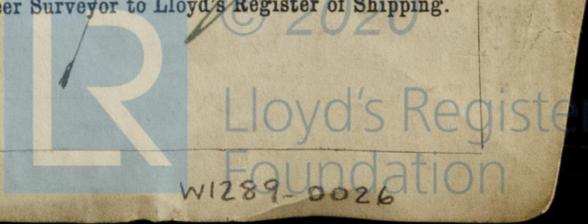
The machinery of this vessel so far as seen is in good and satisfactory condition and eligible in my opinion to be reinstated in class in the Society's Reg. Bk. and to have records of "L.M.C. - 10, 29" - "E & B refilled 29" "Tail shaft (CL) seen - 10, 29" - and boiler pressure 180 lbs.

Survey Fee (per Section 28) £15:- Fees applied for 20. 9. 29
Special Damage or Repair Fee (if any) (per Section 28.) £10:-
Travelling expenses (if chargeable) £8:- Received by me, 8. Oct. 1929

Committee's Minute NOV 5 1929
Assigned + L.M.C. 10:29 F & A
Filled for Oil Fuel 12:20 F. Above 150°F
S 10:29

CHARACTER. for Special Survey. Date of last Survey and of Periodical Surveys.	Years assigned now or expired.	Machinery and Boiler Surveys (including date of N.B., if any)
<u>Inshell deck with</u>		
<u>Freeboard - 3.28</u>		
<u>S.S. O.S.L. No 1-25</u>		
<u>(WRECKED 6.28)</u>		
<u>Filled for oil fuel</u>	<u>12.20 F.P. above</u>	<u>150°F.</u>

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



W1289-0026

after the following repairs had been carried out:

All pistons overhauled, HP piston rings renewed all piston rods re-nerved. Piston made to fit, packings renewed.

All slide valves gone over, slide valve rods skimmed up and rebushed. Link motion, all bearings & reversing blocks adjusted.

Crankshaft lifted out of bedplate, main bearings adjusted in place, crankshaft oiled. All eccentric sheaves overhauled. Strap readjusted. Thrustshaft skimmed

up in way of collar and journals, horse shoe rings and supporting bearings re-metalled; - Intermediate shafts

skimmed in way of coupling flanges, journal bearings re-metalled where necessary; - propeller shaft slightly skimmed in lathe over liner. - Condenser all tubes removed

cleaned and tested, tubes and ferrules renewed where necessary. condenser tested. Air and Circulating

Pumps thoroughly overhauled and repaired, main engine driven feed and bilge pump rams skimmed up and re-

bushed, all suction and delivery valves and seats dressed up. Steam feed and ballast pumps - water ends rebored.

Water ends new, steam ends thoroughly gone over, all valves dressed up. Oil fuel equipment. Heater tested to 400 lbs

per sq. inch, also all oil delivery lines, oil pressure pump overhauled. Foilers lagging removed, cleaned and

re-coated, small leakage made good, boilers tested hy-

draulically to 270 lbs per sq. inch, and found in order, all mountings (steel castings) renewed to suit require-

ments of German Foiler Authorities for superheated steam. On board all suction, change over and intermediate valves

of pumping arrangements dressed up. Bilge and ballast lines for fore ship fitted new (please see approved plan) Electric Light Installation all cables renewed dynamo overhauled and tested.

Machinery replaced on board, all hooks and holding down bolts renewed.

Alterations made: Schmidt Patent superheater fitted - headers, tubes, all mountings and pipes tested hydraulically to 540 lbs in shop and after erection on board. In addition to blowdown forced draught, induced draught by means of steam driven impeller wheel in up-take end fitted.

Upon completion of repairs and alterations boilers examined under steam, safety valves adjusted to 180 lbs. and machinery tested under working conditions and found in order.

Hamburg. 12th Oct. 1919.

Friedrich

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