

# REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

*D.P.M.*  
 Date of writing Report 21.5.42 When handed in at Local Office 8 JUL 1942 Port of HULL  
 No. in Survey held at HULL Date, First Survey 5.12.41 Last Survey 19.5.1942  
 Reg. Book. on the S. Tug EMPIRE FAIRY (Number of Visits 35) Tons 277  
 Built at SELAY By whom built Cochrane & Co Ltd Yard No. 1243 When built 1942  
 Engines made at HULL By whom made Amos & Smith Ltd Engine No. 705 When made   
 Boilers made at HULL By whom made Amos & Smith Ltd Boiler No. 706 When made   
 Registered Horse Power  Owners Ministry of War Transport Port belonging to   
 Nom. Horse Power as per Rule 132 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes  
 Trade for which Vessel is intended

**ENGINES, &c.**—Description of Engines Triple Expansion Revs. per minute 122  
 Dia. of Cylinders 15" 25" 42" Length of Stroke 27" No. of Cylinders 3 No. of Cranks 3  
 Crank shaft, dia. of journals as per Rule 8.05 Crank pin dia. 8 1/4" Crank webs Mid. length breadth 15 1/2" Thickness parallel to axis 5 1/4"  
 as fitted 8 1/4" Mid. length thickness 5 1/4" shrunk Thickness around eye-hole 3 3/8"  
 Intermediate Shafts, diameter as per Rule 7.66 Thrust shaft, diameter at collars as per Rule 8.05  
 as fitted 8" as fitted 8 1/4"  
 Tube Shafts, diameter as per Rule NONE Screw Shaft, diameter as per Rule 8.86 Is the tube shaft fitted with a continuous liner No  
 as fitted NONE as fitted 9 1/4" as fitted 8 1/4"  
 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 Yes If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner Yes  
 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 Yes  
 If two liners are fitted, is the shaft lapped or protected between the liners Yes Is an approved Oil Gland or other appliance fitted at the after end of the tube  
Yes If so, state type NEWARK Length of Bearing in Stern Bush next to and supporting propeller 38 1/2"  
 Propeller, dia. 10'-0" Pitch 11'-9" No. of Blades 4 Material C.I. whether Moveable Solid Total Developed Surface 38 sq. feet  
 Feed Pumps worked from the Main Engines, No. 2 Diameter 2 3/4" Stroke 15" Can one be overhauled while the other is at work Yes  
 Bilge Pumps worked from the Main Engines, No. 2 Diameter 2 3/4" Stroke 15" Can one be overhauled while the other is at work Yes  
 Feed Pumps { No. and size One 6" x 4 1/2" x 6" Pumps connected to the { No. and size } One Duplex 6" x 4 1/2" x 6" + 2 3/4" x 15" Incl. M.E. Pump  
 How driven Independent Rec Main Bilge Line { How driven } Independent Rec  
 Ballast Pumps, No. and size  Lubricating Oil Pumps, including Spare Pump, No. and size NONE  
 Are two independent means arranged for circulating water through the Oil Cooler NONE Suctions, connected to both Main Bilge Pumps and Auxiliary  
 Bilge Pumps;—In Engine and Boiler Room 2 @ 2 1/2" 2 @ 3" dia Boiler Room 2 @ 2 1/2" dia  
 In Pump Room Yes In Holds, &c. F.P.T. 1 @ 2" dia. Fore hold. 1 @ 2" dia. Aft hold 1 @ 2" dia  
A.P.T. 1 @ 2" dia.

