

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

(Received at London Office)

NEWCASTLE-ON-TYNE

Date of writing Report 10/10/43 When handed in at Local Office 11/10/43 Port of NEWCASTLE-ON-TYNE  
 in Book. Survey held at Newcastle Date, First Survey 17 May 43 Last Survey 26 Sept 1943  
962 on the Machinery of the Wood, Iron or Steel Y/s "HOPESTAR" (No. of Visits 2 + 2 elec.)

Gross 5267 Vessel built at Newcastle By whom Swan, Hunter & Wigham Richardson Ltd Year. 1936 Month. 2  
 Net 3192 Engines made at Wallsend By whom Parsons Mar. Engrs. Co. Ltd When 1936  
 Main Boilers 400 Boilers, when made (Main) 1936 (Donkey) 1936  
 Owners Wallsend Shipping Co. Ltd Owners' Address (if not already recorded in Appendix to Register Book.)  
 Managers Stott, Mann & Fleming Ltd Port NEWCASTLE Voyage  
 Donkey Boilers 1 Managers Stott, Mann & Fleming Ltd  
 Pressure in Boilers 285 lb # Surveyed Afloat or in Dry Dock Swan, Hunter & Wigham Richardson's Dry Dock  
 Donkey Boilers 120 lb (State name of Dock.)

Report No. Port

Particulars of Examination and Repairs (if any) Dkg. part LMC. Damage + alterations

Special Surveys, when held, must be reported in detail and serially in the terms of the Rules. State clearly the nature and extent of examinations and subsequent repairs. Repairs on the cause of which must be stated should be separated from repairs due to other causes; and being detailed in the body of the report, should be briefly summarised at the end of the report. State also the date and initials of any letters respecting this case.

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

Has a damage report made by anyone else? If so, by whom? Yes, Underwriters' Surveyors Messrs A.B. Coull & Co.

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

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

Were the funnels examined? Yes.

Were the parts of the Boilers could not be thus thoroughly examined? Yes.

Were 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.

What was the latest date of internal examination of each boiler? Stn Bln 8/9/43, Port Bln 14/9/43, Donk 8/9/43

Did the Surveyor examine the Safety Valves of the Main Boiler? Yes To what pressure were they afterwards adjusted under steam? 285 lb

Did the Surveyor examine the Safety Valves of Donkey Boiler? Yes To what pressure were they afterwards adjusted under steam? 120 lb

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

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

Did the Surveyor examine all the mountings of the Main Boilers? Yes , and of the Donkey Boilers? Yes

Has the screw shaft now been drawn and examined? No 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

Has the shaft now been changed? Yes If so, state reasons Yes

Has the shaft now fitted been previously used? Yes Has it a continuous liner? Yes Is an approved appliance fitted at the after end of the shaft to permit of it being efficiently lubricated? Yes

State of examination of Screw Shaft Yes State the distance between lignum vitae or bearing metal of stern bush and top of after bearing of screw shaft 9/64"

Engine parts, when referred to by numbers, should be counted from forward. Is electric light and De-gaussing fitted? Yes

Did the Surveyor examine the generators, motors, switchgear, cables and fuses? Yes } See Electrical Report page 4.

Has the insulation resistance of the generators, circuits and apparatus been tested and found to be not less than 100,000 ohms? Yes

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

To complete survey for LMC for date 9.43, the following items require to be done:-  
 (1) Main engine driven pumps (Lubricating oil, Bilge & Sanitary), also the "Thermal" engine and the two friction clutches for these pumps & engine.

(2) Intermediate Shafting.

(3) Steam pipes to be tested as per Rules

(4) Steering Engine at aft end.

These items will be done as opportunity is afforded.

Contd on page 2.

## 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.&M.S. 9.11, & L.M.C. 9.11, or L.M.C. 140 lb., F.D., &c.)

The machinery of this vessel is in good safe working condition, eligible in my opinion to remain as classed and to have records, B.S. 9.43 (now), and L.M.C. with date 9.43 when the survey has been completed. The items in S.P.L. to be deleted. The notation 25B (Spt) to be reinstated.

