No. 105743

..9.

[R]EPORT OF SURVEY FOR REPAIRS, &c., OF ENGINES AND BOILERS

(Received at London Office 15 DEC 1948)

[D]ate of writing Report ..... 19..... When handed in at Local Office 11 DEC 1948 19..... Port of NEWCASTLE-on-TYNE

Survey held at South Shields & Hebburn-on-Tyne Date. First Survey 6-8-48. Last Survey 9-11-1948. (No. of Visits 45)

..9. on the Machinery of the ~~Wood, Iron~~ Steel S.S. "AMERSHAM"

			Year.	Month.
Gross 5536	Vessel built at South Shields	By whom J. Readhead & Sons Ltd. When	1941	1
Net 3228	Engines made at South Shields	By whom J. Readhead & Sons Ltd. When	1941	
Nominal Power 435	Boilers, when made (Main) 1941	(Donkey) –		

Main Boilers 2 SB. Owners Thompson Steam Shipping Co Ltd. Owners' Address – (If not already recorded in Appendix to Register Book.)

Donkey Boilers – Port LONDON. Voyage

Pressure— Main Boilers 220 LBS. Managers

Donkey Boilers – If Surveyed Afloat or in Dry Dock Both. Messrs Brigham & Cowan Ltd & Dry Dock Messrs R & W. Hawthorne Leslie & Co Ltd. (State name of Dock.)

Report No. ..... Port .....

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)
✠100 A1		✠LMC
with freeboard		MS 11,45
11,47.		BS. 1,48
Examined 11,47 (6 mos)		Ch. 6. 46.
Cargo battens not fitted		

SEE SPL. NOTE S.R. ✓

[Partic]ulars of Examination and Repairs (if any) T.S. +LMC. O.F. CONVERSION SUPERHEAT CONVERSION.

[Specia]l Surveys, when held, must be reported in detail and seriatim in the terms of the Rules. State clearly the cause of Repairs, if any, [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 [sum]med at the end of the report. State also the dates and initials of any letters respecting this case 26.6.48 H.F.

[In dama]ge cases where the Surveyor has not made a special damage report he is required to state whether he offered his [serv]ices for this purpose, and why they were declined –

[Was a d]amage 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.

Donkey " " " –

[If not, s]tate for what reasons – What parts of the Boilers could not be thus thoroughly examined? –

[What s]pecial means, in the absence of internal examination, were adopted by the [Survey]or to assure himself of the thorough efficiency of those parts of each Boiler? –

[La]test date of internal examination of each boiler Port. 29.9.48. Starb^d 4.10.48. Present condition of funnel(s) Efficient

[Did the] Surveyor examine the Safety Valves of the Main Boilers? Yes To what pressure were they afterwards adjusted under steam? MAIN AND SUPERHEAT. 220 LBS/□"

[Did the] Surveyor examine the Safety Valves of the Donkey Boilers? – 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 Boilers? –

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

[Has the] 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.

[Has the shaf]t now been changed? No If so, state reasons – Has the shaft now fitted been previously used? – Has it a continuous liner? –

[Is an ap]proved oil retaining appliance fitted at the after end? – State date of examination of Screw Shaft 21.10.48 State the wear down in the [stern] bush 9/64" Is electric light and/or power fitted? Yes If so, did the Surveyor examine the generators, motors, switchgear, cables and fuses? Yes.

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

Engine parts, when referred to by numbers, should be counted from forward.

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

[T.S] DONE +LMC. Vessel placed in drydock, propeller tailshaft, stern bush sea connections (opened out [in]to and discharges) and outside fastenings examined and found or placed in good order. Wear down 9/64". [Exa]mined & found or placed in good order main engine cylinders, covers, pistons, slide valves & chests, rods, [cross]heads top and bottom end brasses, crank, thrust and intermediate shafts and bearings, holding [down] bolts, attached air, feed and bilge pumps, independent circulating pump and engine, ballast & [gener]al service pumps, main and auxiliary independent feed pumps, main and auxiliary condensers [an]d pumping arrangements, steering engine, windlass, fan engine, dynamo engines, main [and a]uxiliary steam pipes (tested). Both main boilers examined throughout with mountings, [man]holes, doors and fastenings and found or placed in safe working condition. Boilers examined [unde]r steam and safety valves adjusted to pressure stated above. Accumulation pressure test carried out.

