

REPORT ON MACHINERY.

No. 19707

Port of Hull

Received at London Office SAT 4 JAN 1908

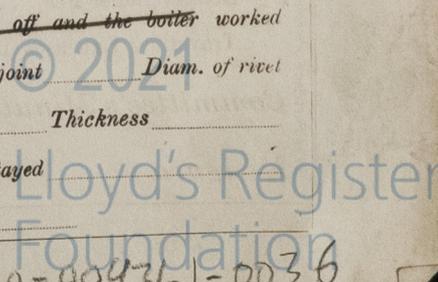
No. in Survey held at Hull Date, first Survey Sep. 21st Last Survey Dec 19th 1907
 Reg. Book. 666 on the Shawes Avon (Number of Visits 37)
 Master Seely Built at Seely By whom built Cochrane & Sons Tons { Gross 250
 Engines made at Hull By whom made Chas. S. Holmes & Co. when made 5 Net 111
 Boilers made at 5 By whom made 5 when made 5
 Registered Horse Power 71 Owners Juff Ben Port belonging to Timothy
 Nom. Horse Power as per Section 28 71 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 12¹/₂ - 22 - 35 Length of Stroke 24 Revs. per minute 110 Dia. of Screw shaft 7¹/₂ 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 3'0"
 Dia. of Tunnel shaft 6¹/₄ Dia. of Crank shaft journals 6¹/₂ Dia. of Crank pin 7 Size of Crank webs 13¹/₂ x 18 Dia. of thrust shaft under collars 7 Dia. of screw 8¹/₂ Pitch of Screw 1¹/₆ - 10¹/₆ No. of Blades 4 State whether moceable No Total surface 28¹/₂
 No. of Feed pumps 1 Diameter of ditto 28 Stroke 24 Can one be overhauled while the other is at work Yes
 No. of Bilge pumps 1 Diameter of ditto 28 Stroke 24 Can one be overhauled while the other is at work Yes
 No. of Donkey Engines 1 Sizes of Pumps 3¹/₂ x 6 No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room 2-2 (Up & Fwd). In Holds, &c. 2-2 (Main hold for steam).
2¹/₂ Gicm suction to the hold & discharge on deck.
 No. of Bilge Injections 1 sizes 2¹/₂ Connected to condenser, or to circulating pump Yes Is a separate Donkey Suction fitted in Engine room & size 2¹/₂ Gicm
 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
 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 suction 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 8.11.07 of Stern Tube 8.11.07 Screw shaft and Propeller 8.11.07
 Is the Screw Shaft Tunnel watertight None Is it fitted with a watertight door Yes worked from Yes

BOILERS, &c.—(Letter for record 8) Manufacturers of Steel Dana & Sons & Wm Beaumont & Co.
 Total Heating Surface of Boilers 1175¹/₂ Is Forced Draft fitted No No. and Description of Boilers 1 S.E. 9 Murchison
 Working Pressure 185 lbs Tested by hydraulic pressure to 370 lbs Date of test 7.12.07 No. of Certificate 1616
 Can each boiler be worked separately Yes Area of fire grate in each boiler 32.8 sq ft No. and Description of Safety Valves to each boiler 2 Spring loaded Area of each valve 3.97 Pressure to which they are adjusted 190 lbs Are they fitted with easing gear Yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 7 Mean dia. of boilers 18'0" Length 10'0" Material of shell plates Steel
 Thickness 1¹/₂ Range of tensile strength 28-32 Are the shell plates welded or flanged Yes Descrip. of riveting: cir. seams DR Lap long. seams DR Lap
 Diameter of rivet holes in long. seams 1¹/₂ Pitch of rivets 7¹/₂ Lap of plates or width of butt straps 17¹/₂
 Per centages of strength of longitudinal joint rivets 85.25 Working pressure of shell by rules 186 Size of manhole in shell 16 x 12 plate 81.5
 Size of compensating ring 7¹/₂ x 1¹/₂ No. and Description of Furnaces in each boiler 2 plain Material Steel Outside diameter 3'6¹/₂
 Length of plain part top 5¹/₂ bottom 5¹/₂ Thickness of plates crown 3¹/₂ bottom 3¹/₂ Description of longitudinal joint Welded No. of strengthening rings 1
 Working pressure of furnace by the rules 192 Combustion chamber plates: Material Steel Thickness: Sides 3¹/₂ Back 4¹/₂ Top 2¹/₂ Bottom 2¹/₂
 Pitch of stays to ditto: Sides 9 x 9 Back 9¹/₂ x 8¹/₂ Top 9 x 10 If stays are fitted with nuts or riveted heads Yes Working pressure by rules 198
 Material of stays Steel Diameter at smallest part 1¹/₂ Area supported by each stay 90 Working pressure by rules 207 End plates in steam space: Material Steel Thickness 1¹/₂ Pitch of stays 18 x 18 How are stays secured DR heads Working pressure by rules 195 Material of stays Steel
 Diameter at smallest part 7.5 Area supported by each stay 274 Working pressure by rules 210 Material of Front plates at bottom Steel
 Thickness 1¹/₂ Material of Lower back plate Steel Thickness 1¹/₂ Greatest pitch of stays 14¹/₂ x 8¹/₂ Working pressure of plate by rules 212
 Diameter of tubes 3¹/₂ Pitch of tubes 4¹/₂ x 5 Material of tube plates Steel Thickness: Front 1¹/₂ Back 3¹/₂ Mean pitch of stays 9¹/₂
 Pitch across wide water spaces 16 Working pressures by rules 300 Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 9¹/₂ x 12¹/₂ Length as per rule 2'10" Distance apart 10 Number and pitch of stays in each 309
 Working pressure by rules 195 Superheater or Steam chest; how connected to boiler None Can the superheater be shut off and the boiler worked separately Yes
 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

