

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

DEC 7 1940

Date of writing Report 26th Nov. 1940. When handed in at Local Office 28th Nov. 1940. Port of Greenock

No. in Survey held at Greenock Date, First Survey 11th DEC. 1939. Last Survey 24th NOVEMBER 1940.
Reg. Book. on the "COLLBEQ." (Number of Visits 42)

Built at Port Glasgow By whom built Messrs Lithgows Ltd. Yard No. 938 Tons } Gross 4680
Engines made at Greenock By whom made Messrs Rankin & Blackmore Ltd. Engine No. 471 Net 3059
Boilers made at Greenock By whom made Messrs Rankin & Blackmore Ltd. Boiler No. 471 When built 1940
Registered Horse Power 436 Owners The Donnoch Shipping Co. Ltd. Port belonging to Glasgow
Nom. Horse Power as per Rule 436 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes
Trade for which Vessel is intended Foreign

ENGINES, &c.—Description of Engines Triple Expansion Revs. per minute 3
No. of Cylinders 3 Length of Stroke 48" No. of Cranks 3
Crank shaft, dia. of journals 13.63" as per Rule 13.63" Crank pin dia. 13.3/4" Crank webs shrunk Thickness parallel to axis 8.3/4"
Intermediate Shafts, diameter 12.98" as per Rule 13" Thrust shaft, diameter at collars 13.3/4" as fitted 13.3/4"

Tube Shafts, diameter 14.1/2" as per Rule 14.3/4" Is the tube shaft fitted with a continuous liner Yes
Screw Shaft, diameter 14.3/4" as fitted 14.3/4" Is the screw shaft fitted with a continuous liner Yes
Bronze Liners, thickness in way of bushes 3/4" as per Rule 3/4" Thickness between bushes 5/8" as fitted 5/8" 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 —
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 No If so, state type — Length of Bearing in Stern Bush next to and supporting propeller 59.2"

Propeller, dia. 18.3" Pitch 17.3" (Max) No. of Blades 4 Material C.I. whether Moveable No Total Developed Surface 108 sq. feet
Feed Pumps worked from the Main Engines, No. Two Diameter 4" Stroke 24" Can one be overhauled while the other is at work Yes
Bilge Pumps worked from the Main Engines, No. Two Diameter 4" Stroke 24" Can one be overhauled while the other is at work Yes
Feed Pumps { No. and size 1-9.1/2"x7"x21" 1-8.5"x6"x18" 1-9.1/2"x7"x21" (Twin) Pumps connected to the { No. and size One 10.2"-13"x24"
How driven Steam Main Bilge Line { How driven Steam
Ballast Pumps, No. and size One 10.2"x13"x24" 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 3 - 2.3/4" diameter
In Pump Room Coffdam 1@2" Tunnel fore-end 1@2" No. 1 - 2@3" No. 2 - 2@3.5" Crossbunker 2@2.5"
No. 3 - 2@3" No. 4 - 2@3" Tunnel Well - 1@2.5"
Main Water Circulating Pump Direct Bilge Suctions, No. and size 1 - 8.5" Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size One 4.3/4"
Are all the Bilge Suction Pipes in holds and tunnel well fitted with strum-boxes Yes

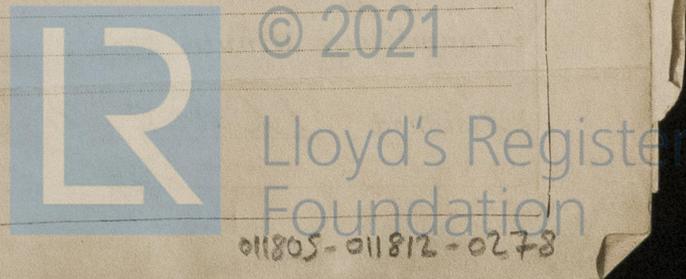
Are the Bilge Suctions in the Machinery Space led from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges Yes
Are all Sea Connections fitted direct on the skin of the ship Yes Are they fitted with Valves or Cocks Both
Are they fixed sufficiently 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 Man below others 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
What Pipes pass through the bunkers Food. bilge suction How are they protected Wood Casings
What 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 compartment to another Yes Is the Shaft Tunnel watertight Yes Is it fitted with a watertight door No worked from Access door to trunk above upper deck