Survey Fee (per Section 29) LMC £ 12: -: -  
 Alterations & repairs £ 5: 5: -  
 Special Damage & Repair Fee (if any) £ 10: 10: -  
 L.M.C. 140 lb., F.D., &c.) £ 3: 3: -  
 Travelling expenses (if chargeable) £ : : -  
 Licence £ 6: 6: -

Fees applied for

113 OCT 1943

Received by me,

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Committee's Minute

Assigned

TUES. 20 OCT 1943

Known subject

BS 9.43

A. Watt. A. Dimes.

Engineer Surveyor to Lloyd's Register of Shipping.

Lloyd's Register Foundation

W1013-0143/4



machinery of S/S HOPESTAR.

For Part LMC:-

Now done; Vessel placed in dry dock, Propeller, aft end of stern bush, Sea connections (opened out) and their shell fastenings examined and found or placed in good order.

Windlass and its engine overhauled and placed in good order.

The following parts were opened out, examined and found or now placed in good condition; viz, The HP & LP Turbines with Turbine rotors lifted, Casings & Blading, Shafts & bearings, D/R Gears with shafts and bearings, Thrust Shaft & bearings, Main engine driven Centrif. Core Water Pump (driven by chain drive from Turbines), Independent Pumps, Main and Auxy Condensers (both tested), Pumping arrangements and piping of same, 3 Steam Dynamo Engines (including one new 15KW Set),

The Main & Auxy S.D. Stl. Steam pipes were examined in place and those at the Turbines which were removed for dismantling, were examined internally and found in good condition.

The Steam pipes attached to each Superheater Header have been renewed to suit the new Smoke tube Superheaters now fitted in lieu of the old Combustion Chr. Type Superheaters. (See note under Alterations).

The Electric Installation has been surveyed - See page 4.

B.S. The 2 main Boilers and the Donkey Boiler were examined internally and externally, with doors, mountings and safety valves and found or now placed in good safe working condition and the Safety Valves were afterwards adjusted under steam as stated above.

The Machinery was examined under working conditions and found satisfactory.

Alteration: The Old Combustion Chr. Type Superheaters and the De-superheaters - which were badly wasted and holed - have now been dispensed with, and in lieu thereof, New N.E.M.Co SMOKE TUBE Type Superheaters have been fitted to the 2 main Boilers and joint tested <sup>at 450 lbs WT</sup> after fitting in place. New steam pipes attached to the Headers tested at 855 lbs WT. and made of O.H. S.D. Stl. were fitted.

The old De-superheaters in the 2 main Boilers have been dispensed with, and a new "Mixing Steam" line to the Auxiliary Steam Range has been fitted, using the original C.Stl. fittings and valves, as shown on Attached Blue Print, N.E.M.Co's Sketch No 7507.

Smoke Eliminators & Smoke Detecting apparatus have now been fitted to the 2 main & the Donkey Boilers.

A new additional 15KW Steam Dyno Set installed and connected up to suit.

S.R.L. (1) See L.R. Mauritius Rpt 898 of Feb 1943, The Turbine Blading of Rotors and Casings was carefully examined and found slightly eroded at the inlet ends of both HP & LP Turbines, but, in my opinion, is in efficient condition.

The labyrinth packing has been overhauled and placed in good condition.

(2) See Capetown Rpt 3355 of May 43, The Stoppered Tubes in Port Boiler have now been renewed.

Contn on page 3.



Machinery of S/S HOPESTAR.

Damage stated to have been caused by negligence of E.R. Staff during voyage from River Tyne (leaving 24<sup>th</sup> May 43) to New York, thence to Bombay & Colombo via Cape of Good Hope, from Colombo to U.K. via Durban & Capetown, returning to The Tyne 16<sup>th</sup> August 1943.

