

Rpt. 4.

REPORT ON MACHINERY.

No. 45185

Received at London Office

25 NOV. 1925

Date of writing Report 14-11-1925 When handed in at Local Office 23-11-1925 Port of Glasgow
No. in Survey held at 3942 on the S.S. AUDACITY Date, First Survey 22-4-25 Last Survey 12-11-1925
Reg. Book. (Number of Visits 28)
Master Built at Greenock By whom built Geo. Brown & Co. (149) Tons Gross 589 Net 242
Engines made at Cathbridge By whom made Wm. Beardmore & Co. Ltd. (620) when made 1925
Boilers made at Glasgow By whom made Wm. Beardmore & Co. Ltd. (190) when made 1925
Registered Horse Power Owners J. T. Emerald & Sons Ltd. Port belonging to London
Nom. Horse Power as per Section 28 110-103 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines

Triple Expansion No. of Cylinders 3 No. of Cranks 3
Dia. of Cylinders 18 1/2", 22", 36" Length of Stroke 24" Revs. per minute 7 1/2 Dia. of Screw shaft 7 1/2" Material of screw shaft Steel
Is 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 tight
in the propeller boss Yes If the liner is in more than one length are the joints burned No 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 Yes If two
liners are fitted, is the shaft lapped or protected between the liners No Length of stern bush 34"
Dia. of Tunnel shaft as per rule 6 5/8" as fitted 6 5/8" Dia. of Crank shaft journals as per rule 7 1/2" as fitted 7 1/2" Dia. of Crank pin 7 1/2" Size of Crank webs 4 1/2" x 1 1/2" Dia. of thrust shaft under
collars 7 1/4" Dia. of screw 9-6" Pitch of Screw 11-0" No. of Blades 4 State whether moveable No Total surface 32 sq
No. of Feed pumps 2 Diameter of ditto 2 3/4" Stroke 12" Can one be overhauled while the other is at work Yes
No. of Bilge pumps 2 Diameter of ditto 2 3/4" Stroke 12" Can one be overhauled while the other is at work Yes
No. of Donkey Engines 2 Sizes of Pumps 6 x 4 x 6 No. and size of Suctions connected to both Bilge and Donkey pumps
In Engine Room 3-2 In Holds, &c. Coil Pumps

No. of Bilge Injections 1 sizes 3 1/2" Connected to circulating pump Yes Is a separate Donkey Suction fitted in Engine room & size 2"
Are 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 Yes
Are all connections with the sea direct on the skin of the ship Yes Are they 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 Discharge Pipes above or below the deep water line Yes
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 are carried through the bunkers None How are they protected Yes
Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times Yes
Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges Yes
Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from

BOILERS, &c.—(Letter for record 5)

Manufacturers of Steel Mun. Wm. Beardmore & Co. Ltd. 15B
Total Heating Surface of Boilers 2064 sq ft Is Forced Draft fitted No No. and Description of Boilers one single ended, return tube
Working Pressure 180 lbs Tested by hydraulic pressure to 320 lbs Date of test 17-8-25 No. of Certificate 16907
Can each boiler be worked separately Yes Area of fire grate in each boiler 66 sq ft No. and Description of Safety Valves to
each boiler 2—Direct spring Area of each valve 7-06" Pressure to which they are adjusted 185 lbs Are they fitted with easing gear Yes
Smallest distance between boilers or uptakes and bunkers or woodwork 9" Mean dia. of boilers 15-0" Length 10-6" Material of shell plates Steel
Thickness 1/4" Range of tensile strength 28 ton Are the shell plates welded or flanged No Descrip. of riveting: cir. seams D.R.
long. seams T.R.D.B.S. Diameter of rivet holes in long. seams 1 1/4" Pitch of rivets 3 1/2" Lap of plates or width of butt straps 18 1/2"
Per centages of strength of longitudinal joint rivets 86% plate 85-7% Working pressure of shell by rules 183 lbs Size of manhole in shell 16" x 12"
Size of compensating ring 8 7/8" x 1 1/4" No. and Description of Furnaces in each boiler 3—Morrison Material Steel Outside diameter 3-8 1/4"
Length of plain part top 9 1/2" bottom 9 1/2" Thickness of plates crown 9 1/2" bottom 9 1/2" Description of longitudinal joint welded No. of strengthening rings
Working pressure of furnace by the rules 184 lbs Combustion chamber plates: Material Steel Thickness: Sides 1/6" Back 1/6" Top 1/6" Bottom 1/6"
Pitch of stays to ditto: Sides 8 1/4" x 9 1/2" Back 9 1/2" x 8 1/4" Top 8 1/4" x 9 1/2" If stays are fitted with nuts or riveted heads No Working pressure by rules 198 lbs
Material of stays Steel Area at smallest part 15 1/2" Area supported by each stay 79 0 Working pressure by rules 181 lbs End plates in steam space:
Material Steel Thickness 1 1/4" Pitch of stays 19 x 21 How are stays secured Double nut Working pressure by rules 182 lbs Material of stays Steel
Area at smallest part 3 1/8" Area supported by each stay 400 0 Working pressure by rules 180 lbs Material of Front plates at bottom Steel
Thickness 2 3/2" Material of Lower back plate Steel Thickness 2 3/2" Greatest pitch of stays 14" Working pressure of plate by rules 230 lbs
Diameter of tubes 3 1/2" Pitch of tubes 4 3/4" Material of tube plates Steel Thickness: Front 2 3/2" Back 2 3/2" Mean pitch of stays 12"
Pitch across wide water spaces 14" Working pressures by rules 180 lbs Girders to Chamber tops: Material Steel Depth and
thickness of girder at centre 2-7 1/2" x 1 1/4" Length as per rule 2-3 1/2" Distance apart 9 1/2" Number and pitch of stays in each 2-8 1/4"
Working pressure by rules 187 lbs Steam dome: description of joint to shell % of strength of joint
Diameter Thickness of shell plates Material Description of longitudinal joint Diam. of rivet holes
Pitch of rivets Working pressure of shell by rules Crown plates Thickness How stayed
SUPERHEATER. Type Date of Approval of Plan Tested by Hydraulic Pressure to
Date of Test Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler
Diameter of Safety Valve Pressure to which each is adjusted Is Easing Gear fitted

