

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

16 AUG 1944

Date of writing Report 22-7-44 When handed in at Local Office 19-44 Port of Liverpool
 No. in Survey held at 22-7-44 Date, First Survey 11/12/42 Last Survey 17/7/1944
 Reg. Book on the Steel screw "FRESHFORD" (Number of Visits 71.) Tons { Gross 282.91
 Net 92.82.
 Built at 22-7-44 By whom built 22-7-44 Yard No. 845. When built 1944.
 Engines made at - do - By whom made - do - Engine No. 554. When made - do -
 Boilers made at - do - By whom made - do - Boiler No. 553. When made - do -
 Registered Horse Power Owners The Admiralty Port belonging to London.
 Nom. Horse Power as per Rule 90. Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted Yes.
 Trade for which vessel is intended For Admiralty Tender Services.

Engines, &c.—Description of Engines Triple Expansion Inverted. Revs. per minute 180 ✓
 Dia. of Cylinders 11-18-30" Length of Stroke 21" No. of Cylinders 3. ✓ No. of Cranks 3.
 Crank shaft, dia. of journals as per Rule 5-79" Crank pin dia. 6" Mid. length breadth 10" Thickness parallel to axis 5 7/8" ✓
 as fitted 6" Crank webs Mid. length thickness 3 3/8" shrunk Thickness around eye-hole 5" ✓
 Intermediate Shafts, diameter as per Rule 5-51 1/4" Thrust shaft, diameter at collars as per Rule 5-79" ✓
 as fitted 5 3/4" as fitted 6 1/4" ✓
 Tube Shafts, diameter as per Rule 6-33 1/2" Is the { tube screw } shaft fitted with a continuous liner { No. ✓
 as fitted 6 1/2" as fitted 6 1/2" ✓
 Bronze Liners, thickness in way of bushes as per Rule Thickness between bushes as per Rule Is the after end of the liner made watertight in the
 as fitted propeller boss If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner. ✓
 If the liner does not fit tightly at the part between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive. ✓
 If two liners are fitted, is the shaft lapped & protected between the liners. Is an approved Oil Gland or other appliance fitted at the after end of the tube
 If so, state type 22-7-44 Length of Bearing in Stern Bush next to and supporting propeller 24" ✓
 Propeller, dia. 6-10" Pitch 4-0" No. of Blades 4. Material C.I. whether Moveable No. Total Developed Surface 13. sq. feet
 Feed Pumps worked from the Main Engines, No. Two. Diameter 2" Stroke 10 1/2" Can one be overhauled while the other is at work. Yes. ✓
 Bilge Pumps worked from the Main Engines, No. Two. Diameter 2" Stroke 10 1/2" Can one be overhauled while the other is at work. Yes. ✓
 Feed Pumps { No. and size One 6 1/2 x 4 x 12" simplex Pumps connected to the { No. and size Two M.E. pumps & one 6 1/2 x 6 x 12" simplex.
 How driven steam Main Bilge Line How driven G.S. Pump steam driven.
 Ballast Pumps, No. and size One 10 1/2 x 12 x 24" simplex Lubricating Oil Pumps, including Spare Pump, No. and size ✓
 Are two independent means arranged for circulating water through the Oil Cooler. ✓ Suctions, connected to both Main Bilge Pumps and Auxiliary
 Bilge Pumps: In Engine and Boiler Room One P.S. at forward end of ER, one at aft end of ER, one direct suction in ER 2 1/2" dia.
 In Pump Room One P.S. & bottom all 2 1/2" dia. In Holds, &c. 2" dia. suction in chain locker, crew space, gland
 compartment, connected to salvage pump, G.S. Pump & Downer Pump.
 Main Water Circulating Pump Direct Bilge Suctions, No. and size One 4" Dia. Independent Power Pump Direct Suctions to the Engine Room Bilges,
 No. and size One 2 1/2" in ER, One 2 1/2" in Hold. Are all the Bilge Suction Pipes in holds and tunnel well fitted with strum-boxes. Yes. ✓
 Are the Bilge Suctions in the Machinery Space led from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges. Yes. ✓
 Are all Sea Connections fitted direct on the skin of the ship. Yes. ✓ Are they fitted with Valves or Cocks. Valves. ✓
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates. Yes. ✓ Are the Overboard Discharges above or below the deep water line. Above. ✓
 Are they each fitted with a Discharge Valve always accessible on the plating of the vessel. Yes. ✓ Are the Blow Off Cocks fitted with a spigot and brass covering plate. Yes. ✓
 What Pipes pass through the bunkers. None. ✓ How are they protected. ✓
 What pipes pass through the deep tanks. None. ✓ Have they been tested as per Rule. ✓
 Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times. Yes. ✓
 Is the arrangement of Valves and their connections such as to prevent the possibility of water passing from the sea or from water tanks into the cargo or machinery spaces, or from one
 compartment to another. Yes. ✓ Is the Shaft Tunnel watertight. Yes. ✓ Is it fitted with a watertight door. No. ✓ worked from. ✓

AIN BOILERS, &c.—(Letter for record "S") Total Heating Surface of Boilers 1600 sq. ft. ✓
 Which Boilers are fitted with Forced Draft. All (one). ✓ Which Boilers are fitted with Superheaters. None. ✓
 No. and Description of Boilers One single ended multitubular scotch Working Pressure 180 lb./sq. in. ✓
 IS A REPORT ON MAIN BOILERS NOW FORWARDED? Yes. ✓
 IS A DONKEY BOILER FITTED? No. ✓ If so, is a report now forwarded? ✓
 Can the donkey boiler be used for domestic purposes only. ✓

PLANS. Are approved plans forwarded herewith for Shafting 18-4-41 Main Boilers 8-4-41 Auxiliary Boilers. ✓ Donkey Boilers. ✓
 (If not state date of approval)
 Superheaters. ✓ General Pumping Arrangements 24-9-42 Oil fuel Burning Piping Arrangements. ✓

SPARE GEAR.

