

REPORT ON MACHINERY.

No. 18322.

Received at London Office

-3 DEC 1924

Date of writing Report 15. 11. 1924. When handed in at Local Office 22. 11. 1924. Port of GreenockNo. in Survey held at Greenock
Reg. Book. S/S "Fornhill"
on theDate, First Survey 3rd April, 1924. Last Survey 22. 11. 1924
(Number of Visits 48.)Master By whom built Barclay Curle & Co. Ltd. 1905Engines made at Greenock By whom made John & Thos. Macdonald & Co. Ltd. 1924 when madeBoilers made at auto By whom made auto when madeRegistered Horse Power 169 Owners Mann Macneal & Co. Port belonging to LondonNom. Horse Power as per Section 28 169 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted yesENGINES, &c.—Description of Engines Triple Expansion No. of Cylinders 3 No. of Cranks 3
Dia. of Cylinders 18-30-50 Length of Stroke 33 Revs. per minute 80 Dia. of Screw shaft 10.03 as per rule 10.31 as fitted 10.98 Material of screw shaft SIs the screw shaft fitted with a continuous liner the whole length of the stern tube yes Is the after end of the liner made water tightin the propeller boss yes If the liner is in more than one length are the joints burned yes If the liner does not fit tightly at the partbetween the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive yes If twoliners are fitted, is the shaft lapped or protected between the liners yes Length of stern bush 41 1/2Dia. of Tunnel shaft 9.08 as per rule 8.95 Dia. of Crank shaft journals 9.12 as per rule 9.39 Dia. of Crank pin 9.94 Size of Crank webs 18x6 Dia. of thrust shaft undercollars 9.94 Dia. of screw 13.0 Pitch of Screw 12.0 No. of Blades 4 State whether moveable No Total surface 60.0No. of Feed pumps 2 Diameter of ditto 3 Stroke 18 Can one be overhauled while the other is at work yesNo. of Bilge pumps 2 Diameter of ditto 3 Stroke 18 Can one be overhauled while the other is at work yesNo. of Donkey Engines 2 Sizes of Pumps Ball 6x7 1/2 x 6 1/2 5 1/2 x 3 1/2 x 5 No. and size of Suctions connected to both Bilge and Donkey pumpsIn Engine Room 3. 2 3/4 Tunnel Drill 1.2 1/2 In Holds, &c. 2. 2 3/4 in. each A/I-Hold Drill 1.2 3/4No. of Bilge Injections 1 sizes 5 Connected to circulating pump yes Is a separate Donkey Suction fitted in Engine room & size yes 2 3/4Are all the bilge suction pipes fitted with roses yes Are the roses in Engine room always accessible yes Are the sluices on Engine room bulkheads always accessible yesAre all connections with the sea direct on the skin of the ship yes Are they Valves or Cocks BothAre they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates yes Are the Discharge Pipes above or below the deep water line belowAre 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 yesWhat pipes are carried through the bunkers Bilge Suctions How are they protected Wood casingAre all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times yesAre the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges yesIs the Screw Shaft Tunnel watertight yes Is it fitted with a watertight door yes worked from U.F.R. PlatformBOILERS, &c.—(Letter for record S) Manufacturers of Steel Steel Co. of Scotland & Lancashire & Co.Total Heating Surface of Boilers 2700 Is Forced Draft fitted No No. and Description of Boilers 2 Single endedWorking Pressure 180 Tested by hydraulic pressure to 320 Date of test 26.6.24 No. of Certificate 1659Can each boiler be worked separately yes Area of fire grate in each boiler 46.58 No. and Description of Safety Valves toeach boiler Double spring Area of each valve 4.91 Pressure to which they are adjusted 185 Are they fitted with easing gear yesSmallest distance between boilers or uptakes and bunkers or woodwork 9 dia. of boilers 13.0 Length 10.6 Material of shell plates SThickness 1 1/16 Range of tensile strength 28-32 Are the shell plates welded or flanged yes Descrip. of riveting: cir. seams DRlong. seams TR. DBS Diameter of rivet holes in long. seams 1 1/8 Pitch of rivets 8 width of butt straps 16 7/8Per centages of strength of longitudinal joint 90 Working pressure of shell by rules 182 Size of manhole in shell 16 x 12Size of compensating ring 30x34 x 1 3/32 No. and Description of Furnaces in each boiler 3 corrugated Material S Outside diameter 3-5 1/4Length of plain part top Thickness of plates bottom Description of longitudinal joint weld No. of strengthening rings yesWorking pressure of furnace by the rules 189 Combustion chamber plates: Material S Thickness: Sides 2 1/32 Back 5/8 Top 2 1/32 Bottom 2 1/32Pitch of stays to ditto: Sides 9 1/2 x 8 5/8 Back 8 7/8 x 8 1/4 Top 9 1/2 x 8 5/8 If stays are fitted with nuts or riveted heads nuts Working pressure by rules 184Material of stays S Area at smallest part 1.73 Area supported by each stay 88.9 Working pressure by rules 207 End plates in steam space:Material S Thickness 1 1/32 Pitch of stays 19 x 1 1/2 How are stays secured DN Working pressure by rules 186 Material of stays SArea at smallest part 5.56 Area supported by each stay 332 Working pressure by rules 183 Material of Front plates at bottom SThickness 1 Material of Lower back plate S Thickness 2 1/32 Greatest pitch of stays 13 1/2 Working pressure of plate by rules 187Diameter of tubes 3 1/4 Pitch of tubes 4 3/8 x 4 1/2 Material of tube plates S Thickness: Front 1 Back 3/4 Mean pitch of stays 10 5/16Pitch across wide water spaces 14 Working pressures by rules 187 Girders to Chamber tops: Material S Depth andthickness of girder at centre 8 1/2 x 1 1/8 (2) Length as per rule 30-625 Distance apart 8 1/8 Number and pitch of stays in each 2 at 9 1/2Working pressure by rules 192 Steam dome: description of joint to shell % of strength of jointDiameter Thickness of shell plates Material Description of longitudinal joint Diam. of rivet holesPitch of rivets Working pressure of shell by rules Crown plates Thickness How stayedSUPERHEATER Type Date of Approval of Plan Tested by Hydraulic Pressure to Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the BoilerDate of Test Is Easing Gear fittedDiameter of Safety Valve Pressure to which each is adjusted