[O].F. Conversion.

The vessel has been converted to oil fuel burning at this time, in accordance with [the] Secretary's letters, approved plans and Rule Requirements. The suction and pressure lines and (see continuation sheets 2 & 3.)

[Gener]al Observations, Opinion, and Recommendation:— The machinery of this vessel as now seen,

(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, BS 9,11, B&MS 9,11 ✠LMC 9,11 or ✠LMC CS 3,34, 140 lb., FD, &c.)

[is] in efficient condition and eligible in our opinion to remain as classed with fresh [reco]rds of T.S. (CL) 10,48: +LMC 11,48 and notation, "Fitted for Oil Fuel, 11,48 Flash [poin]t above 150°F."; also (Spt).

H.

[Entry] Fee (per Section 29)	T.S.	£ 3	0	0
[AL]TERATIONS AND ~~Damage~~ Repair Fee (if any) (per Section 29.)	LMC.	28	0	0
		£15	15	0
	ELECT. LMC.	5	0	0
[Trave]lling expenses (if chargeable)	O.F. CONVERSION.	£ 10	10	0

Fees applied for 13 DEC 1948 19..

Received by me, ... 19..

D W Saylor. F. J. A. Orde

Engineer Surveyor to Lloyd's Register of Shipping.

FRI. 21 JAN 1949

[Com]mittee's Minute

+LMC 11,48

[Assig]ned

S.10,48 Fitted for oil fuel 11,48 FP above 150°F.

CERTIFICATE WRITTEN.

Is a Certificate required? If so, to be sent to

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

005020-005028-0218 1/3

Rpt. 9a.

NEWCASTLE-ON-TYNE. No

Port of NEWCASTLE-ON-TYNE. (SHEET 2). Continuation of Report No. 105748 dated 9/11/48 on the

S.S. "AMERSHAM"

heating coils hydraulically tested after jointing as per Rule Requirements. The installation and deck control gear in connection with the O.F. and Steam Smothering installations examined and tested under working conditions and all found satisfactory.

Particulars of the installation are as follows:-

Wallsend Howden System. No. O.B. 9865.

O.F. Transfer Pump G. & J. Weirs No. 206719. Size 6"×5½"×15". 2 O.F. Pressure Pumps. G. & J. Weirs Nos 208992 & No 22095. (Lloyds Test 400 lbs 14.5.47: 26.1.48.) { 2 DISCHARGE STRAINERS 2 O.F. Heaters Nos 17617-8 (Newcastle Certificate No C27638). Pneumercator system of sounding with distance thermometers and sounding pipes in O.F. bunkers and settling tanks.

Superheat Conversion

The boilers have been fitted at this time with superheaters for supplying superheated steam to the main engines, main circulating pump engine, dynamo engines, steering engine and fan engine in accordance with the Secretary's letters approved plans and Rule Requirements. The superheater headers and elements, (Nos SH1076 Newcastle Certificate No C 27415), cast steel valves and fittings, were supplied by The North Eastern Marine Engineering Co, Ltd., Wallsend-on-Tyne and manufactured, examined and tested in accordance with the Rule Requirements. The open hearth steel seamless pipes used for the steam pipe line alterations have been fitted with steel flanges secured by screwing the pipe and flange with a vanishing screw thread and the pipes expanded into the flanges as per Rule Requirements, and on completion the pipes have been hydraulically tested in accordance with the Rules. On completion of the alterations the superheat installation was examined under working conditions and found satisfactory.

Particulars of the superheat installation are as follows:- No. S.H. 1076.

Type of Superheater: North Eastern Smoke tube. Tube manufacturers: Messrs Tubes Ltd.

Header Manufacturers: Messrs Appleby Frodingham Steel Co. Number of Elements (Total) 126.

Material of Tubes: Solid drawn steel. Internal dia. & thickness: 17 m/m × 2½ m/m THK.

No & Material of Headers: 8 Forged Steel 26/30 TONS. U.T.S. Thickness of Headers: 7/8".

Can the Superheater be shut off and Boiler worked separately ... Yes.

