

REPORT ON MACHINERY.

No. 26060

TUE. APR. 15. 1913

Received at London Office

Date of writing Report 19 When handed in at Local Office 14/4 10 13 Port of Hull.
 No. in Survey held at Reg. Book. Hull. Date, First Survey Jan 8 = Last Survey Apr 7 = 1913
 (Number of Visits 26)
 Gross Tons 289
 Net Tons 115
 Master Built at Selby By whom built Cochrane & Sons Ltd. When built 1913.
 Engines made at By whom made when made 1913.
 Boilers made at Hull By whom made Messrs Charles D. Hodges & Co. Ltd. when made 1913.
 Registered Horse Power Owners Simpson Steam Traction Co. Ltd. Port belonging to Hull.
 Nom. Horse Power as per Section 28 83. Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted No.

ENGINES, &c.—Description of Engines Triple Expansion No. of Cylinders 3 No. of Cranks 3
 Dia. of Cylinders 13" - 22 1/2" - 34" Length of Stroke 24" Revs. per minute Dia. of Screw shaft as per rule 4 1/2" Material of screw shaft Iron
 as fitted 4 1/2" 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 No If two
 liners are fitted, is the shaft lapped or protected between the liners No Length of stern bush 38"
 Dia. of Tunnel shaft as per rule 6 1/2" Dia. of Crank shaft journals as per rule 4 1/2" Dia. of Crank pin 4 1/2" Size of Crank webs 4 1/2" x 4 1/2" Dia. of thrust shaft under
 collars 4 1/2" Dia. of screw 9' 6" Pitch of Screw 10' - 10 1/2" No. of Blades 4 State whether moveable No. Total surface 32 sq
 No. of Feed pumps 1 Diameter of ditto 2 3/4" Stroke 14 1/4" Can one be overhauled while the other is at work Yes
 No. of Bilge pumps 1 Diameter of ditto 2 3/4" Stroke 14 1/4" Can one be overhauled while the other is at work Yes
 No. of Donkey Engines 1 Sizes of Pumps 6" x 4 1/4" x 6" duplex No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room Two 2 1/2" - one forward & one aft. In Holds, &c. One 2 1/2" to fore hold, one 2 1/2" to main hold,
 one 2 1/2" to fore hold, one 2 1/2" aft. ducts with ejector suction from all bilges with discharge on deck
 No. of Bilge Injections 1 sizes 3 1/2" Connected to condenser, or to circulating pump pump Is a separate Donkey Suction fitted in Engine room & size 3" ejector.
 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 Hold cuttings How are they protected Wood casing.
 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 25.1.13 of Stern Tube 25.1.13 Screw shaft and Propeller 25.1.13
 Is the Screw Shaft Tunnel watertight No Is it fitted with a watertight door No worked from

BOILERS, &c.—(Letter for record S.) Manufacturers of Steel The Steel Company of Scotland Ltd.
 Total Heating Surface of Boilers 1350 sq ft Is Forced Draft fitted No. and Description of Boilers One cyl. mult. cradle mtd.
 Working Pressure 200 lbs. Tested by hydraulic pressure to 400 lbs. Date of test 7.3.13 No. of Certificate 1968.
 Can each boiler be worked separately No Area of fire grate in each boiler 44.3 sq ft No. and Description of Safety Valves to
 each boiler Two Spring Area of each valve 4.90 sq in Pressure to which they are adjusted 205 lbs. Are they fitted with easing gear Yes.
 Smallest distance between boilers or uptakes and bunkers or woodwork 6" Mean dia. of boilers 13'-0" Length 10'-6" Material of shell plates S.
 Thickness 1 1/16" Range of tensile strength 28 tons Are the shell plates welded or flanged No. Descrip. of riveting: cir. seams 20. P. & D.
 long. seams P. & D. Diameter of rivet holes in long. seams 1 1/2" Pitch of rivets 8 5/8" Lap of plates or width of butt straps 18"
 Per centages of strength of longitudinal joint rivets 89.5% plate 85.5% Working pressure of shell by rules 205 lbs. Size of manhole in shell 16" x 12"
 Size of compensating ring 7" x 1 1/16" No. and Description of Furnaces in each boiler 3 plain. Material S. Outside diameter 34.625"
 Length of plain part top 6'-3" bottom 6'-3" Thickness of plates crown 13" bottom 16" Description of longitudinal joint Weld. No. of strengthening rings 0
 Working pressure of furnace by the rules 221 lbs. Combustion chamber plates: Material S. Thickness: Sides 11/16" Back 11/16" Top 11/16" Bottom 11/16"
 Pitch of stays to ditto: Sides 8 3/8" x 8" Back 8 3/8" x 8 1/2" Top 8 3/8" x 8" If stays are fitted with nuts or riveted heads No. Working pressure by rules 232 lbs.
 Material of stays S. Diameter at smallest part 2.40" Area supported by each stay 890 sq in Working pressure by rules 242 lbs. End plates in steam space:
 Material S. Thickness 1 3/32" Pitch of stays 19" x 18" How are stays secured 29.7.12. Working pressure by rules 228 lbs. Material of stays S.
 Area at smallest part 7.60" Area supported by each stay 342 sq in Working pressure by rules 228 lbs. Material of Front plates at bottom S.
 Thickness 1" Material of Lower back plate S. Thickness 15/16" Greatest pitch of stays 13" x 8 3/8" Working pressure of plate by rules 254 lbs.
 Diameter of tubes 3 1/2" Pitch of tubes 4 7/8" x 4 7/8" Material of tube plates S. Thickness: Front 1" Back 8/8" Mean pitch of stays 12"
 Pitch across wide water spaces 13 3/4" Working pressures by rules 213 lbs. Girders to Chamber tops: Material S. Depth and
 thickness of girder at centre 10" - 1 3/4" Length as per rule 3'-0" Distance apart 8 1/2" Number and pitch of stays in each 3-8"
 Working pressure by rules 205 lbs. Superheater or Steam chest; how connected to boiler 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