W5-0025

IS A DONKEY BOILER FITTED? *ho*

If so, is a report now forwarded? *✓*

SPARE GEAR. State the articles supplied:— 2 Connecting Rod bolts Top & bottom. 3 Boiler tubes. 2 Main bearing bolts, 1 set coupling bolts, 1 set feed, Air, bilge & Circulating valves. 6 Condenser tubes, 12 Ferrules, 2 safety valve springs, 1 propeller, 1 set of valves for check valves, 6 junk ring bolts & nuts, 6 cylinder cover studs & nuts, 1 set Valves for donkey pump. Assorted sizes of iron bolts & nuts.

The foregoing is a correct description,

WILLIAM BEARDMORE & CO., LIMITED.

Manufacturer.

Dates of Survey while building { During progress of work in shops - - 1925. Apr 22. May 6. June 9. 12. 17. July 7. Aug 4. 8. Sept 7. 21. 23. During erection on board vessel - - - Oct 16. 21. 23. 30 Nov 4. 6. 7. 9. 12. 13. Dec 11. 16. 30. Jan 8. 10. 31. Aug. 11. 17. Total No. of visits E-20. B.8.

Is the approved plan of main boiler forwarded herewith *✓*

" " " donkey " " " *✓*

Dates of Examination of principal parts—Cylinders 12-6-25 Slides 12-6-25 Covers 12-6-25 Pistons 17-6-25 Rods 17-6-25 Connecting rods 17-6-25 Crank shaft 12-6-25 Thrust shaft 4-8-25 Tunnel shafts 21-9-25 Propeller 21-9-25 Stern tube 21-9-25 Steam pipes tested 16-10-25 Engine and boiler seatings 21-10-25 Engines holding down bolts 21-10-25 Completion of pumping arrangements 21-10-25 Boilers fixed 21-10-25 Engines tried under steam 12-11-25 Completion of fitting sea connections ✓ Stern tube ✓ Screw shaft and propeller ✓ Main boiler safety valves adjusted 30-10-25 Thickness of adjusting washers P 1/2" S. 7/16" Material of Crank shaft *steel* Identification Mark on Do. 1113 Material of Thrust shaft *steel* Identification Mark on Do. 1113 Material of Tunnel shafts ✓ Identification Marks on Do. ✓ Material of Screw shafts *steel* Identification Marks on Do. 1113 Material of Steam Pipes *Copper* Test pressure 360 lbs. 0" Is an installation fitted for burning oil fuel *ho* 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 *ho* If so, state name of vessel *✓*

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

The machinery has been constructed under Special Survey in accordance with the approved Plans & Rules. The materials and workmanship are good. The machinery has been fitted on board the vessel, examined under steam and found satisfactory and is eligible in my opinion, to have the Record of L.M.C. 11-25.

note: When steam was raised on this boiler a very slight leak developed at the butt of the shell plates in way of the lower butt strap. At the request of the Owners Representative, the ends of this butt strap were built up by Electric welding.

It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 11-25. CL

The amount of Entry Fee ... £ 3 : 0 : 0 When applied for, 23/11/25
Special *Engine* ... £ 16 : 10 : 0
Donkey Boiler Fee ... £ 13 : 16 : 0 When received, 20/2/26
Travelling Expenses (if any) £ : : 00%

Committee's Minute GLASGOW 24 NOV 1925

Assigned + L.M.C. 11-25.

Engineer Surveyor to Lloyd's Register of Shipping.



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