

# REPORT ON MACHINERY.

No. 17404

Port of Hull

Received at London Office **WES. 12 DEC 1905**

No. in Survey held at Hull Date, first Survey July 17<sup>th</sup> Last Survey 2<sup>nd</sup> Dec 1905  
 Reg. Book. 77 Suppon the Steel Se K. Concord (Number of Visits 35) Tons <sup>Gross</sup> 235 <sub>Net</sub> 96  
 Master \_\_\_\_\_ Built at Selby By whom built Messrs Cochrane Sons When built 1905  
 Engines made at } \_\_\_\_\_ By whom made } Messrs when made } \_\_\_\_\_  
 Boilers made at } Hull By whom made } Charles D. Holmes & Co when made } 1905  
 Registered Horse Power \_\_\_\_\_ Owners White & Willows Port belonging to Grimsby  
 Nom. Horse Power as per Section 28 68 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 12 1/4" - 22" - 35" Length of Stroke 24" Revs. per minute 112 Dia. of Screw shaft <sup>as per rule</sup> 7 1/2" <sub>as fitted</sub> 7 1/2" Material of Steel screw shaft  
 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 burned 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 \_\_\_\_\_ If two liners are fitted, is the shaft lapped or protected between the liners \_\_\_\_\_ Length of stern bush 30 1/2"  
 Dia. of <sup>plain part</sup> 6.38" <sub>as per rule</sub> 6.7" <sup>as per rule</sup> 6.7" <sub>as fitted</sub> 7" Dia. of Crank shaft journals 7" Dia. of Crank pin 7" Size of Crank webs 13 3/8" x 4 3/4" Dia. of thrust shaft under collars 7" Dia. of screw 8' 7 1/2" Pitch of screw 11' 0" No. of blades 4 State whether moveable No Total surface 28 sq ft  
 No. of Feed pumps 1 Diameter of ditto 2 1/2" Stroke 24" Can one be overhauled while the other is at work \_\_\_\_\_  
 No. of Bilge pumps 1 Diameter of ditto 2 1/2" Stroke 24" Can one be overhauled while the other is at work \_\_\_\_\_  
 No. of Donkey Engines One Sizes of Pumps 2 3/4" x 5" No. and size of Suctions connected to both Bilge and Donkey pumps \_\_\_\_\_  
 In Engine Room Two two inches In Holds, &c. One each 2" to each slush well, one 2" to main hold, and ejector suction from Eng. room bilge holds, with discharge on deck.  
 No. of bilge injections 1 sizes 3 Connected to condenser, or to circulating pump pumps a separate donkey suction fitted in Engine room & size 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 0  
 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  
 When were stern tube, propeller, screw shaft, and all connections examined in dry dock before launching Is the screw shaft tunnel watertight None  
 Is it fitted with a watertight door \_\_\_\_\_ worked from \_\_\_\_\_

