

Bel. 13305

No. 65152

5 MAR 1942

REPORT ON OIL ENGINE MACHINERY.

Rpt. 4b.

Received at London Office

Date of writing Report 19 When handed in at Local Office 2:3:19 Port of Glasgow
No. in Survey held at Glasgow Reg. Book. Date, First Survey 14:2:41 Last Survey 31.7.42
Number of Visits 35 + 102

on the Single Screw vessel "EMPIRE FLETCHER"
Tons { Gross 8194 Net 4776
Built at Belfast By whom built Harland & Wolff, Ltd. Yard No. 1081 When built 1942
Engines made at Glasgow By whom made Harland & Wolff, Ltd. Engine No. 8108 When made 1942
Donkey Boilers made at Belfast By whom made Harland & Wolff, Ltd. Boiler No. When made 1942
Brake Horse Power 3300 Owners Ministry of War Transport Port belonging to Belfast
Nom. Horse Power as per Rule 490 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes
Trade for which vessel is intended Carrying Petroleum in Bulk

ALL ENGINES, &c. Type of Engines Heavy oil. Airless injection 2 or 4 stroke cycle 4 Single or double acting S.A.
Maximum pressure in cylinders 700 lb Diameter of cylinders 740 mm Length of stroke 1500 mm No. of cylinders 6 No. of cranks 6
Mean Indicated Pressure 128

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 972 mm Is there a bearing between each crank yes
Revolutions per minute 110 Flywheel dia. 2489 mm Weight 2580 Kgs Means of ignition Compression Kind of fuel used Diesel oil

Crank Shaft, { Solid forged dia. of journals as per Rule Appd. 505 mm as fitted 505 mm Crank pin dia. 505 mm Mid. length breadth 980 mm Thickness parallel to axis 310 mm
{ Semi-built dia. of journals as fitted 505 mm Crank Webs Mid. length thickness 310 shrunk Thickness around eyehole 292.5
{ All built dia. of journals as fitted 115 Crank Webs Mid. length thickness 310 shrunk Thickness around eyehole 292.5

Flywheel Shaft, diameter as per Rule as approved Intermediate Shafts, diameter as per Rule as approved Thrust Shaft, diameter at collars as per Rule Appd. 654 mm
as fitted as fitted as fitted 24" - 14" as fitted 454 mm

Tube Shaft, diameter as per Rule as approved Screw Shaft, diameter as per Rule as approved Is the tube shaft fitted with a continuous liner yes
as fitted as fitted as fitted 18" as fitted as fitted

Bronze Liners, thickness in way of bushes as per Rule as approved Thickness between bushes as per Rule as approved Is the after end of the liner made watertight in the
as fitted as fitted as fitted as fitted as fitted as fitted

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
If so, state type no Length of Bearing in Stern Bush next to and supporting propeller 5'-0"

Propeller, dia. 55'-6" Pitch 12'-0" No. of blades 4 Material Bronze whether Moveable fixed Total Developed Surface 75 sq. feet
Method of reversing Engines Direct Is a governor or other arrangement fitted to prevent racing of the engine when decoupled yes Means of lubrication forced

Thickness of cylinder liners 53 mm Are the cylinders fitted with safety valves yes Are the exhaust pipes and silencers water cooled or lagged with
non-conducting material lagged If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine 1 Engine driven, 180 ton/hr.

Cooling Water Pumps, No. 1 independent Is the sea suction provided with an efficient strainer which can be cleared within the vessel yes
Bilge Pumps worked from the Main Engines, No. 2 Diameter 2.1 @ 200 tons per hour Stroke 1 @ 80 tons per hour Can one be overhauled while the other is at work yes

Pumps connected to the Main Bilge Line { No. and Size 2.1 @ 200 tons per hour How driven Steam driven
Is the cooling water led to the bilges no If so, state what special arrangements are made to deal with this water in addition to the ordinary bilge pumping arrangements yes

Ballast Pumps, No. and size 1 @ 200 tons per hour Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 1 Engine driven, 100 ton/hr. independent 100 tons/hr.
Are two independent means arranged for circulating water through the Oil Cooler yes Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge
Pumps, No. and size:—In Machinery Spaces 5 3 @ 3 1/2" dia 2 @ 2 1/2" dia In Pump Rooms 3 @ 4"

Holds, &c. Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 2 @ 6" dia
Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes yes Are the Bilge Suctions in the Machinery Spaces
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 platform plates yes Are the Overboard Discharges above or below the deep water line below

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 yes

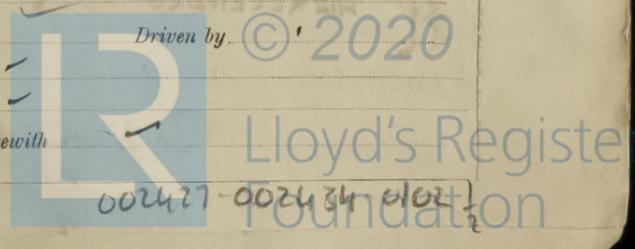
If a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork yes

Main Air Compressors, No. 2 No. of stages 2 Diameters 245/250 mm Stroke 130 mm Driven by Steam Engine
Auxiliary Air Compressors, No. 2 No. of stages 2 Diameters 245/250 mm Stroke 130 mm Driven by Steam Engine

Small Auxiliary Air Compressors, No. 2 No. of stages 2 Diameters 245/250 mm Stroke 130 mm Driven by Steam Engine
What provision is made for first Charging the Air Receivers as above

Exhausting Air Pumps, No. BUCHI BLOWER EXHAUST FROM MAIN ENGINE yes Driven by Steam Engine

Auxiliary Engines crank shafts, diameter as per Rule as fitted No. as fitted Position as fitted
Have the Auxiliary Engines been constructed under special survey yes Is a report sent herewith yes



The foregoing is a correct description,

For HARLAND AND WOLFF, LIMITED

Wm. J. Wright.

Manufacturer.

1941
 Apr 7. 11. 22. 29 June 27 July 8. 11. 25 Aug 4. 11. 12 Sept 16. 22. 26 Nov. 26. 28. 29 Dec. 1. 3. 6. 10. 12. 16. 19. 31

1942
 Jan 6. 9. 8. 13. 24. 29. 31 Feb. 2. 25. 10. 13. 16. 19. 20. 25. 26 Mar 11. 20. 23. 25. 27. 30 Apr 2. 8. 15. 16. 21. 22. 23. 24. 28. 29

30 May 5. 13. 14. 18. 20. 23. 25. 26. 28 June 1. 2. 3. 4. 8. 13. 15. 17. 19. 20. 22. 23. 24. 25. 29. 30 July 1. 3. 6. 7. 8. 9. 10. 11. 20. 21. 22

23. 24. 27. 28. 29. 30 31 = 102

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 5-11-41
 12-12-41
 17-10-41

Dates of Examination of principal parts—Cylinders 25-11-41 Covers 25-11-41 Pistons 17-12-41 Rods 17-12-41 Connecting
 Crank shaft 13-10-41 Flywheel shaft ✓ Thrust shaft 13-10-41 Intermediate shafts 25/3/42 Tube shaft
 Screw shaft 25/3/42 Propeller 27/3/42 Stern tube 27/3/42 Engine seatings 2/3/42 Engines holding down bolts