

REPORT ON MACHINERY.

No. 34145
THU. 11 OCT 1917

Received at London Office

Date of writing Report 19 When handed in at Local Office 10 Port of Glasgow
 No. in Survey held at Glasgow Date, First Survey 6th Nov. 1916 Last Survey Sept 29th 1917
 Reg. Book. on the R.F.A. Boxol (Number of Visits 40)
 Master Built at Glasgow By whom built Barclay Curle & Co Tons Gross Net
 Engines made at Glasgow By whom made Barclay Curle & Co When built 1917
 Boilers made at Glasgow By whom made Barclay Curle & Co when made 1917
 Registered Horse Power Owners Port belonging to

Nom. Horse Power as per Section 28 144 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 15 1/2", 25 1/2", 41 1/2" Length of Stroke 27 Revs. per minute 130 Dia. of Screw shaft as per rule 8.59 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 length 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 fits all the way two liners are fitted, is the shaft lapped or protected between the liners Length of stern bush 3.0"
 Dia. of Tunnel shaft as per rule 7.5 Dia. of Crank shaft journals as per rule 7.87 Dia. of Crank pin 8 1/4" Size of Crank webs 5 1/2" x 15 1/2" Dia. of thrust shaft under collars 8 1/4" Dia. of screw 10.9" Pitch of Screw 4.9" No. of Blades 4 State whether moveable no Total surface 38 ft²
 No. of Feed pumps 2 Diameter of ditto 7 x 5 Stroke 15 Can one be overhauled while the other is at work yes
 No. of Bilge pumps 3 Diameter of ditto 3 1/4" Stroke 13 1/2" Can one be overhauled while the other is at work yes
 No. of Donkey Engines in engine room Sizes of Pumps 11" x 8" x 10" No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room (3) 2 1/2" In Holds, &c. Four ports (1) 4" lower hold (1) 4" in Cofferdam (2) Port 4" (1) 3" in deep tank, in W. ? Flat (2) 4"
 No. of Bilge Injections 1 sizes 6 Connected to condenser, or to circulating pump pump Is a separate Donkey Suction fitted in Engine room & size yes 3"
 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 no
 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 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 are carried through the bunkers none How are they protected
 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
 Dates of examination of completion of fitting of Sea Connections 20/7/17 of Stern Tube 20/7/17 Screw shaft and Propeller 20/7/17
 Is the Screw Shaft Tunnel watertight no Is it fitted with a watertight door worked from

BOILERS, &c.—(Letter for record (5)) Manufacturers of Steel D. Colville & Sons Steel Coy of Scotland, Wallsend, Howden system
 Total Heating Surface of Boilers 2206 Is Forced Draft fitted yes No. and Description of Boilers 2 Single ended
 Working Pressure 180 Tested by hydraulic pressure to 360 Date of test 30/4/17 No. of Certificate 13767
 Can each boiler be worked separately yes Area of fire grate in each boiler No. and Description of Safety Valves to each boiler 1 pair direct spring Area of each valve 7.06 Pressure to which they are adjusted 185 Are they fitted with easing gear yes
 Smallest distance between boilers or uptakes and bunkers or woodwork well clear Mean dia. of boilers 10.3 Length 11.0 Material of shell plates steel
 Thickness 15/16" Range of tensile strength 28/32 Are the shell plates welded or flanged no Descrip. of riveting: cir. seams lap table long. seams butt table Diameter of rivet holes in long. seams 1 1/4" Pitch of rivets 7 1/2" Lap of plates or width of butt straps 14 15/16"
 Per centages of strength of longitudinal joint rivets 86.0 Working pressure of shell by rules 186 Size of manhole in shell 16" x 12" plate 86.2
 Size of compensating ring 2-6" x 2" x 10" No. and Description of Furnaces in each boiler 2 Mason's Material steel Outside diameter 37 1/4"
 Length of plain part top bottom Thickness of plates crown bottom 15/32 Description of longitudinal joint welded No. of strengthening rings
 Working pressure of furnace by the rules 186 Combustion chamber plates: Material steel Thickness: Sides 9/16" Back 9/16" Top 9/16" Bottom 3/4"
 Pitch of stays to ditto: Sides 7 1/4" x 7 1/4" Back 7 1/4" x 8" Top 7 1/4" x 7 1/4" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 182
 Material of stays steel Diameter at smallest part 1.49 Area supported by each stay 60 Working pressure by rules 192 End plates in steam space: Material steel Thickness 29/32 Pitch of stays 14 1/2" x 14" How are stays secured 2 nuts Working pressure by rules 180 Material of stays steel Diameter at smallest part 4.11 Area supported by each stay 203 Working pressure by rules 205 Material of Front plates at bottom steel Thickness 29/32 Material of Lower back plate steel Thickness 29/32 Greatest pitch of stays 14" Working pressure of plate by rules 224
 Diameter of tubes 2 1/2" Pitch of tubes 3 1/2" x 3 1/2" Material of tube plates steel Thickness: Front 29/32 Back 3/4" Mean pitch of stays 8 3/4"
 Pitch across wide water spaces 13 1/2" Working pressures by rules 184 Girders to Chamber tops: Material steel Depth and thickness of girder at centre 7 1/2" x 16" Length as per rule 28 1/16" Distance apart 7 1/2" Number and pitch of stays in each (3) 7 1/4"
 Working pressure by rules 184 Superheater or Steam chest; how connected to boiler no Can the superheater be shut off and the boiler worked separately
 Diameter Length Thickness of shell plates Material Description of longitudinal joint Diam. of rivet holes Pitch of rivets Working pressure of shell by rules Diameter of flue Material of flue plates Thickness
 If stiffened with rings Distance between rings Working pressure by rules End plates: Thickness How stayed
 Working pressure of end plates Area of safety valves to superheater Are they fitted with easing gear

