

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office.

26 APR 1944

Date of writing Report 17-4-1944. When handed in at Local Office 18 APR 1944. Port of LIVERPOOL

No. in Survey held at Lytham & Preston. Date, First Survey 11/12/41 Last Survey 24/3/1944

Reg. Book (Number of Visits)

on the class screw steamer FRESHBURN. Tons {Gross 282.91 Net 92.82}

Built at Lytham By whom built The Lytham S.R. & C. Co. Ltd. Yard No. 844. When built 1944

Engines made at - do - By whom made - do - Engine No. 553 When made - do -

Boilers made at - do - By whom made - do - Boiler No. 552 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 5.49" Crank pin dia. 6" Crank webs Mid. length breadth 10" Thickness parallel to axis 3 3/8"

Intermediate Shafts, diameter as per Rule 6.514" Thrust shaft, diameter at collars as per Rule 5.49"

Tube Shafts, diameter as fitted Screw Shaft, diameter as per Rule 6.354" Is the {tube screw} shaft fitted with a continuous liner No.

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 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 or protected between the liners Is an approved Oil Gland or other appliance fitted at the after end of the tube

at yes If so, state type Lytham S.R. & C. Co. 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 3" Stroke 10 1/2" Can one be overhauled while the other is at work yes

Feed Pumps {No. and size One - 6" x 4" x 12" simplex Pumps connected to the {No. and size Two M.E. pumps + one 6" x 6" x 12" simplex

{How driven steam Main Bilge Line {How driven 9.5 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 14.5 at forward end of E.R., 1 at aft end of E.R., all 2 1/2" dia., 1 closed suction in E.R. 2 1/2" dia.

In Pump Room One 14.5 + Centre all 2 1/2" dia. In Holds, &c. 2" dia suction in chain locker, screw space, gland compartment, connected to salvage pump, 9.5 pump + 1 - 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 E.R., 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 ✓

MAIN BOILERS, &c.—(Letter for record S.) Total Heating Surface of Boilers 1600 sq ft

Which Boilers are fitted with Forced Draft yes Which Boilers are fitted with Superheaters None

No. and Description of Boilers 1 single ended multitubular scotch Working Pressure 180 lbs/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. cyl cover studs + nuts, 6 M.E. piston ring studs, pump link brasses, 1 set each main engine, piston rings, 1 set valve rod packing, 20 condenser pumpers + flugs, 1 set of piston + bucket rings for each independent pump, 2 back bit bottom + main bearing bolts, steering Eng: 1 set each main bit + bottom end brasses, piston rod, eccentric rod with strap, 1 distributer valve, 2 cross valves, 2 valve + salvage pump: 1 set main bit + bottom brasses, metal rods + piston rods, 1 set of suction + delivery valves for each independent pump, F.D. Fan Eng: 1 set connecting rod bolts + valve rings

Dynamo: 1 set piston rings, main bit + bottom brasses, Governor springs, Generator: Armature with bearings, 1 set fuel coils, Ball race, Bushes + straps.

Windlass: 1 set each main bearings + piston rings.

The foregoing is a correct description.

THE LYTHAM SHIPBUILDING AND
ENGINEERING COMPANY, LIMITED
Manufacturers.

R. Friedenthal

Dates of Survey while building
 During progress of work in shops - ¹⁹⁴² Dec 11, 15, 23, ¹⁹⁴³ Jan 11, 15, 28, 10, 19, 21, Mar 5, 18, 25, Apr 2, 15, 21, 30, May 7, 12, 19, June 8, 11, 25, July 9, 12, 16, 21, 29, Aug 5, 20, 26, 31, Sept 3, 9, 24.
 During erection on board vessel - ¹⁹⁴⁴ Oct 1, 8, 16, 26, 28, Nov 5, 10, 17, 18, 25, Dec 9, 17, 22, Jan 5, 20, 31, Feb 4, 10, 16, 23, Mar 10, 17, 22, 24.
 Total No. of visits. 57

Dates of Examination of principal parts—Cylinders 8-6-43, 12-7-43. Slides 8-6-43, 12-7-43. Covers 15-1-43, 12-7-43.
 Pistons 15-1-43, 12-7-43. Piston Rods 29-7-43, 10-11-43. Connecting rods 29-7-43, 10-11-43.
 Crank shaft 25-6-43, 29-7-43, 10-11-43. Thrust shaft 21-7-43, 31-8-43, 24-9-43. Intermediate shafts 21-7-43, 31-8-43, 24-9-43.
 Tube shaft ✓. Screw shaft 21-7-43, 31-8-43, 24-9-43. Propeller 15-10-43, 22-3-44.
 Stern tube 5-8-43, 16-10-43, 22-3-44. Engine and boiler seatings 10-11-43. Engines holding down bolts 20-1-44.
 Completion of fitting sea connections 16-10-43.
 Completion of pumping arrangements 22-3-44. Boilers fixed 25-11-43. Engines tried under steam 10-3-44, 22-3-44.
 Main boiler safety valves adjusted 17-3-44. Thickness of adjusting washers 10.V. 3/8" S.V. 1/32.
 Crank shaft material Steel. Identification Mark 2460. Thrust shaft material Steel. Identification Mark 2545.
 Intermediate shafts, material Steel. Identification Marks FORD 2344, 17FT 2373. Tube shaft, material ✓. Identification Mark ✓.
 Screw shaft, material Steel. Identification Mark 2572. Steam Pipes, material Steel. Test pressure 540 lb/sq. in. Date of Test 9-2-44.
 Is an installation fitted for burning oil fuel ✓. 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. Greenwell Ser. Report 120255-
 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:-
 + LMC 4-44. - TS(OG) - 15R - 180 lbs/sq. in.

Certificate to be sent to
 The amount of Entry Fee ... £ 2 : 0 : 0 When applied for, 21 APR 1944
 Special ... £ 22 : 10 : 0 When received, 19
 Donkey Boiler Fee ... £ ✓ : ✓ : ✓
 Travelling Expenses (if any) £ 19 : 2/4 : 19
 Committee's Minute
 Assigned Transmit to London. J. H. Lindley
 J. H. Lindley
 Engineer Surveyor to Lloyd's Register of Shipping.
 LIVERPOOL 25 APR 1944 THURS 11 MAY 1944
 + LMC 3-44