Is a safety valve fitted to every part of Superheater which can be shut off from boiler: Yes.

Area of Safety valve:- 3.1416 □". Safety valves fitted with easing gear and adjusted to 220 lbs /□". Tubes hydraulically tested to 1500 LBS/□" and headers to 660 LBS/□"

Drain cocks fitted to free superheaters from water where necessary.

Total Superheater Surface:- 2180 □ft.

Repairs:- Tail shaft key renewed (slack in keyway). Sea connections overhauled.

Main Engine:- H.P. piston junk ring bolts renewed. M.P. piston rod refitted to crosshead-(slack). H.P. bottom end brasses and M.P. bottom half and L.P. top half brasses remetalled. H.E. air pump rod skimmed; fwd. feed pump ram skimmed, forward bilge valve seats renewed. Independent circulating pump:- Top end pin and brasses renewed, bottom end bearings remetalled, cylinder bored, piston & rings renewed, piston rod (bent) renewed, & crankshaft tried in lathe & found true. Both independent main feed pumps, ballast and general service pumps overhauled - minor repairs. Independent auxiliary feed pump water end renewed - (Wasted & holed at bottom); renewed water end marked:- Lloyds Test 500 LBS. 8.10.48. A.R.S. Tank and bilge valves overhauled, pipe lines repaired as necessary, pumping arrangements tested. auxiliary condenser aft door renewed.

(see Continuation SHeet 3).

Rpt. 9a.

Port of NEWCASTLE-ON-TYNE.

NEWCASTLE-ON-TYNE, No.

Continuation of Report No. 105743 dated 9/11/48 on the

(SHEET No 3.)

S.S. "AMERSHAM"

Repairs (Continued).

Steering engine main bearing brasses renewed, telemotor overhauled by Makers. Windlass top end pins and bushes and bottom end brasses renewed. Minor repairs effected to fan engine and dynamo engines. Exhaust steam interceptor cleaned. New oil fuel transfer pump discharge valve fitted to shell, starboard side of engine room, in accordance with the Rules.

B.S.: On account of tube leakage all plain tubes in both boilers have been renewed and stay tubes expanded and caulked. The centre furnace in both boilers, found badly distorted, now renewed. (New furnaces marked Lloyds 3160 and 3170 3.9.48. E.E.) Starboard boiler wing furnaces, distorted, now jacked up a number of wasted c.c. stays and several wasted c.c. girder dog stays renewed: minor wastage of tube plates and on fireburn line of furnace corrugations, water side, made good by E.W. where necessary and several C.C. rivets in both boilers renewed. Several other minor repairs effected in each boiler. All boiler mountings overhauled, soot blowers fitted to each combustion chamber. On completion of repairs both boilers hydraulically tested and all found sound and tight.

The following additional machinery items have been fitted in vessel:-

New Surface feed heater marked: Lloyds Test: Shell 440 lbs.: Tubes 484 lbs. T.G. No 5108.

New Pressure feed filter, Caird & Rayner marked: Lloyds D. 18397 Shell 560 lbs. 13.8.48. T.W.M.

Spare tail shaft marked: Lloyds 2472. J.C.B. 6.7.48.

Electrical Installation

2 — 12½ K.W. Generators.

The electrical installation examined under working conditions. Generators, cables and fittings examined. Navigation, accommodation, engine room and stokehold lighting wiring overhauled. Chart room, midship accommodation and after accommodation lighting wiring part renewed, 5 additional flood lights wired and fitted for masts and bridge space. On completion of repairs all circuits tested for insulation resistance, generators tested under load and governing and all found satisfactory.

Note:- D.G. coil, main cables, switchboard and junction boxes removed at this time.

Main and auxiliary machinery tried under working conditions and found satisfactory.

Attached herewith:-

Newcastle Certificate No C.27638 — Oil Fuel Heaters and Strainers
" " " C.27415. Superheater Headers and Elements.
Sunderland " " C. 1211 Feed Heater.
London " " D. 18397 Pressure Feed Filter.
Leith Report " F. 2472. Spare Tail Shaft.
Glasgow Boiler Furnace Report dated 4.9.48.

D.M.S.

SURVEYOR TO LLOYD'S REGISTER. NEWCASTLE-ON-TYNE.