Has the spare gear required by the Rules been supplied. Yes. ✓
 State the principal additional spare gear supplied. 2 Main bearing bolts, 6 M.E. cylinder studs & nuts, 6 M.E. piston ring studs
 2 pin & bushes, 1 set each M.E. piston rings, 1 set M.E. valve rod packing, 20 Condenser ferrules &
 plugs, 1 set of piston & bucket rings for each independent pump, 2 back stop bottom & main
 bearing bolts, steering engine: 1 set each main top & bottom end brasses, piston rod, eccentric
 rod stem & stud, 2 control valves, 1 distributer valve, 2 fire & salvage pump: 1 set of main top &
 bottom brasses, metallic packing for piston rod, 1 set of suction & delivery valves for each
 independent pump.
 F.R. Engine: 1 set connecting rod bolts & valve rings, Dynamo Eng: 1 set belt rings, main top &
 bottom brasses, governor springs. Generator: Armature wind bearings, 1 set of field coils, brushes &
 springs, Windlass: 1 set piston rings & 1 set main bearings.

The foregoing is a correct description.

THE LYTAM SHIPBUILDING & ENGINEERING COMPANY, LIMITED

Manufacturer.

Lloyd's Register
Foundation

008812 - 008822 - 0084

1942 1943
During progress of work in shops - - - Dec 11. 18. 23 Jan 11. 15 Feb 10. 19. 26 Mar 5. 18. 28 Apr 2. 15. 21. 30 May 7. 12. 19 June 8. 11. 25 July 9. 12. 16. 23. 29 Aug 5. 20. 26
During erection on board vessel - - - Sept 3. 9. 24 Oct 1. 8. 15. 21. 28 Nov 5. 10. 18. 26 Dec 9. 17. 22
1944
May 5. 12. 19. 26 June 5. 16. 23. 30 July 3. 6. 12. 17
Total No. of visits 71

Dates of Examination of principal parts—Cylinders 8-6-43, 10-2-44. Slides 8-6-43, 10-2-44. Covers 13-1-44, 10-2-44.
Pistons 15-1-43, 10-2-44. Piston Rods 5-1-44, 10-2-44. Connecting rods 22-7-43, 10-2-44.
Crank shaft 18-11-43, 31-1-44, 10-2-44. Thrust shaft 22-7-43, 24-9-43. Intermediate shafts 22-7-43, 24-9-43.
Tube shaft ✓ Screw shaft 22-7-43, 24-9-43. Propeller 7-3-44.
Stern tube 7-3-44. Engine and boiler seatings 22-3-44, 21-4-44. Engines holding down bolts 5-5-44.
Completion of fitting sea connections 7-3-44.
Completion of pumping arrangements 6-7-44. Boilers fixed 6-4-44. Engines tried under steam 30-6-44, 12-7-44.
Main boiler safety valves adjusted 6-7-44. Thickness of adjusting washers S.V. 13/32" P.V. 1/16"
Crank shaft material steel. Identification Mark 2461 F.H.F. Thrust shaft material steel. Identification Mark 2349 F.H.F.
Intermediate shafts, material steel. Identification Marks 2348 F.H.F. 2347 F.H.F. 24948. Tube shaft, material ✓ Identification Mark ✓
Screw shaft, material steel. Identification Mark 24-9-43. Steam Pipes, material steel. Test pressure 540 lb/sq. in. Date of Test 26-5-44.
Is an installation fitted for burning oil fuel No. Is the flash point of the oil to be used over 150° F. ✓
Have the requirements of the Rules for the use of oil as fuel been complied with ✓
Is the vessel (not being an oil tanker) fitted for carrying oil as cargo No. ✓ If so, have the requirements of the Rules been complied with ✓
If the notation for Ice Strengthening is desired, state whether the requirements in this respect have been complied with ✓
Is this machinery duplicate of a previous case yes. If so, state name of vessel "Fresburn."
General Remarks (State quality of workmanship, opinions as to class, &c.)

The machinery of this vessel has been constructed under special survey in accordance with the approved plans and the Society's Rules.

The material and workmanship are sound & good. It has been satisfactorily fitted on board, tried under steam and full working conditions and found satisfactory.

It is eligible in my opinion to be classed in the Register Book with notation:-

+ L.M.C. 4-HH. - T.S.(OG) - 1 S.B. - 180 lb/sq. in.

The amount of Entry Fee ... £ 2 : 0 :
Special ... £ 22 : 10 :
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ 17 : 13/5d
When applied for, 10 AUG 1944
When received, 19

J.H. Hendley
Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute

Assigned

Transmit to London

+ L.M.C. 7-44
30. 69

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