

REPORT ON MACHINERY.

Hull No. 19046
69796

SAT. 8 JUN. 1907

Date of writing Report 31 May 07 When handed in at Local Office Luton 19 07 Port of London
 No. in Survey held at Luton Date, First Survey Feb 14 Last Survey May 17 1907
 Reg. Book. 136044 on the Enigma 9016724 for S.S. City of Hull (Number of Visits 10)
 Master Selby Built at Selby By whom built Cochrane Sons Tons { Gross 88
 Engines made at Luton By whom made The Marshall & Hunt Hydraulic Eng Co Ltd Net 14
 Boilers made at Stockton By whom made Riley Bros & Stephenson & Co When built 1907
 Registered Horse Power 85 Owners London & Peterhead S. F Co Ltd when made 1907
 Nom. Horse Power as per Section 28 85 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted No
 Port belonging to Peterhead

ENGINES, &c.—Description of Engines Comp. Invert-Surface Condensing No. of Cylinders 2 No. of Cranks 2
 Dia. of Cylinders 11" - 24" Length of Stroke 16" Revs. per minute 150 Dia. of Screw shaft 5.367" Material of Steel
 Is the screw shaft fitted with a continuous liner the whole length of the stern tube No as fitted 5.5" screw shaft)
 in the propeller boss Yes If the liner is in more than one length are the joints burned ✓ Is the after end of the liner made water tight
 between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive ✓ If the liner does not fit tightly at the part
 liners are fitted, is the shaft lapped or protected between the liners ✓ If two
 Dia. of Tunnel shaft 4.71" as per rule 4.71" Dia. of Crank shaft journals 4.94" as per rule 4.94" Length of stern bush 1-10" ✓
 collars 3/4" as fitted 4.71" Dia. of Crank pin 5 1/4" Size of Crank webs 3 1/4 x 2 1/8" Dia. of thrust shaft under
 No. of Feed pumps one Diameter of ditto 2" Stroke 9" No. of Blades 4 State whether moveable No Total surface 15.5 sq ft
 No. of Bilge pumps one Diameter of ditto 2" Stroke 9" Can one be overhauled while the other is at work ✓
 No. of Donkey Engines 1 Sizes of Pumps 6" Steam Cyl. 2 1/2" feed cyl. 3" water pump } x 6 strokes No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room Three 2" & one 2 1/2" In Holds, &c. One 2" ✓
 No. of Bilge Injections 1 sizes 2 1/2" Connected to condenser, or to circulating pump pump Is a separate Donkey Suction fitted in Engine room & size Yes 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 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 just awash
 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 26.4.07 of Stern Tube 26.4.07 Screw shaft and Propeller 26.4.07
 Is the Screw Shaft Tunnel watertight None Is it fitted with a watertight door — worked from 2

BOILERS, &c.—(Letter for record) Manufacturers of Steel

Total Heating Surface of Boilers 750 sq ft As Forced Draft fitted — No. and Description of Boilers —
 Working Pressure 140 lb Tested by hydraulic pressure to — Date of test — No. of Certificate —
 Can each boiler be worked separately — Area of fire grate in each boiler — No. and Description of Safety Valves to —
 each boiler — Area of each valve — Pressure to which they are adjusted — Are they fitted with easing gear —
 Smallest distance between boilers or uptakes and bunkers or woodwork — Mean dia. of boilers — Length — Material of shell plates —
 Thickness — Range of tensile strength — Are the shell plates welded or flanged — Descrip. of riveting: cir. seams —
 long. seams — Diameter of rivet holes in long. seams — Pitch of rivets — Lap of plates or width of butt straps —
 Per centages of strength of longitudinal joint — Working pressure of shell by rules — Size of manhole in shell —
 Size of compensating ring — No. and Description of Furnaces in each boiler — Material — Outside diameter —
 Length of plain part — Thickness of plates — Description of longitudinal joint — No. of strengthening rings —
 Working pressure of furnace by the rules — Combustion chamber plates: Material — Thickness: Sides — Back — Top — Bottom —
 Pitch of stays to ditto: Sides — Back — Top — If stays are fitted with nuts or riveted heads — Working pressure by rules —
 Material of stays — Diameter at smallest part — Area supported by each stay — Working pressure by rules — End plates in steam space: —
 Material — Thickness — Pitch of stays — How are stays secured — Working pressure by rules — Material of stays —
 Diameter at smallest part — Area supported by each stay — Working pressure by rules — Material of Front plates at bottom —
 Thickness — Material of Lower back plate — Thickness — Greatest pitch of stays — Working pressure of plate by rules —
 Diameter of tubes — Pitch of tubes — Material of tube plates — Thickness: Front — Back — Mean pitch of stays —
 Pitch across wide water spaces — Working pressures by rules — Girders to Chamber tops: Material — Depth and —
 thickness of girder at centre — Length as per rule — Distance apart — Number and pitch of stays in each —
 Working pressure by rules — 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 —

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 each top and bottom end connecting rod bolts and nuts, two main bearing bolts and nuts, one set coupling bolts and nuts, one set each air, circulating, feed and bilge pump valves, and a quantity of assorted bolts nuts etc*
 The foregoing is a correct description,

Manufacturer.

Dates of Survey while building { During progress of work in shops - 1907 Feb 4 Mar 6 18 20 Apr 5 16 26 30 May 7 14
 { During erection on board vessel - Hull - Apr 19 26 30 May 8 23 25 28 30 31 Jun 4.
 Total No. of visits { 10 + 10 = 20

Is the approved plan of main boiler forwarded herewith No

Dates of Examination of principal parts—Cylinders 7.5.07 Slides 7.5.07 Covers 7.5.07 Pistons 7.5.07 Rods 7.5.07
 Connecting rods 7.5.07 Crank shaft 16.4.07 Thrust shaft ✓ Tunnel shafts 16.4.07 Screw shaft 6.4.07 Propeller 6.4.07
 Stern tube 13.3.07 Steam pipes tested 25.5.07 Engine and boiler seatings 8.5.07 Engines holding down bolts 30.5.07
 Completion of pumping arrangements 3.6.07 Boilers fixed 3.6.07 Engines tried under steam 31.5.07
 Main boiler safety valves adjusted 31.5.07 Thickness of adjusting washers 9/32 9/32
 Material of Crank shaft Steel Identification Mark on Do. 904 Material of Thrust shaft ✓ Identification Mark on Do. ✓
 Material of Tunnel shafts Steel Identification Marks on Do. 904 390 Material of Screw shafts Steel Identification Marks on Do. 10418
 Material of Steam Pipes Solid drawn copper Test pressure 280 lbs □

General Remarks (State quality of workmanship, opinions as to class, &c. *These engines have been constructed under special survey, the material has been tested & the workmanship is good, they have been sent to Selby for the purpose of fitting on board.*

*These engines have been fitted on board, tested under steam and found satisfactory, they are now in good order, and safe working condition, and respectfully submitted as being eligible in my opinion to be classed with the notation of * L.M.C. 6.07 in the Register Book.*

James Barclay

It is submitted that this vessel is eligible for THE RECORD. + LMC 6.07. J.M.

The amount of Entry Fee... £ 1 : 0 : 0 When applied for, 5/6 1907
 Special ... £ 8 : 2 : 0 7/6 1907
 Donkey Boiler Fee ... £ 18 : 5 : 0 When received, 17/6 1907
 Travelling Expenses (if any) £ 1 : 12 : 0

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

Committee's Minute

TUES. 11 JUN 1907

Assigned

+ LMC 6.07

MACHINERY CERTIFICATE WRITTEN.



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