

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office 17 SEP 1942 17 NOV 1944

Date of writing Report **7-9-42** When handed in at Local Office **14:9** Port of **Glasgow**
 No. in Survey held at **Blydebank** Date, First Survey **31:1:41** Last Survey **25-8-1942**
 Reg. Book. on the **EMPIRE COWDRAY** (Number of Visits **109**)
 Built at **Sunderland** By whom built **Shipbuilding Corporation Ltd** Yard No. **4** When built **1944**
 Engines made at **Blydebank** By whom made **John Brown & Co.** Engine No. **A.65** When made **1942**
 Boilers made at _____ By whom made _____ Boiler No. _____ When made _____
 Registered Horse Power _____ Owners _____ Port belonging to _____
 Nom. Horse Power as per Rule **439** Is Refrigerating Machinery fitted for cargo purposes _____ Is Electric Light fitted _____
 Trade for which Vessel is intended _____

ENGINES, &c.—Description of Engines **Triple expansion** Revs. per minute _____
 Dia. of Cylinders **23 1/2 - 37 1/2 - 68** Length of Stroke **48** No. of Cylinders **3** No. of Cranks **3**
 Crank shaft, dia. of journals as per Rule **13.6** Crank pin dia. **13 3/4** Crank webs Mid. length breadth **26 3/4** Thickness parallel to axis **8 3/4**
 as fitted **13 3/4** Mid. length thickness **8 3/4** Thickness around eye-hole **6 1/2**
 Intermediate Shafts, diameter as per Rule _____ Thrust shaft, diameter at collars as per Rule **13.63**
 as fitted _____ as fitted **13 3/4**
 Tube Shafts, diameter as per Rule _____ Screw Shaft, diameter as per Rule _____ Is the { tube } shaft fitted with a continuous liner { screw }
 as fitted _____ as fitted _____
 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 _____
 as fitted _____ as fitted _____
 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 shaft _____
 If so, state type _____ Length of Bearing in Stern Bush next to and supporting propeller _____
 Propeller, dia. _____ Pitch _____ No. of Blades _____ Material _____ whether Moveable _____ Total Developed Surface _____ sq. feet
 Feed Pumps worked from the Main Engines, No. **none** Diameter _____ Stroke _____ Can one be overhauled while the other is at work _____
 Bilge Pumps worked from the Main Engines, No. **2** Diameter **4** Stroke **24** Can one be overhauled while the other is at work _____
 Feed Pumps { No. and size _____ Pumps connected to the { No. and size _____
 { How driven _____ Main Bilge Line { How driven _____
 Ballast Pumps, No. and size _____ Lubricating Oil Pumps, including Spare Pump, No. and size _____
 Are two independent means arranged for circulating water through the Oil Cooler _____ Suctions connected to both Main Bilge Pumps and Auxiliary Bilge Pumps;—In Engine and Boiler Room _____
 In Pump Room _____ In Holds, &c. _____

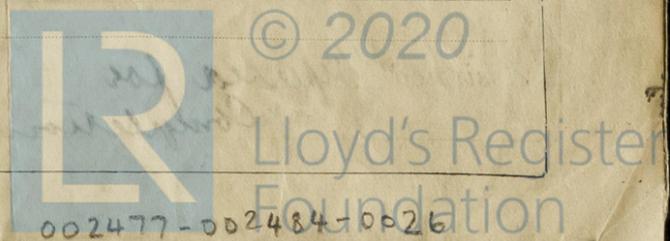
MAIN BOILERS, &c.—(Letter for record _____) Total Heating Surface of Boilers _____
 Which Boilers are fitted with Forced Draft _____ Which Boilers are fitted with Superheaters _____
 No. and Description of Boilers _____ Working Pressure **220 lb.**
IS A REPORT ON MAIN BOILERS NOW FORWARDED?
IS A DONKEY BOILER FITTED? If so, is a report now forwarded? _____
 Can the donkey boiler be used for domestic purposes only _____
PLANS. Are approved plans forwarded herewith for Shafting _____ Main Boilers _____ Auxiliary Boilers _____ Donkey Boilers _____
 (If not state date of approval) _____
 Superheaters _____ General Pumping Arrangements _____ Oil fuel Burning Piping Arrangements _____

SPARE GEAR.

Has the spare gear required by the Rules been supplied _____
 State the principal additional spare gear supplied _____

The foregoing is a correct description.
John Brown & Company, Limited.

Manufacturer.



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1941 Jan 31 Feb: 3. 5. 6. 13. 19. 20. 21. 25. 26. 28 Mar: 12 Oct: 29 Nov: 3. 5. 19. 26 Dec: 1. 2. 4
 During progress of work in shops -- 9. 11. 12. 18. 19 (1942) Jan: 5. 6. 7. 8. 30 Feb: 3. 4. 11. 13. 19. 23 Mar: 5. 19. 23. 27 Apr: 2. 7. 8. 9. 13. 15. 16
 Dates of Survey while building During erection on board vessel --- 20. 22. 23. 24. 27. 29 May: 1. 4. 5. 7. 8. 11. 13. 14. 15. 18. 25. 27. 28. 29 June: 2. 3. 4. 5. 8. 9. 10. 11. 15. 16. 17. 18
 19. 23. 24. 25. 30 July: 1. 2. 3. 6. 9. 10. 13. 14. 15. 16. 17. 29. 30. 31 Aug: 3. 5. 7. 10. 11. 12. 13. 14. 18. 21. 26
 Total No. of visits 109

Dates of Examination of principal parts—Cylinders 5-11-41 etc Slides 7-8-42 etc Covers 22-4-42 etc
 Pistons 7-8-42 etc Piston Rods 5-8-42 etc Connecting rods 13-2-42 etc
 Crank shaft 23-3-42 etc Thrust shaft 5-8-42 etc Intermediate shafts ✓
 Tube shaft ✓ Screw shaft ✓ Propeller ✓
 Stern tube ✓ Engine and boiler seatings Engines holding down bolts
 Completion of fitting sea connections Boilers fixed Engines tried under steam
 Completion of pumping arrangements Main boiler safety valves adjusted Thickness of adjusting washers
 Crank shaft material S Identification Mark A65 Thrust shaft material S Identification Mark S 3619.
 Intermediate shafts, material ✓ Identification Marks Tube shaft, material ✓ Identification Mark
 Screw shaft, material ✓ Identification Mark Steam Pipes, material Test pressure Date of Test
 Is an installation fitted for burning oil fuel 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 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

General Remarks (State quality of workmanship, opinions as to class, &c. This Engine has been built under special survey in accordance with the approved plans and The Society's Rules and requirements the materials and workmanship are good.

The requirements of The Ministry of Shipping specification have been carried out satisfactorily.

The Engine only has been sent to Vickers & Armstrong Barrow.

Job of 19/12

The amount of Entry Fee ... £	:	:	When applied for,
Special ... £ 36	:	7	15 SEP 1942
Donkey Boiler Fee ... £ 9	:	2	
Travelling Expenses (if any) £	:	:	When received,
			19

Jas. S. Cairns,
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 15 SEP 1942

Assigned by order for Completion

FRI 17 NOV 1944

See Minute on Sea H. No. 1
 Lloyd's Register Foundation

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