

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office 17 Oct 1928

Date of writing Report 16. 10. 28 When handed in at Local Office 16. 10. 28 Port of MIDDLESBROUGH
 No. in Survey held at STOCKTON Date, First Survey 4 January Last Survey 16. 10. 1928
 Reg. Book. 90658 on the sc. 'ISLEWORTH' (Number of Visits 22) Tons } Gross 4908
 } Net 2966
 Built at Blyth By whom built Cowper D.D. & Co. Yard No. 235 When built 1928
 Engines made at Stockton on Tees By whom made Blair & Co. Engine No. 1980 when made 1928
 Boilers made at do. By whom made do. Boiler No. 1980 when made 1928
 Registered Horse Power _____ Owners Dalgliesh Str. Shipping Co. Ltd. Port belonging to Newcastle
 Nom. Horse Power as per Rule 506.6 507 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes
 Trade for which Vessel is intended _____

ENGINES, &c.—Description of Engines Triple Expansion Revs. per minute 66
 Dia. of Cylinders 27" 44 1/2" 73" Length of Stroke 48" No. of Cylinders 3 No. of Cranks 3
 Crank shaft, dia. of journals as per Rule 13.86 Crank pin dia. 15" Crank webs Mid. length breadth 2' 0 1/2" Thickness parallel to axis 9 3/4"
 as fitted 14 1/2" Mid. length thickness 9 1/4" shrunk Thickness around eye-hole 6 7/8"
 Intermediate Shafts, diameter as per Rule 13.2 Thrust shaft, diameter at collars as per Rule 13.86
 as fitted 14" as fitted 15"
 Tube Shafts, diameter as per Rule _____ Screw Shaft, diameter as per Rule 14.6 Is the tube screw shaft fitted with a continuous liner Yes
 as fitted _____ as fitted 16 1/2" as fitted _____
 Bronze Liners, thickness in way of bushes as per Rule 3/4" Thickness between bushes as per Rule 9/16" Is the after end of the liner made watertight in the
 as fitted 3/4" as fitted 9/16" 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 Yes
 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 Yes Is an approved Oil Gland or other appliance fitted at the after
 end of the tube shaft No Length of Bearing in Stern Bush next to and supporting propeller 5'-6"
 Propeller, dia. 17'-3" Pitch 17'-3" No. of Blades 4 Material Bronze whether Moveable No Total Developed Surface 102 sq. feet
 Feed Pumps worked from the Main Engines, No. 2 Diameter 3 1/2" Stroke 34" Can one be overhauled while the other is at work Yes
 Bilge Pumps worked from the Main Engines, No. 2 Diameter 5" Stroke 34" Can one be overhauled while the other is at work Yes
 Feed Pumps { No. and size 1-7 1/2" x 5" x 6"; 1-6 1/2" x 4 1/2" x 6" Pumps connected to the { No. and size 1-9" x 11" x 10" Duplex (Ballast)
 { How driven STEAM Main Bilge Line { How driven Steam
 Ballast Pumps, No. and size 1-9" x 11" x 10" Lubricating Oil Pumps, including Spare Pump, No. and size _____
 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 3-3" x 1-2 1/2" in Tunnel well
 In Holds, &c. Nº 1: 2-3"; Nº 2: 2-3 1/2"; Nº 3: 2-3 1/2"; Nº 4: 3-2 1/2"

Main Water Circulating Pump Direct Bilge Suctions, No. and size 1-8" Independent Power Pump Direct Suctions to the Engine Room Bilges,
 No. and size 1-5" 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 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 Towards Bilge suction How are they protected Wood Casings
 What 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 worked from E.R. Top Platform

MAIN BOILERS, &c.—(Letter for record S) Total Heating Surface of Boilers 7413 sq. ft.
 Is Forced Draft fitted Yes No. and Description of Boilers 3 S.B. Working Pressure 180 lb.
 IS A REPORT ON MAIN BOILERS NOW FORWARDED? Yes
 IS A DONKEY BOILER FITTED? No If so, is a report now forwarded? Yes
 PLANS. Are approved plans forwarded herewith for Shafting Duplicate Main Boilers 24. 11. 27 Auxiliary Boilers Yes Donkey Boilers Yes
 (If not state date of approval)
 Superheaters Yes General Pumping Arrangements 8. 11. 27 Oil fuel Burning Piping Arrangements Yes

SPARE GEAR. State the articles supplied:— As per Rules + 1 propeller shaft, 1 set springs for L.P. piston, 2 main check valves, 2 donkey check valves, 2 safety valve springs, quantity boiler tubes, condenser tube, condenser ferrule, and studs for glands and covers.

The foregoing is a correct description,
 For BLAIR & CO. (1928) LIMITED.

J. G. Thomson Secretary. *Blair & Co.* Manufacturer.



During progress of work in shops -- 1928: Jan'y 4, 18, 24, 30 Feb 10, 16, 22, 24, 28 Mar 1, 6, 7, 13, 15, 19, 20, 27, 30 Apr 2, 4, 11, 25 Aug 17, 28, 30, 31
 Dates of Survey while building During erection on board vessel ---
 Sept. 4, 7, 13, 21, 25 Oct 15
 Total No. of visits 32

Dates of Examination of principal parts—Cylinders 22. 2. 28. Slides 15-3-28. Covers 30. 1. 28.
 Pistons 28. 2. 28. Piston Rods 22. 2. 28. Connecting rods 28. 2. 28.
 Crank shaft 28. 2. 28. Thrust shaft 28. 2. 28. Intermediate shafts 13. 3. 28.
 Tube shaft ✓ Screw shaft 27. 3. 28. Propeller 7. 9. 28
 Stern tube 25. 4. 28. Engine and boiler seatings 7. 9. 28. Engines holding down bolts 13. 9. 28.
 Completion of fitting sea connections See Newcastle Rpt:

Completion of pumping arrangements 15. 10. 28 Boilers fixed 13. 9. 28. Engines tried under steam 15. 10. 28.
 Main boiler safety valves adjusted 25. 9. 28. Thickness of adjusting washers Port $\frac{5}{16}$ p. $\frac{11}{32}$ s. Centre $\frac{1}{4}$ p. $\frac{5}{16}$ s. Star $\frac{3}{8}$ p. $\frac{11}{32}$ s.
 Crank shaft material S.M. Steel Identification Mark 28. 2. 28 P.T.B. Thrust shaft material S.M. Steel Identification Mark 27. 3. 28 P.T.B.
 Intermediate shafts, material S.M. Steel Identification Marks 27. 3. 28 P.T.B. Tube shaft, material ✓ Identification Mark ✓
 Screw shaft, material S.M. Steel Identification Mark 27. 3. 28 P.T.B. Steam Pipes, material Steel Test pressure 540 lbs. Date of Test 16. 3. 28

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 carrying and burning oil fuel been complied with ✓
 Is this machinery duplicate of a previous case Main Engine Only No. If so, state name of vessel "LANFAIR" etc. (Lab Rpt. 13353).

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

The materials and workmanship are good
 This machinery has been built under special survey in accordance with the Rules and Approved Plans, it has been securely fitted aboard and tested with satisfactory results under working conditions and is, in my opinion, suitable for classification with record + L.M.C. 10. 28.

The amount of Entry Fee ... £ 6-0-0 When applied for,
 Special ... £ 100-7-0 16. 10. 19 28
 Donkey Boiler Fee ... £ : :
 Travelling Expenses (if any) £ : £ 105-16-6 22/11/28

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

Committee's Minute FRI. 2 NOV 1928

Assigned Thue 10. 28 CL J.D.

CERTIFICATE WRITTEN.

