

REPORT ON MACHINERY.

No. 26754

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Date of writing Report 20th June 1908 When handed in at Local Office 29th June 1908 Port of Glasgow
 No. in Survey held at Glasgow Date, First Survey 14 Febry Last Survey 23rd June 1908
 Reg. Book. S/S "FELSPAR" (Number of Visits 31)

Master Port Glasgow Built at Port Glasgow By whom built A. Rodgers & Co (No 406) Gross Tons 1908
 Engines made at Glasgow By whom made do (No 153) when made 1908
 Boilers made at do By whom made Ewing & Dawson (No 853 & 854) when made 1908
 Registered Horse Power 138 Owners W. Robertson Port belonging to Glasgow

Nom. Horse Power as per Section 28 138 Is Refrigerating Machinery fitted for cargo purposes ☒ Is Electric Light fitted yes

ENGINES, &c.—Description of Engines Triple Surface Condensing No. of Cylinders 3 No. of Cranks 3
 Dia. of Cylinders 17"-27 1/2"-44" Length of Stroke 33" Revs. per minute as per rule Dia. of Screw shaft as fitted Material of screw shaft iron
 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 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 yes If two liners are fitted, is the shaft lapped or protected between the liners yes Length of stern bush 37"
 Dia. of Tunnel shaft as per rule Dia. of Crank shaft journals as per rule Dia. of Crank pin 8 3/4" Size of Crank webs 5 3/4" Dia. of thrust shaft under collars 8 3/4" Dia. of screw 11-0" Pitch of Screw 13-1 1/2" No. of Blades 4 State whether moveable no Total surface 35.5 sq ft
 No. of Feed pumps 2 Diameter of ditto 2 3/4" Stroke 16 1/2" Can one be overhauled while the other is at work yes
 No. of Bilge pumps 2 Diameter of ditto 2 3/4" Stroke 16 1/2" Can one be overhauled while the other is at work yes
 No. of Donkey Engines Two Sizes of Pumps 7-6" & 3 1/2-6" and 7 1/2" Pulsometer No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room 1-2 1/4" & Stokehold 1-2 1/4" In Holds, &c. Two 2"

No. of Bilge Injections 1 sizes 4" Connected to condenser, or to circulating pump pump Is a separate Donkey Suction fitted in Engine room & size yes 2 1/4"
 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 none
 Are all connections with the sea direct on the skin of the ship yes Are they Valves or Cocks Both valves & cocks
 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 Hold bilge pipes How are they protected wooden box 2 1/4" thick
 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 ☒ of Stern Tube ☒ Screw shaft and Propeller ☒
 Is the Screw Shaft Tunnel watertight none Is it fitted with a watertight door ☒ worked from ☒

BOILERS, &c.—(Letter for record (S)) Manufacturers of Steel David Colville & Sons Ltd
 Total Heating Surface of Boilers 2467.6 Is Forced Draft fitted no No. and Description of Boilers Two Single Ended
 Working Pressure 160 lbs. Tested by hydraulic pressure to 320 lbs. Date of test 29.5.08 No. of Certificate 9466
 Can each boiler be worked separately yes Area of fire grate in each boiler 39.6 sq ft No. and Description of Safety Valves to each boiler 2 Spring loaded Area of each valve 4.9 sq in Pressure to which they are adjusted 165 lbs. Are they fitted with easing gear yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 2-0" Int. dia. of boilers 12-0" Length 10-0" Material of shell plates Steel
 Thickness 1" Range of tensile strength 28/32 kno Are the shell plates welded or flanged no Descrip. of riveting: cir. seams D.R.L.
 long. seams D.R.S. Diameter of rivet holes in long. seams 1 1/16" Pitch of rivets 7 1/2" Lap of plates width of butt straps 1-3 5/8"
 Per centages of strength of longitudinal joint 77.3 % Working pressure of shell by rules 165 Size of manhole in shell 16" x 12"
 Size of compensating ring 7 in. dia No. and Description of Furnaces in each boiler 2 plain Material Steel Outside diameter 3-6"
 Length of plain part 73" Thickness of plates 3 23/32" Description of longitudinal joint welded No. of strengthening rings 1
 Working pressure of furnace by the rules 170 lbs. Combustion chamber plates: Material Steel Thickness: Sides 9/16" Back 19/32" Top 37/64" Bottom 23/32"
 Pitch of stays to ditto: Sides 7 1/4" x 8 1/2" Back 8 1/2" x 8 1/2" Top 7 1/4" x 8 1/2" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 168 lbs.
 Material of stays Steel Diameter at smallest part 1.79" Area supported by each stay 6 1/2 sq in Working pressure by rules 197 lbs. End plates in steam space: Material Steel Thickness 6 3/64" Pitch of stays 17 x 15 1/4" How are stays secured D. H. Working pressure by rules 160 Material of stays Steel
 Diameter at smallest part 4.11" Area supported by each stay 267 sq in Working pressure by rules 160 lbs. Material of Front plates at bottom Steel
 Thickness 25/32" Material of Lower back plate Steel Thickness 3/4" Greatest pitch of stays 13" Working pressure of plate by rules 162 lbs.
 Diameter of tubes 3 1/2" Pitch of tubes 4 7/8" x 5" Material of tube plates Steel Thickness: Front 25/32" Back 43/64" Mean pitch of stays 9 7/8"
 Pitch across wide water spaces 14 1/2" Working pressures by rules 160 lbs. Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 8" x 1 1/2" Length as per rule 31 1/2" Distance apart 8 1/2" Number and pitch of stays in each 3-7 1/4"
 Working pressure by rules 160 lbs. Superheater or Steam chest; how connected to boiler none 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 ☒

