

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

DEC - 2 1910

19 When handed in at Local Office 30. 11. 1910 Port of Belfast
 Date, First Survey 2nd Jan. 1910 Last Survey 18. Nov. 1910
 (Number of Visits 103)
 in Survey held at Belfast
 on the STEEL S.S. "FREESIA"
 By whom built Heslar, Harland & Wolff Ltd Yard No. 1074 Tons { Gross 724.47
 By whom made Harland & Wolff Ltd Engine No. 1074 Net 265.49
 By whom made Harland & Wolff Ltd Boiler No. 1074 When built 1910
 Owners The Admiralty Port belonging to "
 Registered Horse Power 409 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes
 Trade for which Vessel is intended Admiralty Service

GINES, &c.—Description of Engines Four Cylinder Triple Expansion Revs. per minute 185
 dia. of Cylinders 18 1/2" x 31" x 38 1/2" x 38 1/2" Length of Stroke 30" No. of Cylinders 4 No. of Cranks 4
 Crank shaft, dia. of journals 10 1/2" Crank pin dia. 10 1/2" Crank webs 16 3/4" Mid. length breadth 6 1/2" Thickness parallel to axis 4 3/4"
 Intermediate Shafts, diameter 10 1/2" Thrust shaft, diameter at collars 10 1/2"
 Tube Shafts, diameter 10 1/2" Screw Shaft, diameter 10 1/2" Is the shaft fitted with a continuous liner Yes
 Bronze Liners, thickness in way of bushes 3/8" Thickness between bushes 19/32" 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 One length
 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
 propeller, dia. 10-6" Pitch 10-8" No. of Blades 3 Material Blair Bronze Whether Moveable Solid Total Developed Surface 31 sq. feet
 Feed Pumps worked from the Main Engines, No. 2 Diameter 10" Stroke 18" Can one be overhauled while the other is at work Yes
 Bilge Pumps worked from the Main Engines, No. 2 Diameter 10" Stroke 18" Can one be overhauled while the other is at work Yes
 Feed Pumps { No. and size 10 1/2" x 8" x 22" Pumps connected to the Main Bilge Line No. and size 2 off 50 tons per each How driven Steam
 Ballast Pumps, No. and size 2 off 50 tons per each Lubricating Oil Pumps, including Spare Pump, No. and size 1
 Are two independent means arranged for circulating water through the Oil Cooler Yes Suctions, connected to both Main Bilge Pumps and Auxiliary
 Bilge Pumps;—In Engine and Boiler Room Eng Room 2 & 3 Boiler Room 4 & 3 In Holds, &c. 12 & 2

Main Water Circulating Pump Direct Bilge Suctions, No. and size One 2 1/2" Independent Power Pump Direct Suctions to the Engine Room Bilges, Yes
 No. and size One 2 1/2" in ER, one 2 1/2" in each B.L.P. Room 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 Yes
 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 At water line
 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 (Leaking coals only) How are they protected Yes
 That pipes pass through the deep tanks Yes 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

MAIN BOILERS, &c.—(Letter for record S) Total Heating Surface of Boilers 7080 sq. ft.
 Is Forced Draft fitted Yes No. and Description of Boilers Two S.F. Multitubular Working Pressure 225 lbs/sq. in.
 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 Yes Main Boilers Plans approved London Auxiliary Boilers Yes Donkey Boilers Yes
 (If not state date of approval)
 Superheaters Yes General Pumping Arrangements Yes 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 Please see attached list.

Water Capacity.
 Tons.
16.5.
8.5.

1940
Jan. 2. 8 Mar 22. 27. 29 Apr. 1. 9. 12. 16. 20. 26. 29 May 6. 8. 9. 16. 17. 27 June 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31 Aug 1. 2. 5. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31 Sept 3. 4. 6. 7. 10. 11. 12. 13. 16. 19. 20. 23. 24. 25. 26. 27. 28. 29. 30. 31 Oct 1. 2. 4. 5. 10. 11. 16. 19. 21. 22. 23. 24. 25. 28. 30 Nov 4. 5. 6. 7. 8. 9. 11. 12. 13. 15. 18
During progress of work in shops -
During erection on board vessel - - -
Total No. of visits 103

Dates of Examination of principal parts—Cylinders 20.6.40 to 29.7.40 Slides 6.6.40 to 4.10.40 Covers 20.6.40 to 29.7.40
Pistons 24.9.40 Piston Rods 24.9.40 Connecting rods 21.10.40
Crank shaft 16.9.40 Thrust shaft 4.7.40 Intermediate shafts 24.9.40
Tube shaft 26.9.40 Screw shaft 24.9.40 Propeller 21.8.40
Stern tube 26.9.40 Engine and boiler seatings 3.10.40 Engines holding down bolts 22.10.40
Completion of fitting sea connections 3.10.40
Completion of pumping arrangements 6.11.40 Boilers fixed 10.10.40 Engines tried under steam 7.11.40, 16.11.40
Main boiler safety valves adjusted 7.11.40 Thickness of adjusting washers For B.R. P 3/8" S 1/2" Aft B.R. P 1/2" S 3/4"

Crank shaft material Steel Identification Mark LLOYD No 1012 RLA 16.9.40 Thrust shaft material Steel Identification Mark LLOYD No 359 R.S. 24.9.40
Intermediate shafts, material Steel Identification Marks LLOYD No 359 R.S. 24.9.40 Tube shaft, material Steel Identification Mark LLOYD No 359 R.S. 24.9.40
Screw shaft, material Steel Identification Mark LLOYD No 359 R.S. 24.9.40 Steam Pipes, material S.D. Steel Test pressure 675 lb Date of Test 25.12.39
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 "ARABIS" etc BEL. No 1959

General Remarks (State quality of workmanship, opinions as to class, &c.) These engines have been constructed under Special Survey in accordance with the Rules, approved plans. The materials and workmanship are good. This machinery has been efficiently installed onboard the vessel and tried out under full working conditions at sea, with satisfactory results.

In our opinion the vessel is eligible for the Notations, in the Society's Register Book, of

F LMC 11.40 CL 2 SB 225 hp FD

The amount of Entry Fee ... £ : : When applied for, 30.11.19
Special ... £ 170 : - :
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : : When received, 11.12.19

Committee's Minute

Assigned 31 Dec 11.40
Fitted for oil fuel &c 22.12.19

When received, 11.12.19
R. Lee James, Engineer Surveyor to Lloyd's Register of Shipping.



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