W290-0149

Lloyd's Register Foundation

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 _____ 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:— Two sets 1/2" & 1/4" bolts and connecting rod bolts & nuts, two main bearing bolts & nuts, one set of coupling bolts & nuts, one set each side & side pump valves, iron of various sizes, a quantity of assorted bolts, nuts etc.

The foregoing is a correct description,
p. pro **CHARLES D. HOLMES & Co. LTD.** Manufacturer.

Arthur Holmes

DIRECTOR. 1913:— Jan 8, 14, 17, 23, 25, 29, 30, Feb 4, 5, 6, 12, 17, 19, 26, 28 Mar 5, 7

Dates of Survey while building

During progress of work in shops -
 During erection on board vessel -
 Total No. of visits 26.

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

Dates of Examination of principal parts—Cylinders 17.2.13 Slides 12.2.13 Covers 12.2.13 Pistons 5.2.13 Rods 6.2.13

Connecting rods 29.2.13 Crank shaft 29.1.13 Thrust shaft 10.2.13 Tunnel shafts _____ Screw shaft 14.1.13 Propeller 14.1.13

Stern tube 14.1.13 Steam pipes tested 26.2.13 Engine and boiler seatings 25.1.13 Engines holding down bolts 19.2.13

Completion of pumping arrangements 7.4.13 Boilers fixed 29.2.13 Engines tried under steam 29.2.13

Main boiler safety valves adjusted 29.2.13 Thickness of adjusting washers *Forward 5/16" off 1/16"*

Material of Crank shaft *Steel* Identification Mark on Do. *Nº 991 T.G.D.* Material of Thrust shaft *Steel* Identification Mark on Do. *Nº 991 T.G.D.*

Material of Tunnel shafts _____ Identification Marks on Do. _____ Material of Screw shafts *Iron* Identification Marks on Do. *Nº 991 T.G.D.*

Material of Steam Pipes *Solid drawn copper* Test pressure *400 lbs per sq. inch hydraulic*

General Remarks (State quality of workmanship, opinions as to class, &c.) *The engines & boilers of this vessel have been inspected under special survey in accordance with the Rules. The materials & workmanship are sound & good. The boiler tested by hydraulic pressure & with the engines covered on board & tested under steam they are now in good order & safe working condition & respectfully submitted as being eligible in my opinion to be classed with the notation of 'L.M.C. 4.13' in the Register Books.*

It is submitted that this vessel is eligible for **THE RECORD.** *L.M.C. 4.13.*

R.M.S.
 15.4.13

The amount of Entry Fee ... £ 1 : 0 :
 Special ... £ 12 : 9 :
 Donkey Boiler Fee ... £ : :
 Travelling Expenses (if any) £ 82 : :
 When applied for, 14.4.13
 When received, 30/4/13

[Signature]
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute
 Assigned
 FRI. APR. 13, 1913
Done 4.13

MACHINERY CERTIFICATE WRITTEN



Certificate (if required) to be sent to (The Surveyors are requested not to write on or below the space for Committee's Minute.)