Main Water Circulating Pump Direct Bilge Suctions, No. and size One @ 5" Independent Power Pump Direct Suctions to the Engine Room Bilges,  
 No. and size One @ 3" include above 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 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 Yes  
 What pipes pass through the deep tanks NONE Have they been tested as per Rule Yes  
 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 Yes worked from Eng. Room

**MAIN BOILERS, &c.**—(Letter for record S) Total Heating Surface of Boilers 2390 sq. ft.  
 Is Forced Draft fitted No No. and Description of Boilers One S.B. Working Pressure 200 lb. 10'  
 IS A REPORT ON MAIN BOILERS NOW FORWARDED? Yes  
 IS A DONKEY BOILER FITTED? No If so, is a report now forwarded? Yes  
 Is the donkey boiler intended to be used for domestic purposes only Yes  
 PLANS. Are approved plans forwarded herewith for Shafting 28-7-41 Main Boilers 3-7-41 Auxiliary Boilers None Donkey Boilers None  
 (If not state date of approval)  
 Superheaters Yes General Pumping Arrangements 3/9/41 Oil fuel Burning Piping Arrangements Yes

### SPARE GEAR.

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

The foregoing is a correct description.

For AMOS & SMITH LTD.

*Amos & Smith Ltd*  
LONDON

Manufacturer.



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EMPIRE FAIRY.

Dates of Survey while building  
 During progress of work in shops -- 1941 Dec. 5, 19, 27, 30, 31. 1942 Jan. 2, 4, 7, 12, 13, 14, 20, 23, 31. Feb. 6, 11, 23, 26, 27.  
 During erection on board vessel --- Mar. 9, 10, 21. Apr. 4, 20, 22, 24. May 4, 5, 6, 9, 12, 13, 14, 15, 19.  
 Total No. of visits 35.

Dates of Examination of principal parts—Cylinders 12/1/42 13/1/42 14/1/42 Slides 20/1/42 Covers 12/1/42 13/1/42 14/1/42  
 Pistons 23/1/42 Piston Rods 27/2/42 Connecting rods 27/2/42  
 Crank shaft 11/2/42 Thrust shaft 23/1/42 Intermediate shafts 7/1/42  
 Tube shaft NONE Screw shaft 5/12/41 Propeller 4/1/42  
 Stern tube 2/1/42 Engine and boiler seatings 22.4.42 Engines holding down bolts 22.4.42  
 Completion of fitting sea connections 2/1/42  
 Completion of pumping arrangements 13.5.42 Boilers fixed 22.4.42 Engines tried under steam 13.5.42  
 Main boiler safety valves adjusted 13.5.42 Thickness of adjusting washers 13/32 both.  
 Crank shaft material M.S. C.P. 270 CP. 5/12/41. P4J-319.LT. Identification Mark 20-10-41. Thrust shaft material M.S. Identification Mark C.P. 5/12/41  
 Intermediate shafts, material M.S. Identification Marks 353. CP.LT. 33. 5-12-41. Tube shaft, material NONE. Identification Mark ✓  
 Screw shaft, material M.S. Identification Mark C.P. 15/10/41 Steam Pipes, material Steel ✓ Test pressure 600#. Date of Test 22.4.42  
 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 ✓  
 Is this machinery duplicate of a previous case No. ✓ If so, state name of vessel ✓

General Remarks (State quality of workmanship, opinions as to class, &c.)  
 The Machinery of this Vessel has been constructed in accordance with the approved plans, the Specification and the Society's Rules.  
 The Workmanship is good, The Materials are good, tested, and supplied by firms approved by the Society.  
 The Machinery auxiliaries have been fitted aboard and when tried under steam at or near full power as practicable in the basin were found satisfactory in every respect.  
 The Vessel is eligible in my opinion, when closed, to have records of LMC 5,42. and O.G. and the notation T. 30y. 15-25-42" - 27" 163 NHP. 200 lb 15B. 3 cf. G.S. 63 ft. H.S. 2390.

Certificate to be sent to

The amount of Entry Fee ... £ 3 : : When applied for,  
 Special Supervision of Spec. ... £ 33 : 5 : : B JUL 1942  
 Donkey Boiler Fee ... £ : : : When received,  
 Travelling Expenses (if any) £ : : : 19.....

*W. Shillars*  
 Dykes & Co. Surveyors  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI 14 AUG 1942  
 + amb. 5.42  
 Assigned *ol.*

