

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

11 OCT 1946

Writing Report 19 When handed in at Local Office 9th Oct. 1946 Port of Belfast
 Survey held at Belfast Date, First Survey 11th Sept. 1945 Last Survey 28th Sept. 1946
 Book S.S. "BALAENA" (Number of Visits 201) Tons { Gross 15760
 Net 8224
 on the Belfast By whom built Jessie Aaland, Wolff Ltd Yard No. 1327 When built 1946
 at Belfast By whom made Aaland, Wolff Ltd Engine No. 1327 When made 1946
 es made at Belfast By whom made Aaland, Wolff Ltd Boiler No. 1327 When made 1946
 rs made at Belfast Owners United Wharves Ltd Port belonging to London
 icated Horse Power 653 NHP 1448
 Horse Power as per Rule 1643 Is Refrigerating Machinery fitted for cargo purposes Yes Is Electric Light fitted Yes
 for which vessel is intended Whale Oil Factory

VES, &c.—Description of Engines Two Sets - Triple Expansion (Poppet valves fitted for HP, MP & LP) Revs. per minute 85
 of Cylinders 27" - 44" - 76" Length of Stroke 51" No. of Cylinders 6 No. of Cranks 6
 shaft, dia. of journals as per Rule 15.225 Crank pin dia. 16" Mid. length breadth - Thickness parallel to axis 9 3/8" MP 10 3/8"
 as fitted 15 1/2" Crank webs - shrunk - Thickness around eye-hole 7 1/8" MP 8 1/4"
 as per Rule 14.5" Mid. length thickness - as per Rule 15.225"
 as fitted 14.481
 mediate Shafts, diameter as per Rule 16 1/2" Thrust shaft, diameter at collars as per Rule 15 1/2"
 as fitted 16 1/2"
 Shafts, diameter as per Rule - Screw Shaft, diameter as per Rule 15.95" 15.937" 16.73" as fitted 15 1/2"
 as fitted 25 3/32" Is the tail shaft fitted with a continuous liner Yes
 as fitted 17 1/4" Is the screw shaft fitted with a continuous liner Yes
 as per Rule 7 3/8" Thickness between bushes as per Rule 1 1/8" Is the after end of the liner made watertight in the
 as fitted 7 3/8" as fitted 1 1/8"
 If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner One length
 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 -
 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
 If so, state type - Length of Bearing in Stern Bush next to and supporting propeller 5' 9"
 dia. 17' 6" Pitch 17' 3" to 14' 6" No. of Blades 4 Material Man Bronze Whether Moveable Solid Total Developed Surface 96 sq. feet
 Pumps worked from the Main Engines, No. - Diameter - Stroke - Can one be overhauled while the other is at work -
 Pumps worked from the Main Engines, No. 4 Diameter 5" Stroke 27" Can one be overhauled while the other is at work Yes
 No. and size 3 off 75,000 lphr each 1 off 75,000 lphr Pumps connected to the Main Bilge Line { No. and size 4 @ 5" x 27" 1 @ 250 lphr 1 @ 110 lphr
 How driven Steam DA Steam DA How driven Main Eng. Steam DA Steam DA
 st Pumps, No. and size One @ 250 lphr Lubricating Oil Pumps, including Spare Pump, No. and size -
 two independent means arranged for circulating water through the Oil Cooler - Suctions, connected both to Main Bilge Pumps and Auxiliary
 Pumps:—In Engine and Boiler Room 4 @ 3 1/2" 1 @ 2 1/2" 1 @ 2 1/2" 1/2" suet [2 @ 2 1/2" Suction from Boiler Room]
 Pump Room Main Pump Room 2 @ 4" 2nd Pump Room 1 @ 2 1/2" In Holds, &c. FORD. HOLD. 2 @ 2 1/2"

Water Circulating Pump Direct Bilge Suctions, No. and size 2 @ 10 1/2" Independent Power Pump Direct Suctions to the Engine and/or Boiler Room Bilges,
 and size One @ 6" Are all the Bilge Suction Pipes in holds and tunnel well fitted with strum-boxes Yes
 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
 All Sea Connections fitted direct on the skin of the ship Yes on fabricated sea boxes Are they fitted with Valves or Cocks Yes
 they fixed sufficiently high on the ship's side to be seen without lifting the stowhold plates Yes Are the Overboard Discharges above or below the deep water line Below
 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
 Pipes pass through the bunkers 6" O.F. Section 4 F.R. from 10" O.F. main How are they protected Yes
 Pipes pass through the deep tanks - Have they been tested as per Rule Yes
 All Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times Yes
 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 - Is it fitted with a watertight door - worked from 4550 26842
266328 TOTAL

BOILERS, &c.—(Letter for record S) Total Heating Surface of Boilers Boilers 22292 sq' SUPERHEATERS 4340 sq' (266328)
 h Boilers are fitted with Forced Draft Yes Which Boilers are fitted with Superheaters All boilers
 and Description of Boilers 7 S.F. C.P. Multitubular Working Pressure 220 lbs/sq'
 1 REPORT ON MAIN BOILERS NOW FORWARDED? Yes
 A DONKEY BOILER FITTED? No If so, is a report now forwarded? -
 he donkey boiler be used for other than domestic purposes -

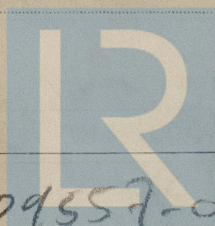
INS. Are approved plans forwarded herewith for Shafting 14.9.45 Main Boilers 21.8.45, 27.9.45 Auxiliary Boilers - Donkey Boilers -
 (If not state date of approval) 2.9.45 General Pumping Arrangements 25.10.45 Oil fuel Burning Piping Arrangements 25.5.46

SPARE GEAR.
 he spare gear required by the Rules been supplied Yes
 the principal additional spare gear supplied Please see attached List.