It was stated that on passage from Colombo to Durban, a serious fall in power was experienced, that the vessel put in to Mauritius. (See L.R. Mauritius Rpt No 898 of 7<sup>th</sup> Feb 44), where the Turbines were opened out and the blading was found to be foul and dirty.

On passage from Durban to Capetown, Superheater trouble developed, and at Cape Town, the Superheaters (Combustion Chr. type.) were cut out.

Exam<sup>n</sup> now made on a/c of above damage;  
main Turbines opened up, examined & found in good and efficient condition.  
Some vanes of labyrinth packing of the Shaft Glands - found broken  
not overhauled and renewed as necessary.

The 2 main Boilers were opened up, cleaned & scaled.

The main Condenser was degreased on Steam side, tested full of water and made tight.

Feed Filter, Primary & Secondary Feed Heaters cleaned & degreased.

Air Pump & the 2 Weir's Feed Pumps opened up, cleaned & reclosed.

Fan Engine, the 6KW & 12KW. Dynamo Engines opened up, cleaned & overhauled. The machinery was afterwards examined under manoeuvring conditions in River Tyne and found satisfactory.

Repairs due to damage:

Air pump & the 2 feed pumps & Fan Engine overhauled generally & readjusted.  
Engines in 6KW & 12KW Dyno Sets were taken to Shop and overhauled.

Crank Chamber (oil Sump) of 6KW Set was smashed when balance wt of Crank webs came adrift. - Crank chamber fitted with a M.S. plate to form an oil Sump, and ragged part of old Sump bottom cut away. Armature adjusted for alignment.

Crank shaft journals & pin - scored - metal sprayed, ground & re bedded.

Balance weights overhauled & resecured to crank webs.

and other minor repairs.

Repairs due to wear & tear: Sea Connections overhauled & ground in.

Windlass overhauled generally & re adjusted

Auxy Circ W Pump & Sanitary Pump - water end of each renewed.

& pumps overhauled generally. Ballast Pump, one water end liner bored out & rings renewed.

Inboard Feed Pump - water end rebored. Main Condenser about 20 tubes renewed.

Stds in Bhr - 1 stay tube renewed. a number of landing edge fractures in CC's reed, the webbs & rivets in way renewed. S. furnace goose neck bottom fracture reed & fls welded.

In P.T.S in Bhr - 2 solid long stay fitted in each Bhr in place in the stay tube 1/p + 15.

at lower corner of wing C.C's. - (These single stay tube leaked & one broke at front rib plate)

Port in Bhr - 7 plain & 2 stay tubes renewed & 1 sc. stay tube hole built up by S.W. & re tapped.

a number of landing edge fractures in CC's - reed. Ed welded & rivets in way renewed.

and other minor voyage repairs effected.

The foregoing work was carried out under Licence.



S/S "HOPESTAR."Electrical Installation.

Generator 1-6KW. 1-12KW. 1-15KW.

The 6KW. generator was overhauled, commutator skimmed, and brush gear overhauled. Removed to new position in Engine room.

The 12KW. was cleaned and overhauled.

The 15KW. is a new machine, fitted in place of the 6KW. cables to switchboard 19/082. 54 feet lead and return.

New refrigerator fitted in Engine room, 5HP. motor, cables 4/064, 60 feet lead and return.

The navigation circuit was overhauled, lanterns repaired and new dimmers fitted.

Re-wiring where necessary, was carried out on the following circuits, Galley, P. O's wash place, Engineers mess, Seamen's accommodation, Engine room and Tunnel, and Storehold.

Complete re-wiring of Masthead light and floodlights, Boiler gauge lights, 3 Smoke observation lights, and 9 lights in Gunners accommodation.

Large cluster plugs repaired, clusters overhauled and fittings replaced where necessary.

On completion, the Insulation resistance tests on all circuits were satisfactory, and the generators operated under normal working conditions with satisfactory results.

The generators are cross connected through change over switches to supply D.C. and/or ship load.

Ah. Dimenz.