

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office 20 APR 1942

Date of writing Report 19 When handed in at Local Office 15 Apr 1942 Port of Sunderland.
 No. in Survey held at Sunderland. Date, First Survey 15 July '41 Last Survey 14 Apr 1942
 Reg. Book. on the "EMPIRE BARRIE" (Number of Visits 52)
 Built at Sunderland. By whom built J. P. Thompson & Co. Ltd. Yard No. 615 Tons { Gross 7168
 Engines made at Sunderland By whom made G. Black (1938) Ltd. Engine No. 1254 When made 1942
 Boilers made at Sunderland By whom made G. Black (1938) Ltd. Boiler No. 1254 When made 1942
 Registered Horse Power Owners Ministry of War Transport Port belonging to Sunderland
 Nom. Horse Power as per Rule 509 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted Ylo.
 Trade for which Vessel is intended

ENGINES, &c.—Description of Engines

Revs. per minute

Dia. of Cylinders 24 1/2" - 30" - 40" Length of Stroke 48" No. of Cylinders 3 No. of Cranks 3
 Crank shaft, dia. of journals as per Rule 13.99" Crank pin dia. 14 3/4" Crank webs Mid. length breadth 22" Thickness parallel to axis 9 3/8"
 as fitted 14 1/2" Mid. length thickness 9" shrunk Thickness around eye-hole 6 3/8"
 Intermediate Shafts, diameter as per Rule 13.33" Thrust shaft, diameter at collars as per Rule 13.99"
 as fitted 13 5/8" as fitted 14 1/4"

Tube Shafts, diameter as per Rule — Screw Shaft, diameter as per Rule 15 1/4" Is the { tube } shaft fitted with a continuous liner { Ylo. }
 as fitted — as fitted 15 1/4" as fitted —

Bronze Liners, thickness in way of bushes as per Rule 25/32" Thickness between bushes as per Rule 3/4" Is the after end of the liner made watertight in the propeller boss Ylo.
 as fitted 25/32" as fitted 3/4" If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner one length

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 shaft no

If so, state type — Length of Bearing in Stern Bush next to and supporting propeller 5'-1"

Propeller, dia. 18'-6" Pitch 16'-0" No. of Blades 4 Material C.I. whether Moveable no Total Developed Surface 120 sq. feet

Feed Pumps worked from the Main Engines, No. Two Diameter 4" Stroke 24" Can one be overhauled while the other is at work Ylo.

Bilge Pumps worked from the Main Engines, No. Two Diameter 4" Stroke 24" Can one be overhauled while the other is at work Ylo.

Feed { No. and size 2 @ 4" x 9 1/2" x 21" Pumps connected to the { No. and size 1 @ 9 1/2" x 4" x 21" 1 @ 10 1/2" x 13" x 24"
 Pumps { How driven Steam Main Bilge Line { How driven Steam

Ballast Pumps, No. and size 1 @ 10 1/2" x 13" x 24" 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 2 @ 3" in E.R. 2 @ 3" in Bl. man. 1 @ 2 1/2" in Tunnel hull.

In Pump Room — In Holds, &c. N°1. 3" prs. N°2. 3" prs. N°3. 3" prs.

Bunker 3" prs. N°4. 3" prs. N°5. 3" prs. Deep Tank 3" prs.

Main Water Circulating Pump Direct Bilge Suctions, No. and size 1 @ 9" Independent Power Pump Direct Suctions to the Engine Room Bilges,

No. and size 1 @ 5" Are all the Bilge Suction Pipes in holds and tunnel well fitted with strum-boxes Ylo.

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 Ylo.

Are all Sea Connections fitted direct on the skin of the ship Ylo. Are they fitted with Valves or Cocks Both.

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates Ylo. Are the Overboard Discharges above or below the deep water line Below & aft of hull

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel Ylo. Are the Blow Off Cocks fitted with a spigot and brass covering plate Ylo.

What Pipes pass through the bunkers In Bilge Suctions How are they protected wood lumen boards

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 Ylo.

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 Ylo.

Is the Shaft Tunnel watertight Ylo. Is it fitted with a watertight door no (Bilge door intact) worked from —

MAIN BOILERS, &c. (Letter for record S.) Total Heating Surface of Boilers 7248 sq.