VERTICAL DONKEY BOILER—Manufacturers of Steel

No. _____ Description _____

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 _____ Stayed by _____

Diameter of uptake _____ Thickness of uptake plates _____ Thickness of water tubes _____ Dates of survey _____

SPARE GEAR. State the articles supplied:—Two connecting rod top end & 2 bottom end bolts & nuts, 2 main bearing bolts & nuts, 1 set of coupling bolts, 1 main & 1 donkey feed check valve, 1 set each of feed & bilge pump valves, 1 set of Ramsbottom rings for each piston, 1 set of air pump valves, 2 set assorted bolts & nuts, Condenser tubes & ferrules.

The foregoing is a correct description,

C. H. Pilditch & Co.

Manufacturer.

Dates of Survey while building { During progress of work in shops - 1908 Feb. 4. 14. 15. 22 Mar. 10. 12. 19. 25. Apr. 3. 9. 14. 23. 29. May. 2. 8. 13. 19. 25. 26. During erection on board vessel - June. 2. 6. 8. 11. 12. 13. 15. 17. 18. 20. 22. 23. Total No. of visits 31

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

Dates of Examination of principal parts—Cylinders 23.4.08 Slides 29.4.08 Covers 14.4.08 Pistons 2.5.08 Rods 14.4.08 Connecting rods 23.4.08 Crank shaft 14.4.08 Thrust shaft 13.5.08 Tunnel shafts ✓ Screw shaft 8.5.08 Propeller 8.5.08 Stern tube 8.5.08 Steam pipes tested 26.5.08 Engine and boiler seatings 6.6.08 Engines holding down bolts 11.6.08 Completion of pumping arrangements 17.6.08 Boilers fixed 17.6.08 Engines tried under steam 23.6.08 Main boiler safety valves adjusted 18.6.08 Thickness of adjusting washers Port Boiler P.W. = 3/8, S.W. 3/8, Stand B. 6th 3/8

Material of Crank shaft *Steel* Identification Mark on Do. 2055 A.T.G. Material of Thrust shaft *Steel* Identification Mark on Do. 15-3.

Material of Tunnel shafts *None* Identification Marks on Do. ✓ Material of Screw shafts *iron* Identification Marks on Do. 15-3.

Material of Steam Pipes *Copper* Test pressure 320 lbs.

General Remarks (State quality of workmanship, opinions as to class, &c.) These engines & boilers have been built under Special Survey: the workmanship & materials are of good quality, & having been satisfactorily fitted on board, & tried under steam, we are of opinion that they will be eligible for the notation **+ L.M.C. 6.08.**

It is submitted that this vessel is eligible for THE RECORD, **+ L.M.C. 6.08.**

ELEC LIGHT.

2-7-08

A.R.K.

2-7-08

The amount of Entry Fee £ 2 : - : When applied for, 22/6/1908

Special £ 20 14 : When received, 31.7.08

Donkey Boiler Fee £ : : Travelling Expenses (if any) £ : :

Committee's Minute GLASGOW JUN. 1908

Assigned **+ LMC 6,08** *2/11*

MACHINER CERTIFICATE WRITTEN 1-7-08

C. H. Pilditch & Co. Engineer Surveyors to Lloyd's Register of British & Foreign Shipping.

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