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VERTICAL DONKEY BOILER Manufacturers of Steel

No. *1104* Description *None*
 Made at _____ By whom made _____ When made _____ Where fixed _____
 Working pressure tested by hydraulic pressure to _____ Date of test _____ No. of Certificate _____ Fire grate area _____ Description of Safety Valves _____
 No. of Safety Valves _____ Area of each _____ Pressure to which they are adjusted _____ Date of adjustment _____
 If fitted with easing gear _____ If steam from main boilers can enter the donkey boiler _____ Dia. of donkey boiler _____ Length _____
 Material of shell plates _____ Thickness _____ Range of tensile strength _____ Descrip. of riveting long. seams _____
 Dia. of rivet holes _____ Whether punched or drilled _____ Pitch of rivets _____ Lap of plating _____ Per centage of strength of joint _____ Rivets _____ Plates _____
 Working pressure of shell by rules _____ Thickness of shell crown plates _____ Radius of do. _____ No. of stays to do. _____ Dia. of stays _____
 Diameter of furnace Top _____ Bottom _____ Length of furnace _____ Thickness of furnace plates _____ Description of joint _____
 Working pressure of furnace by rules _____ Thickness of furnace crown plates _____ Radius of do. _____ Stayed by _____
 Diameter of uptake _____ Thickness of uptake plates _____ Thickness of water tubes _____ Dates of survey _____

SPARE GEAR. State the articles supplied:— 2 top end bolts & nuts, 2 bottom end bolts & nuts, 2 main bearing bolts & nuts, 1 set of coupling bolts & nuts, feed & bridge pump valves, iron bolts & nuts of various sizes, and all other articles specified.

The foregoing is a correct description,

FOR BARCLAY, CURLE & CO., LTD.

Manufacturer.

John Alexander

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Dates of Survey while building: During progress of work in shops -- 1916 Dec. 6, 24, 1917 Jan. 5, 9, 10, 15, 26, Feb. 6, 8, 23, 26, Mar. 5, 7, 9, 12, 15, 19, 20, 22, 24, Apr. 2, 14, 1918 May 2, 4, 10, 11, 18, 24, 31, June 4, 13, 19, 25, July 2, 10, 12, 17, 21, 25, 26, 27, Aug. 7, 15, 16, 22, 26, Sep. 2, 1919 Oct. 12, 1920 Nov. 12, 1921 Dec. 12, 1922 Jan. 12, 1923 Feb. 12, 1924 Mar. 12, 1925 Apr. 12, 1926 May 12, 1927 Jun. 12, 1928 Jul. 12, 1929 Aug. 12, 1930 Sep. 12, 1931 Oct. 12, 1932 Nov. 12, 1933 Dec. 12, 1934

Dates of Examination of principal parts: Cylinders 19-20/3/17 Slides 15/3/17 Covers 15/3/17 Pistons 15/3/17 Rods 15/3/17
 Connecting rods 15/3/17 Crank shaft 7/3/17 Thrust shaft 19/6/17 Tunnel shafts _____ Screw shaft 2/7/17 Propeller 4/6/17
 Stern tube 18/5/17 Steam pipes tested 24/4/17 Engine and boiler seatings 22/9/17 Engines holding down bolts 12/9/17
 Completion of pumping arrangements 27/9/17 Boilers fixed 20/9/17 Engines tried under steam 27/9/17
 Main boiler safety valves adjusted 20/9/17 Thickness of adjusting washers S^d Bolts 3/2 P^d 3/2 Pol. Ab 2 3/2
 Material of Crank shaft *Steel* Identification Mark on Do. *328 23mk 7/3/17* Material of Thrust shaft *Steel* Identification Mark on Do. *9415 19/6/17*
 Material of Tunnel shafts *None* Identification Marks on Do. _____ Material of Screw shafts *Steel* Identification Marks on Do. *3179 2/7/17*
 Material of Steam Pipes *Iron* Test pressure *540 lbs*

General Remarks (State quality of workmanship, opinions as to class, &c., Duplicate of R.F.A. Birehol.)
 These engines and boilers have been built under special survey the materials and workmanship are of good description they have been well fitted on board and tried under steam. This machinery is in our opinion eligible to have certification of + L.M.C. 9.17 (in red) & fitted for oil fuel F.P. above 150°F in the Register Book.

It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 9.17. F.D. Fitted for oil fuel F.P. above 150°F.

The amount of Entry Fee .. £ :
 Special .. £ 55. 0 :
 Donkey Boiler Fee .. £ :
 Travelling Expenses (if any) £ :

J.M. 11/10/17
A. McKeand & J. Ritchie
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute GLASGOW 9 - OCT. 1917

Assigned + L.M.C. 9.17 F.D.

Fitted for oil fuel F.P. above 150°F



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Certificate (if required) to be sent to

The Surveyors are requested not to write on or below the space for Committee's Minute.