Is Forced Draft fitted Ylo. No. and Description of Boilers 3 SB. Working Pressure 220

IS A REPORT ON MAIN BOILERS NOW FORWARDED? Ylo.

IS A DONKEY BOILER FITTED? no. If so, is a report now forwarded? —

Is the donkey boiler intended to be used for domestic purposes only —

PLANS. Are approved plans forwarded herewith for Shafting — Main Boilers — Auxiliary Boilers — Donkey Boilers —

(If not state date of approval)

Superheaters — General Pumping Arrangements — Oil fuel Burning Piping Arrangements —

SPARE GEAR.

Has the spare gear required by the Rules been supplied Ylo.

State the principal additional spare gear supplied C.I. Propeller, 1 Complete bottom end bearing with bolts & nuts

1 Complete top end bearing with bolts & nuts, 2 main bearing bolts & nuts, 1 Set Coupling

bolts & nuts, 1 Set pads for Michell block, 6 holding down bolts & nuts, 6 cyl. cover studs

& nuts, 6 valve chest cover studs & nuts, 6 pump rod studs & nuts, 1 set bilge pump

suct. & disch. valves & seats, 1 set metallic packing for piston rods (bearing parts only)

1 set of valves for water end of each steam pump, 1 set air pump valves, one

impeller shaft for circ. pump, 1 set of rings for HP piston valves.

The foregoing is a correct description,
 GEORGE CLARK (1988) LTD.

A. J. Berry
 DIRECTOR & GENERAL MANAGER

Manufacturer.



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002956-002969-0093

Dates of Survey while building
 During progress of work in shops - - 1941 July 15 Aug 21 Sep 25 26 29 Oct 10 13 28 Nov 4 7 10 11 14 17 21 Dec 2 3 5 8 9 11 12
 15 19 22 29 30 31 1942 Jan 6 8 9 13 15 16 19 20 21 22 26 27 28 30 Feb 2 3 4 9 13 15 19 27
 During erection on board vessel - - - Apr 13 14
 Total No. of visits 52

Dates of Examination of principal parts - Cylinders H.P. 22/12/41 M.P. 3/12/41 L.P. 2/12/41 Slides 21/1/42 Covers 14/11/41
 Pistons 14/11/41 Piston Rods 8/1/42 Connecting rods 8/1/42
 Crank shaft 30/12/41 Thrust shaft 21/11/41 Intermediate shafts 22/1/42
 Tube shaft Screw shaft 19/1/42 Propeller 30/1/42
 Stern tube 19/1/42, 26/1/42 Engine and boiler seatings 13/2/42 Engines holding down bolts 13/1/42
 Completion of fitting sea connections 6/1/42
 Completion of pumping arrangements 13/4/42 Boilers fixed 13/2/42 Engines tried under steam 24/2/42
 Main boiler safety valves adjusted 24/2/42 Thickness of adjusting washers P. Bl. 5 3/16 C. Bl. 5 3/16 S. Bl. 5 3/8
 Crank shaft material Ingot Steel Identification Mark No 1254 WHF Thrust shaft material Ingot Steel Identification Mark No 6168 WHF
 Intermediate shafts, material Ingot Steel Identification Marks No 6170/1/2/3/5 WHF Tube shaft, material - Identification Mark -
 Screw shaft, material Ingot Steel Identification Mark WHF 19/1/42 Steam Pipes, material S. D. Steel Test pressure 660 Date of Test 30/1/42
 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 not desired.
 Is this machinery duplicate of a previous case - If so, state name of vessel -

General Remarks (State quality of workmanship, opinions as to class, &c.) This machinery has been built under Special Survey in accordance with the approved Plan, Specification & the rule requirements of the Society.
 The materials & workmanship are good.
 It has been securely fitted on board the vessel & tried under working conditions alongside quay but satisfactory results & is now eligible, in my opinion, to have notation
 * L.N.C. 4. 42, T.S (CL), 3 SB (FD) 22000%.

The amount of Entry Fee ... £ 6 : :
 Special Specification ... £ 100 : 9 :
 Donkey Boiler Fee ... £ 25 : 2 :
 Travelling Expenses (if any) £ : :
 Committee's Minute
 Assigned T. Lamb, H. 42, 22, CL

When applied for, 6 APR 1942

When received, 19

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

TUE. 28 APR 1942



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