

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office 14 SEP 1946

Date of writing Report 19... When handed in at Local Office 12 SEP 1946 19... Port of HULL.

No. in Survey held at Selby & Hull Date, First Survey 18.9.45 Last Survey 21.8.1946
 Reg. Book 56876 on the "EMPIRE JUNA" A/MS 1328 Tons {Gross 296.45 Net Nil (Number of Visits 43)

Built at Selby By whom built Cochrane & Sons Ltd. Yard No. 1315 When built 1946
 Engines made at Hull By whom made Amos & Smith Ltd. Engine No. 778 When made 1946
 Boilers made at Hull By whom made Amos & Smith Ltd. Boiler No. 778 When made 1946
 Registered Horse Power... Owners Ministry of War Transport Port belonging to Hull
 Nom. Horse Power as per Rule 154 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes
 Trade for which vessel is intended Towing services.

ENGINES, &c.—Description of Engines Triple expansion Reciprocating Revs. per minute 120

Dia. of Cylinders 15", 25", 42" Length of Stroke 27" No. of Cylinders 3 No. of Cranks 3

Crank shaft, dia. of journals 8 1/2" as per Rule approx. Crank pin dia. 8 1/2" Crank webs 15 1/2" Mid. length breadth 5 1/2" Thickness parallel to axis 5 1/2"
 as fitted 8 1/2" Mid. length thickness 5 1/2" shrunk Thickness around eye-hole 3 1/8"

Intermediate Shafts, diameter 8" as per Rule approx. Thrust shaft, diameter at collars 8 1/2" as fitted approx.

Tube Shafts, diameter - as per Rule - Screw Shaft, diameter 9 1/2" as fitted approx. Is the 7/8" screw shaft fitted with a continuous liner without

Bronze Liners, thickness in way of bushes - as per Rule - Thickness between bushes - as fitted - 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 no, state type Newark Length of Bearing in Stern Bush next to and supporting propeller 38"

Propeller, dia. 10'0" Pitch 11'6" No. of Blades 4 Material C.I. whether Moveable No Total Developed Surface 38 sq. feet

Feed Pumps worked from the Main Engines, No. none Diameter - Stroke - Can one be overhauled while the other is at work Yes
 Bilge Pumps worked from the Main Engines, No. two Diameter 3" Stroke 15" Can one be overhauled while the other is at work Yes
 Feed Pumps Two 8 1/2", 6", 13" Pumps connected to the Main Bilge Line {No. and size Two 3"x15" One Duplex 7 1/2", 5", 6" Bilge ejector Steam
 How driven Ind. steam How driven ME Ind. Steam. Steam
 Ballast Pumps, No. and size 12" 9" 12" by pump st. Lubricating Oil Pumps, including Spare Pump, No. and size none

Are two independent means arranged for circulating water through the Oil Cooler - Suctions, connected both to Main Bilge Pumps and Auxiliary Bilge Pumps:—In Engine and Boiler Room E.R. 1 - 2 1/2" B.R. 1 - 2 1/2" (aft) P & S.
 In Pump Room cofferdam B.R. 1 - 2" In Holds, &c. One 2" in each F.P.T., water ballast tank, (P & S) -do- Fwd. E.R. 1 - 2 1/2" store (fd) under crew space, Blr. Fd. Tank (P & S)

Main Water Circulating Pump Direct Bilge Suctions, No. and size 1 - 5" Independent Power Pump Direct Suctions to the Engine and/or Boiler Room Bilges, No. and size 1 - 3" E.R. Aft Are all the Bilge Suction Pipes in holds and 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 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 - 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 Part of ER Is it fitted with a watertight door - worked from -

MAIN BOILERS, &c.—(Letter for record S) Total Heating Surface of Boilers 2,400 ft.²
 Which Boilers are fitted with Forced Draft Sole Boiler Which Boilers are fitted with Superheaters none
 No. and Description of Boilers 1 S.B. Working Pressure 200 lbs
 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 other than domestic purposes -

PLANS. Are approved plans forwarded herewith for Shafting 16.2.45 Main Boilers 2.2.45 Auxiliary Boilers - Donkey Boilers -
 (If not state date of approval)
 Superheaters - General Pumping Arrangements 1.5.45 Oil fuel Burning Piping Arrangements 2.8.46

SPARE GEAR.