The foregoing is a correct description.

FOR HAZARD AND WOLFF LIMITED.

Manufacturer.



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Lloyd's Register
Foundation

009557-00 9564-0236

1943 Sept 11. 21 Oct 1. 2. 3. 4. 10. 16. 23. 30 Nov. 4. 12. 13. 15. 22. 23. 26. 27. 28. 29 Dec 3. 6. 7. 12. 17 1946 Jan 1. 2. 16. 21. 22. 25. 28. 30 Feb 1. 3. 4. 5. 7. 11. 13. 18. 20. 22. 25. 26. 27. 28 Mar 1. 4. 5. 6. 8. 11. 13. 14. 15. 18. 19. 20. 21. 22. 25. 27. 28 2. 3. 8. 9. 11. 12. 15. 16. 17. 18. 23. 25. 26. 27. 29. 30 May 1. 2. 3. 6. 7. 8. 9. 10. 11. 13. 14. 15. 16. 17. 20. 22. 23. 24. 25. 27. 28. 29. 30. 4. 5. 6. 7. 10. 11. 12. 13. 14. 17. 18. 19. 20. 21. 22. 24. 25. 26. 27. 28. 29. 30 July 1. 2. 3. 4. 5. 6. 8. 9. 10. 11. 23. 24. 25. 26. 27. 29. 30. 5. 6. 7. 8. 9. 10. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 24. 26. 27. 28. 29. 30 Sept. 3. 4. 5. 6. 7. 9. 10. 11. 12. 13. 14. 15. 17. 18. 23. 24. 25. 26. 27. 28

Dates of Survey while building

During progress of work in shops - -

During erection on board vessel - -

Total No. of visits 201

NEWCASTLE F.E. RPI No. 103513

Dates of Examination of principal parts—Cylinders Slides Covers

Pistons Piston Rods Connecting rods PORT 2.2.46 STARBOARD 29.3.46

Crank shaft P 11.4.46 S 13.3.46 Thrust shafts 29.3.46 Intermediate shafts P 4.4.46 S 11.4.46

Tube shaft - Screw shaft P 11.5.46 S 2.4.46 Propeller P 2.4.46 S 8.4.46

Stern tubes 1/2. 4. 46 Engine and boiler seatings 5. 4. 46 Engines holding down bolts 12. 6. 46

Completion of fitting sea connections 11.4.46

Completion of pumping arrangements 27. 9. 46 Boilers fixed 27. 8. 46 Engines tried under steam 19.9.46 + 27.9.46

Main boiler safety valves adjusted 18.9.46 + 25.9.46 Thickness of adjusting washers. PORT FORD BLRS STARBOARD AFTER BLRS

Crank shaft material Steel 28/32 7. Identification Mark P 110708 No 1124 } Thrust shaft material Steel 28/32 7. Identification Mark P 110708 No 1125 }

Intermediate shafts, material Steel 28/32 7. Identification Mark P 110708 S 2878 } Tube shaft, material - Identification Mark - }

Screw shaft, material Steel 28/32 7. Identification Mark P 110708 S 2877 } Steam Pipes, material S.D. Steel Test pressure 660 lbs/sq. in. Date of Test 1.7.46

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 Yes If so, have the requirements of the Rules been complied with Yes

If the notation for Ice Strengthening is desired, state whether the requirements in this respect have been complied with Yes

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.) These engines have been constructed in accordance with the Rules and approved plans. The materials and workmanship are good. The whole of the machinery has been efficiently installed onboard the vessel tried out under full working conditions at sea with satisfactory results. In my opinion the vessel is eligible to have the following records & notations in the Society's Register Book: F LMC 9,46 TSB - 220 lbs (SPT.) TSCL & PR. BLRS Subject to examination under full working conditions of the 1500KW Turbo Generator & completion of factory steam pipe installation. Now being carried out at Oslo.

Fire Extinguishing Appliances fitted:

Eng. Room - 6 off 29 gal Foamite.

BLR. Room - 1 Foam Generator, 7 off - 29 gal. Foamite. Steam under coils?

FACTORY - 1 Foam Generator, 11 off - 29 gal Foamite.

OF BUNKERS & CARGO OIL TANKS - Steam Ducting.

The amount of Entry Fee ... £ : When applied for, not yet rendered 19

Special ... £ 248 : 12

Donkey Boiler Fee ... £ : When received, 19

Additional fee for factory installation submitted & waiting approval (See London Letter, 10.5.46)

Travelling Expenses (if any) ... £ : 19

Date FRI. 22 NOV 1946

John S. Thomas

Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute + LMC 9,46 Subject 6 PR. B. 80lb

FITTED FOR OIL FUEL 9,46 FLASH POINT ABOVE 160°F. F.D. C.L. 33 " 70lb

7 S.B. 220 lb. Sph. 9 " 60lb

2 " 30lb

6 " 10lb