If not, state whether, and when, one will be sent? Is a Report also sent on the Hull of the Ship?

009350-009361-0036



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 tops two bottom end connecting rods bolts & nuts two main bearing bolts, one set of coupling bolts & nuts, one set of feed & bilge pump valves, one main & one donkey feed check valve, various bolts & nuts etc.*

The foregoing is a correct description,
Charles D. Holmes, Manufacturer.

Dates of Survey while building { During progress of work in shops - - 1907 - Sep 21, 25, 28, Oct 1, 5, 7, 9, 15, 18, 19, 23, 25, 29, 31, Nov 5, 8, 11, 13, 15, 18, 20
 { During erection on board vessel - - Nov 26, 27, 28, 29, Dec 3, 7, 13, 14, 17, 18, 19
 Total No. of visits 32

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

Dates of Examination of principal parts—Cylinders *20.11.07*, Slides *29.11.07*, Covers *26.11.07*, Pistons *26.11.07*, Rods *29.11.07*
 Connecting rods *29.11.07*, Crank shaft *20.11.07*, Thrust shaft *11.11.07*, Tunnel shafts ✓, Screw shaft *19.10.07*, Propeller *19.10.07*
 Stern tube *19.10.07*, Steam pipes tested *13.12.07*, Engine and boiler seatings *8.11.07*, Engines holding down bolts *13.12.07*
 Completion of pumping arrangements *19.12.07*, Boilers fixed *18.12.07*, Engines tried under steam *14.12.07*
 Main boiler safety valves adjusted *14.12.07*, Thickness of adjusting washers *F 1/4" A 1/4"*
 Material of Crank shaft *Iron*, Identification Mark on Do. *387 J.W.G. 26.11.07*, Material of Thrust shaft *Iron*, Identification Mark on Do. *387 J.W.G. 26.11.07*
 Material of Tunnel shafts ✓, Identification Marks on Do. ✓, Material of Screw shafts *Iron*, Identification Marks on Do. *387 J.W.G. 19.10.07*
 Material of Steam Pipes *Solid drawn Copper*, Test pressure *360 lbs.*

General Remarks (State quality of workmanship, opinions as to class, &c. *The machinery & trim of this vessel have been examined under Special Survey, are of good material & workmanship & have been fitted & secured in accordance with the Rules & agreement with the Rules work for one feed & one bilge pump to be fitted.) They are now in good working condition & eligible in my opinion to have the Notation -1- L. M. C. 12.07 in the Register Book. A letter from the owner is attached hereto.*

It is submitted that this vessel is eligible for THE RECORD, *L. M. C. 12.07.*

J.H.C. 4-1-08
J.S. 4.1.08

The amount of Entry Fee..	£ 1 : -	When applied for,
Special	£ 10 13	3/11/1908
Donkey Boiler Fee .. .	£ - : -	When received,
Travelling Expenses (if any) £	- : 8 2	3.1.1908

John W. Gwynne
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute **TUES. 7 JAN 1908**
 Assigned *+ time 12.07*

ALL CERTIFICATE WRITTEN.



Certificate (if required) to be sent to Mull

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