Has the spare gear required by the Rules been supplied Yes
 State the principal additional spare gear supplied As per attached list.

The foregoing is a correct description

W. G. Brown
DIRECTOR

Manufacturer.



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Lloyd's Register Foundation

013750 - 013759 - 0211

"EMPIRE JUNIA"

During progress of work in shops - - - { 1945. Sept 18. Oct 25. Nov 7. Dec 4. 17. ^{1946.} Jan. 9. 21. 24. Feb. 11. 19. 26. Mar. 5. 15. 21.
 Apr. 4. 8. 10. 15. 23. 25. May. 1. 21.
 During erection on board vessel - - - { 1945. Dec. 19. ^{1946.} Jan. 22. Feb. 15. May. 6. 29. June 5. 15. 18. 24. 26. 28. July 17. 23. 24.
 Aug. 1. 2. 7. 15. 16. 19. 21.
 Total No. of visits 43.

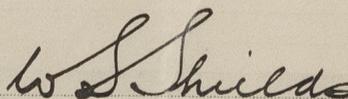
Dates of Examination of principal parts - Cylinders 4.4.46. Slides 15.4.46. Covers 4.4.46.
 Pistons 4.4.46. Piston Rods 10.4.46. Connecting rods 10.4.46.
 Crank shaft 24.1.46. Thrust shaft 7.11.45. Intermediate shafts 9.1.46.
 Tube shaft - Screw shaft 17.12.45. Propeller 6.2.46.
 Stern tube 6.2.46. Engine and boiler seatings 25.3.46. Engines holding down bolts 18.6.46.
 Completion of fitting sea connections 6.2.46.
 Completion of pumping arrangements 2.8.46. Boilers fixed 18.6.46. Engines tried under steam 1.8.46. & 15.8.46.
 Main boiler safety valves adjusted 1.8.46. Thickness of adjusting washers "P. 11/32" S. 3/8"
 Crank shaft material F I Steel Identification Mark 492 FW 4.5.45. Thrust shaft material F I Steel Identification Mark 624 FW
 Intermediate shafts, material -do- Identification Marks 427 " 16.3.45. Tube shaft, material - Identification Mark -
 Screw shaft, material -do- Identification Mark HB 587 KC 623 FW 20.7.45. Steam Pipes, material Steel Test pressure 600lbs Date of Test 23.7.46.
 Is an installation fitted for burning oil fuel Yes Is the flash point of the oil to be used over 150° F. Yes
 Have the requirements of the Rules for the use of oil as fuel been complied with Yes
 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 FAUN" (with minor amendments).

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

The machinery of this vessel has been constructed & installed in accordance with the Secretary's letters, approved plans, the Rules & the specification.
 The workmanship and materials are good.
 The machinery has been tried under working conditions and on completion of all tests found satisfactory in every respect.
 Eligible in my opinion, to have record of +LMC 8,46 OG with the Notation:
 T 3 cy. 15", 25", 42" - 27. 154MN.
 1 SB 200 lbs 3 cf. US 2400 F.D.
 Fitted for oil fuel 2,43 TP above 150° F.

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

The amount of Entry Fee	£ 3 - -	When applied for, 18 SEP 1946
Special +LMC	£ 38 10 -	
25% Specification	£ 9 12 6	When received,
Donkey Boiler Fee	£ :	
Travelling Expenses (if any)	£ :	10


 Engineer Surveyor to Lloyd's Register of Shipping.

Date **FRI. 27 SEP 1946**

Committee's Minute **+ LMC 8,46**
 FITTED FOR OIL FUEL 8,46 FLASH POINT ABOVE 150° F. F. D. O. G.