BOILERS, &c.— (Letter for record 8) Total Heating Surface of Boilers 1096 sq ft Is forced draft fitted No  
 No. and Description of Boilers One byl. Multi. Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs  
 Date of test 16. 11. 05 Can each boiler be worked separately \_\_\_\_\_ Area of fire grate in each boiler 32.8 sq ft No. and Description of safety valves to each boiler Two Spring Area of each valve 3.98 sq in Pressure to which they are adjusted 185 lbs Are they fitted with easing gear Yes  
 Smallest distance between boilers or uptakes and bunkers or woodwork 7" Mean dia. of boilers 12'-6" Length 10'-0" Material of shell plates Steel  
 Thickness 1 1/2" Range of tensile strength 29.32 tons Are they welded or flanged \_\_\_\_\_ Descrip. of riveting: cir. seams L. D. long. seams D. B. S. J. R.  
 Diameter of rivet holes in long. seams 1 1/2" Pitch of rivets 7" Lap of plates or width of butt straps 15"  
 Per centages of strength of longitudinal joint <sup>rivets</sup> 86 <sub>plate</sub> 85.2 Working pressure of shell by rules 185 lbs Size of manhole in shell 16" x 12"  
 Size of compensating ring 7" x 1 1/2" No. and Description of Furnaces in each boiler 2 plain Material Steel Outside diameter 43"  
 Length of plain part <sup>top</sup> 5'-10" <sub>bottom</sub> \_\_\_\_\_ Thickness of plates <sup>orow</sup> 4 9/16" <sub>bottom</sub> 6 1/4" Description of longitudinal joint Welded No. of strengthening rings 0  
 Working pressure of furnace by the rules 185 lbs Combustion chamber plates: Material Steel Thickness: Sides 23/32" Back 11/16" Top 23/32" Bottom 23/32"  
 Pitch of stays to ditto: Sides 8" Back 9" x 8 1/2" Top 8 1/2" x 8 3/4" If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 213 lbs  
 Material of stays Steel Diameter at smallest part 1 7/8" margin Area supported by each stay 105.75 sq in Working pressure by rules 204 lbs End plates in steam space: margin  
 Material Steel Thickness 1 3/32" Pitch of stays 17 1/2" x 17 1/2" How are stays secured sewed into both Working pressure by rules 185 lbs Material of stays Steel  
 Diameter at smallest part 6.210" Area supported by each stay 306.25 sq in Working pressure by rules 202 lbs Material of Front plates at bottom Steel  
 Thickness 7/8" Material of Lower back plate Steel Thickness 15/16" Greatest pitch of stays 15" Working pressure of plate by rules 198 lbs  
 Diameter of tubes 3 1/4" Pitch of tubes 4 5/8" Material of tube plates Steel Thickness: Front 7/8" Back 7/8" Mean pitch of stays 9 1/2"  
 Pitch across wide water spaces 15" Working pressures by rules 180 lbs Girders to Chamber tops: Material Iron Depth and thickness of girder at centre 9" x 1 3/4" Length as per rule 2'-8" Distance apart 8 3/4" Number and pitch of Stays in each 3 - 8 1/2"  
 Working pressure by rules 193 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 \_\_\_\_\_

**DONKEY BOILER**— No. \_\_\_\_\_ Description \_\_\_\_\_

Made at \_\_\_\_\_ By whom made \_\_\_\_\_ When made \_\_\_\_\_ Where fixed \_\_\_\_\_

Working pressure tested by hydraulic pressure to \_\_\_\_\_ No. of Certificate \_\_\_\_\_ Fire grate area \_\_\_\_\_ Description of safety valves \_\_\_\_\_

No. of safety valves \_\_\_\_\_ Area of each \_\_\_\_\_ Pressure to which they are adjusted \_\_\_\_\_ 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 \_\_\_\_\_ 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 \_\_\_\_\_

Thickness of furnace crown plates \_\_\_\_\_ Stayed by \_\_\_\_\_ Working pressure of shell by rules \_\_\_\_\_

Working pressure of furnace by rules \_\_\_\_\_ Diameter of uptake \_\_\_\_\_ Thickness of uptake plates \_\_\_\_\_ Thickness of water tubes \_\_\_\_\_

**SPARE GEAR.** State the articles supplied: *Two each top, and bottom end connecting rod bolts, and nuts, two main bearing bolts + 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,

*Charles D. Solman* Manufacturer.

Dates of Survey while building

During progress of work in shops -	1905: July 17, 27 Aug 15, 21, 22, 25, 31. Sep 7, 8, 12, 13, 19, 26, 27 Oct 3, 4, 10, 13, 19, 24, 25.
	During erection on board vessel -
	Nov 1, 2, 13, 14, 17, 22, 24, 28, 30. Dec 1, 2, 5, 7, 8.

Total No. of visits *35* Is the approved plan of main boiler forwarded herewith *Yes*

**General Remarks** (State quality of workmanship, opinions as to class, &c. *The machinery and boiler of this vessel have been constructed under special survey, in accordance with the Rules of the Society. The materials and workmanship are good. The boiler tested by hydraulic pressure, and with the engines placed on board and tested under steam, 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. 12.05* in the Register Book.*

It is submitted that this vessel is eligible for THE BOARD L.M.C. 12.05.

*Paul*  
*12.12.05*

The amount of Entry Fee. £ 1 : : : When applied for, 9/12/05

Special .. .. £ 10 4 : : : 30/12/05

Donkey Boiler Fee .. .. £ : : : When received, 29/12/05

Travelling Expenses (if any) £ : 8 2 : : : 19.05

FRI, 15 DEC 1905

*James Barclay*  
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.  
9.12.05

Committee's Minute

Assigned *+ L.M.C. 12.05*



© 2020

Lloyd's Register Foundation

Certificate (if required) to be sent to Mull

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