

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office 24 NOV 1944

Date of writing Report 31-10-44 19 When handed in at Local Office 31 NOV 1944 Port of Liverpool

No. in Survey held at NORTHWICH Date, First Survey May 5th/44 Last Survey Oct 17 1944

Reg. Book on the SS "EMPIRE FULHAM" (Number of Visits 19) Tons {Gross 222
Net 1011-}

Built at Northwich By whom built W.J. Yarwood & Son Ltd Yard No. 760 When built 1944

Engines made at Northwich By whom made W.J. Yarwood & Son Ltd Engine No. 215 When made 1944

Boilers made at Carfin By whom made Alex Anderson & Sons Boiler No. 3802 When made 1944

Registered Horse Power Owners Min. of War Transport Port belonging to

Nom. Horse Power as per Rule 57 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

Trade for which vessel is intended Water Carrier

ENGINES, &c.—Description of Engines Compound 325 I.H.P. at Revs. per minute 140

Dia. of Cylinders 13 1/2 x 28 Length of Stroke 22 No. of Cylinders 2 No. of Cranks 2

Crank shaft, dia. of journals as per Rule 6 5/16 Crank pin dia. 6 5/16 Mid. length breadth Thickness parallel to axis 4 1/2
as fitted 6 5/16 Crank webs Mid. length thickness shrunk Thickness around eye-hole 2 1/2

Intermediate Shafts, diameter as per Rule Thrust shaft, diameter at collars as per Rule 6 5/16
as fitted

Tube Shafts, diameter as per Rule Screw Shaft, diameter as per Rule 7 1/8 Is the screw shaft fitted with a continuous liner No
as fitted

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
as fitted

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

If so, state type Yarwood Length of Bearing in Stern Bush next to and supporting propeller 2-3

Propeller, dia. 7-8 Pitch 7-9 No. of Blades 4 Material CI whether Moveable No Total Developed Surface 19 sq. feet

Feed Pumps worked from the Main Engines, No. One Diameter 2 Stroke 11 Can one be overhauled while the other is at work

Bilge Pumps worked from the Main Engines, No. One Diameter 2 Stroke 11 Can one be overhauled while the other is at work

Feed Pumps {No. and size 1-2 x 11, 1-4 x 6 x 12 Pumps connected to the {No. and size 1-2 x 11, 1-6 x 4 1/2 x 6
How driven M. Eng. Steam (W. Eng.) Main Bilge Line How driven M. Eng. Steam

Ballast Pumps, No. and size 1-6 x 4 1/2 x 6 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 2-2

In Pump Room In Holds, &c. None Hand pump to stern forward

Main Water Circulating Pump Direct Bilge Suctions, No. and size 1-3 1/2 Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1-2 1/2

Are all the Bilge Suction Pipes in holds and tunnel well fitted with strum-boxes None

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 On Kingston 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 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 worked from

MAIN BOILERS, &c.—(Letter for record S) Total Heating Surface of Boilers 991 sq ft

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

No. and Description of Boilers 1-SB (FD) Working Pressure 140 lbs/sq in

IS A REPORT ON MAIN BOILERS NOW FORWARDED? gls report N° 68341

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 1-3-44 Main Boilers gls Auxiliary Boilers Donkey Boilers

(If not state date of approval)

Superheaters General Pumping Arrangements 30-3-44 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 as per specification.

The foregoing is a correct description.

Manufacturer.

W. J. Yarwood & Son Ltd
Northwich



5/5/44 to 17/10/44
 Dates of Survey while building: During progress of work in shops - - -
 During erection on board vessel - - -
 Total No. of visits

Dates of Examination of principal parts - Cylinders 31.5.44 Slides 7.3.44 Covers 31.5.44
 Pistons 14.6.44 Piston Rods 7.3.44 Connecting rods 7.3.44
 Crank shaft 5.5.44 Thrust shaft 7.3.44 Intermediate shafts
 Tube shaft ✓ Screw shaft 5.7.44 Propeller 5.7.44
 Stern tube 30.6.44 Engine and boiler seatings 1.8.44 Engines holding down bolts 27.9.44
 Completion of fitting sea connections 1.8.44
 Completion of pumping arrangements 9.10.44 Boilers fixed 29.8.44 Engines tried under steam 12.10.44
 Main boiler safety valves adjusted 12.10.44 Thickness of adjusting washers Port 9/32" Star 1/4"
 Crank shaft material Steel Identification Mark 7801 ✓ Thrust shaft material Steel Identification Mark 3861
 Intermediate shafts, material ✓ Identification Marks 252-44 FS
 Screw shaft, material Steel Identification Mark 3908 ✓ Steam Pipes, material Copper ✓ Test pressure 280 ✓ Date of Test 26.9.44
 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 "Empire Barnaby"

General Remarks (State quality of workmanship, opinions as to class, &c.)

The machinery of this vessel has been built under special survey in accordance with the approved plans and the specification approved by the Ministry of Shipping. The materials + workmanship are good.
 After erection in the shops, the machinery fitted on board, together with the auxiliaries, in an efficient manner. The safety valves adjusted under steam and an accumulation test held. The spare gear has been checked.
 Upon completion a satisfactory basin trial was held at full power.

In my opinion the machinery of this vessel is eligible to be classed in the Register Book with a notation of
 + LMC 10.44.

TS. O.G. I.P.
 F.D.

Certificate to be sent to
 (The Surveyors are requested not to write on or below the space for Committee's Minute.)

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| The amount of Entry Fee | £ 2 : 0 : 0 | When applied for, 20 NOV 1944 |
| Special inc. spec | £ 11 : 5 : 0 | |
| Donkey Boiler Fee | £ : | When received, 19 |
| Travelling Expenses (if any) | £ 7 : 5/8 | |

C. W. Reed
 Engineer Surveyor to Lloyd's Register of Shipping.

LIVERPOOL 21 NOV 1944
 Committee's Minute
 Assigned L.M.C. 10.44
 O.G., F.D.

