

pt. 4b.

REPORT ON OIL ENGINE MACHINERY.

No. 10,398

21 JUN 1930

Received at London Office

Date of writing Report

When handed in at Local Office

16 June 1930 Port of

Belfast

Survey held at

Belfast

Date, First Survey

8 May 1929

Last Survey

11 June

1930

Number of Visits

144

on the

Single
Twin
Triple
Quadruple

Screw vessel

INNISFALLEN

Tons

Gross

Net

built at

Belfast

By whom built

Harland & Wolff Ltd.

Yard No. 870

When built 1930

Engines made at

Belfast

By whom made

Harland & Wolff Ltd.

Engine No. 870

When made 1930

Boilers made at

Lincoln

By whom made

Babcock & Wilcox Ltd.

Boiler No. 69

When made 1930

Indicated Horse Power

Owners City of Cork Steam Packet Co. Ltd.

Port belonging to Cork

Net Horse Power as per Rule

1193

Is Refrigerating Machinery fitted for cargo purposes

Yes

Is Electric Light fitted

Yes

Trade for which vessel is intended

Ocean-going

ENGINES, &c.—Type of Engines Harland & Wolff—B & W Diesel—Sole—Injection 2 or 4 stroke cycle 4 Single or double acting Single

Maximum pressure in cylinders 500 lbs. Diameter of cylinders 630 mm. Length of stroke 980 mm. No. of cylinders 20 No. of cranks 20

Distance of bearings, adjacent to the Crank, measured from inner edge to inner edge 876 mm. Is there a bearing between each crank Yes

Revolutions per minute 170 Flywheel dia. 1694 mm. Weight 1150 kgs. Means of ignition Compression Kind of fuel used Diesel-oil

Crank Shaft, dia. of journals as per Rule approved as fitted 410 mm. Crank pin dia. 410 mm. Crank Webs Mid. length breadth 650 mm shrunk Thickness parallel to axis 256 mm

Intermediate Shafts, diameter as per Rule approved as fitted 11 1/2" 284 Thrust Shaft, diameter at collars as per Rule approved as fitted 12"

Propeller Shaft, diameter as per Rule approved as fitted 13" Is the shaft fitted with a continuous liner No

Brass Liners, thickness in way of bushes as per Rule as fitted Thickness between bushes as per rule 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

Yes If so, state type Bedervall type Length of Bearing in Stern Bush next to and supporting propeller 4' 8"

Propeller, dia. 12' 0" Pitch 12' 7" No. of blades 3 Material mang. Br. whether Moveable No. Total Developed Surface 36 sq. feet

Method of reversing Engines direct acting engine Is a governor or other arrangement fitted to prevent racing of the engine when detached Yes Means of lubrication

oil Thickness of cylinder liners 46 mm. Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled or lagged with

conducting material Yes If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine 15 funnel

Working Water Pumps, No. Two Fresh & Two Salt Water Is the sea suction provided with an efficient strainer which can be cleared within the vessel Yes

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

Pumps connected to the Main Bilge Line No. and Size Four Bilge 60 Tons/hr. Ballast 100 Tons/hr. Emergency Bilge 60 Tons/hr. Sludge 40 Tons/hr.

How driven Electric motors. Lubricating Oil Pumps, including Spare Pump, No. and size Two 90 Tons/hr.

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 Aux. Motor Room. 2 of 3" 1 of 2 1/2" DIRECT 1 of 4" MAIN MOTOR ROOM. 2 of 3" 2 of 2 1/2" ENG. ROOMS 4 of 2 1/2" COAMS. 5 of 2 1/2"

Holds, &c. No. 1 Hold 2 of 2 1/2" No. 2 Hold 2 of 2 1/2" (SLUDGE 4 of 3 1/2") AFTER HOLD 2 of 2 1/2"

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size Four Main Motor room {One 5" Two 4" Auxiliary motor room One 4"

Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes Yes Are the Bilge Suctions in the Machinery Spaces

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 Yes

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 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

Do the pipes pass through the bunks How are they protected

Do the 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

department to another Yes Is the Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from Bridge or passage above motor room.

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

Air Compressors, No. Two No. of stages Two Diameters 240-210 mm Stroke 160 mm Driven by Electric motors

Auxiliary Air Compressors, No. One No. of stages Two Diameters 106-34 mm Stroke 80 mm Driven by Steam

Additional Auxiliary Air Compressors, No. No. of stages Diameters Stroke Driven by

Engining Air Pumps, No. Diameter Stroke Driven by

Auxiliary Engines crank shafts, diameter as per Rule Two of 134.4 mm. ONE OF 200.4 mm.

as fitted 140 mm. 220 mm. BORED 62 mm.

RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule Yes and/or fusible plugs.

Are the internal surfaces of the receivers be examined Yes What means are provided for cleaning their inner surfaces open ends.