W558-0034

IS A DONKEY BOILER FITTED?

No

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:— 2 Connecting Rod bolts (one for top end, one for bottom end) 2 Main Bearing bolts 1 set of Coupling bolts 1 set of Fed. Pump Bolts 2 Quantity of motted lock washers 1 set of various sizes

The foregoing is a correct description,

DIRECTOR

FOR JOHN G. KINCAID & COY., LIMITED

Manufacturer.

Dates of Survey while building { During progress of work in shops - - (1924.) Apr. 3. 21. 22. 25. 28. 30. May. 9. 14. 19. 21. 23. 29. 30. June 3. 4. 18. 19. 20. 24. 26. 30. July 15. 18. 21. 22. During erection on board vessel - - - Aug. 11. 14. 18. 25. 28. Sept. 1. 3. 5. 11. 12. 15. 17. 18. 19. 22. 25. 26. 29. Oct. 2. 3. 7. 14. 22. Total No. of visits 48.

Is the approved plan of main boiler forwarded herewith

yes

Dates of Examination of principal parts—Cylinders 12. 9. 24 Slides 3 9. 24 Covers 12. 9. 24 Pistons 3-9. 24 Rods 11. 8. 24

Connecting rods 11. 8. 24 Crank shaft 3 9. 24 Thrust shaft 3 9. 24 Tunnel shafts 3-9. 24 Screw shaft 3-9. 24 Propeller 11. 8. 24

Stern tube 11. 8. 24 Steam pipes tested 25. 9. 24 Engine and boiler seatings on 4th Sept Engines holding down bolts 26. 9. 24

Completion of pumping arrangements 2. 10. 24 Boilers fixed 19. 9. 24 Engines tried under steam 22. 11. 24

Completion of fitting sea connections on 4th Sept Stern tube on 4th Sept Screw shaft and propeller 15. 9. 24

Main boiler safety valves adjusted 2. 10. 24 Thickness of adjusting washers P 21/64 S 1/16 P 21/64 S 9/32

Material of Crank shaft S Identification Mark on Do. 2407 Material of Thrust shaft S Identification Mark on Do. 7092

Material of Tunnel shafts S Identification Marks on Do. 2350 Material of Screw shafts S Identification Marks on Do. 2378

Material of Steam Pipes 60 pps Test pressure 360

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 Section 49 of the Rules been complied with

Is this machinery duplicate of a previous case yes If so, state name of vessel S/S Forest of Dean Ref. 7042 18288

General Remarks (State quality of workmanship, opinions as to class, &c.) These Engines, Boilers have been built under Special Survey in accordance with the approved plans & the workmanship & material are of good quality & they have been securely fitted on board and under steam & found satisfactory

The machinery is eligible in my opinion for the record of

LMC 11. 24

It is submitted that this vessel is eligible for THE RECORD. + LMC 11. 24. CL.

4/12/24

The amount of Entry Fee ... £ 3 : : When applied for, Special ... £ 42. 5 : : 24. 11. 1924. Donkey Boiler Fee ... £ : : Travelling Expenses (if any) £ : : 30. 2. 24

Committee's Minute

Assigned + LMC 11. 24.

W. Gordon-Maclean

Engineer Surveyor to Lloyd's Register of Shipping.



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