MAIN BOILERS, &c.—(Letter for record 5) Total Heating Surface of Boilers 5830 sq
Which Boilers are fitted with Forced Draft Both Which Boilers are fitted with Superheaters Both
No. and Description of Boilers 2 S.E. Marine Type Working Pressure 220 lbs.
IS A REPORT ON MAIN BOILERS NOW FORWARDED? Yes
IS A DONKEY BOILER FITTED? No 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 Yes Main Boilers Yes Auxiliary Boilers — Donkey Boilers —
(If not state date of approval) Superheaters Yes General Pumping Arrangements Yes Oil fuel Burning Piping Arrangements —

SPARE GEAR.
Has the spare gear required by the Rules been supplied Yes
State the principal additional spare gear supplied —

The foregoing is a correct description.
RANKIN & BLACKMORE LTD.
A. Smith Managing Director.



(1939) DEC. 11. (1940) APR. 3. 9. 11. 18. 22. 24. 26. MAY 4. 10. 16. 20. 22. 24. 28. JUNE 3. 5. 7. 10. 12. 14. 18. 20.
 During progress of work in shops - - 26. 28. JULY 1. 3. 8. 10. 15. 18. 22. 25. 26. AUG. 6. 4. 9. 12. 14. 16. 23. 24. 26. 28. 30. SEPT. 2. 4. 6. 10. 19. 23. 24. 25. 26.
 Dates of Survey while building During erection on board vessel - - - OCT. 2. 6. 10. 21. 22. 23. 25. 29. 30. NOV. 4. 5. 6. 8. 11. 12. 26. 27.
 Total No. of visits 40.

Dates of Examination of principal parts—Cylinders 26/7/40 Slides 10/9/40 Covers 10/9/40
 Pistons 2/9/40 Piston Rods 24/8/40 Connecting rods 24/8/40
 Crank shaft 26/7/40 Thrust shaft 20/9/40 Intermediate shafts 20/9/40
 Tube shaft / Screw shaft 15/8/40 Propeller 14/8/40
 Stern tube 9/8/40 Engine and boiler seatings 28/8/40 Engines holding down bolts 29/10/40
 Completion of fitting sea connections 14/8/40
 Completion of pumping arrangements 12/11/40 Boilers fixed 5/11/40 Engines tried under steam 26/11/40
 Main boiler safety valves adjusted 12/11/40 Thickness of adjusting washers all 5/16"
 Crank shaft material Steel Identification Mark 2019/40 Thrust shaft material Steel Identification Mark 20/9/40
 Intermediate shafts, material Steel Identification Marks 9261 M.C. Tube shaft, material / Identification Mark /
 Screw shaft, material Steel Identification Mark 9261 M.C. Steam Pipes, material Steel Test pressure 660 lbs. Date of Test 8/11/40
 Is an installation fitted for burning oil fuel No 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 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 AIRCREST GRK. RPT N° 2112

General Remarks (State quality of workmanship, opinions as to class, &c. These engines and boilers have been built under Special Survey, in accordance with the rules and the approved plans. The materials and workmanship are good. They have been securely fitted in the vessel, tried under steam and found satisfactory. The machinery is eligible, in my opinion for the Record of L.M.C. 11.40 and T.S. (C.L.) and the Notation 2-SB. (Super). F.D.

GLASGOW

The amount of Entry Fee ... £ 5 : 0 : When applied for, Special ... £ 90 : 8 : 28th Nov. 1940. Donkey Boiler Fee ... £ : : When received, Travelling Expenses (if any) £ : : 2.12. 40 19

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M. Caldwell
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 3 DEC 1940
 Assigned L.M.C. 11.40.
 Spt. ZA.