Is there a drain arrangement fitted at the lowest part of each receiver Yes

High Pressure Air Receivers, No. Two Cubic capacity of each 150 litres Internal diameter 295 mm thickness 15 mm

Seamless, lap welded or riveted longitudinal joint Yes Material Steel Range of tensile strength 28-32 Tons Working pressure by Rules 1103 lbs.

Starting Air Receivers, No. Two Total cubic capacity 2140 Internal diameter 76 1/8" thickness 1 1/8"

Seamless, lap welded or riveted longitudinal joint Yd. 6.5. Material Steel Range of tensile strength 28-32 Tons Working pressure by Rules 558 lbs.

W984-0015

IS A DONKEY BOILER FITTED? ☒ YESIf so, is a report now forwarded? ☒ YES

PLANS. Are approved plans forwarded herewith for Shafting (If not, state date of approval)

21. 3. 29 7.11.29 Receivers 11. 4. 29

Separate Tanks 18. 1. 30

Donkey Boilers 30. 10. 29 2. 1. 30 General Pumping Arrangements 14. 2. 30

Oil Fuel Burning Arrangements 25. 3. 30

SPARE GEAR In excess of rule requirements see attached list.

The foregoing is a correct description,
For HARLAND AND WOLFF, LIMITED.

H. K. Beck

Manufacturer.

1929
 Dates of Survey while building
 During progress of work in shops-- May 8. 28 July 9. 10 Aug 6. 9. 12. 13. 14. 15. 16. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30 Sept. 2. 3. 4. 5. 9. 10. 11. 1
 During erection on board vessel-- 17. 26. 27. 30 Oct 1. 3. 7. 8. 9. 11. 14. 15. 16. 17. 18. 21. 22. 23. 24. 28. 30 Nov 1. 7. 8. 11. 12. 14. 15. 18. 25. 26. 27. 28. 30
 Total No. of visits 1. 6. 8. 9. 12. 13. 15. 16. 22. 23. 24. 27. 29. 30 June 3. 4. 5. 6. 10. 11. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30

Dates of Examination of principal parts—Cylinders 14. 3. 29 15. 10. 29 Covers 8. 7. 29 10. 29 Pistons 11. 1. 30 27. 2. 30 Rods 11. 1. 30 27. 2. 30 Connecting rods 11. 1. 30 27. 2. 30

Crank shaft 6. 12. 29 17. 4. 30 Flywheel shaft 14. 2. 30 Thrust shaft 14. 2. 30 Intermediate shafts 30. 10. 29 10. 3. 30 Tube shaft 17. 4. 30

Screw shaft 28. 2. 30 Propeller 25. 2. 30 Stern tube 23. 10. 29 Engine seatings 12. 3. 30 Engines holding down bolts 8. 6. 40

Completion of fitting sea connections 4. 3. 30 Completion of pumping arrangements 10. 6. 30 Engines tried under working conditions 8. 6. 30

Crank shaft, Material S. M. STEEL Identification Mark Nos. 102. 113. R. L. A. Flywheel shaft, Material Identification Mark 2180. 2316. 2180.

Thrust shaft, Material S. M. STEEL Identification Mark Nos. 2839. 2719. R. L. A. Intermediate shafts, Material S. M. STEEL Identification Marks 2295. 2316. 2180.

Tube shaft, Material Identification Mark Screw shaft, Material S. M. STEEL Identification Mark 2295. 2269. 2180.

Is the flash point of the oil to be used over 150° F. YES.

Have the requirements of the Rules for oil fuel pipes and tank fittings 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

Is this machinery duplicate of a previous case YES If so, state name of vessel ULSTER MONARCH & Co.

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

The machinery of this vessel has been constructed under special supervision. The materials and workmanship are sound and good. The main engines and auxiliaries have been tried out under working conditions with satisfactory results. In my opinion the vessel is now eligible for notation in the Society's Register Book + L.M.C. 6.30. O.G. waste heat boiler pressure 80 lbs. Fitted for oil fuel 6.30 F.P. above 150° F. Electric light.

It is submitted that
 this vessel is eligible for
 THE RECORD + L.M.C. 6.30. O-G

Oil Engines 450 S.A. N.H.P. 1193.

20 Cy. 24 13/16" - 38 7/16" D.B. 80 lb.

Harland & Wolff Ltd. Belfast.

H. K. Beck

74/6/30

The amount of Entry Fee ... £ 6 : - : When applied for, 17 June 1930

Special ... £ 129 : 16. 6. : When received, 14 8 30

Donkey Boiler Fee ... £ 8 : 8 : 14 8 30

Travelling Expenses (if any) £ - : - : 14 8 30

Committee's Minute

Assigned

FRI. 4 JUL 1930

+ L.M.C. 6.30

O.G.

Oil Eng. D.B. 80 lb.

R. Lee Ames

Engineer Surveyor to Lloyd's Register of Shipping



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Lloyd's Register
Foundation