

# REPORT ON MACHINERY.

No. 18864

Port of Hull

Received at London Office **TUES. 9 APL 1907**

No. in Survey held at Hull Date, first Survey Nov. 6/06 Last Survey 23<sup>rd</sup> Mar 1907  
 Reg. Book. 88 Supp. on the Steel S. K. Barbadoys (Number of Visits 44) Tons { Gross 183 Net 63  
 Master Hull Built at Hull By whom built Messrs Charles C<sup>o</sup> Ltd When built 1907  
 Engines made at } Hull By whom made } Messrs Charles C<sup>o</sup> Ltd when made 1907  
 Boilers made at } Hull By whom made } Messrs Charles C<sup>o</sup> Ltd when made 1907  
 Registered Horse Power 49 Owners Hull Steam Fishing & Ice Co. Ltd Port belonging to Hull  
 Nom. Horse Power as per Section 28 49 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 10" - 17" - 28" Length of Stroke 24" Revs. per minute 105 Dia. of Screw shaft 7.22" 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 one length 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 34 1/2"  
 Dia. of <sup>plain</sup> shaft as per rule 5.76 Dia. of Crank shaft journals as per rule 6" Dia. of Crank pin 6 1/4" Size of Crank webs 12 3/4" x 3 3/4" Dia. of thrust shaft under  
 collars 6 1/4" Dia. of screw 10" - 0" Pitch of Screw 8" - 0" & 9" - 3" No. of Blades 4 State whether moveable No Total surface 30 sq  
 No. of Feed pumps 1 Diameter of ditto 2 1/2" Stroke 11" Can one be overhauled while the other is at work —  
 No. of Bilge pumps 1 Diameter of ditto 2 1/2" Stroke 11" Can one be overhauled while the other is at work —  
 No. of Donkey Engines Two Sizes of Pumps 6" x 3" x 6" & 5" x 5" x 5" No. and size of Suctions connected to both Bilge and Donkey pumps  
 In Engine Room Two 2" In Holds, &c. One 2" from hold, and one 2" from ballast tank.  
 No. of Bilge Injections 1 sizes 3 1/2" Connected to condenser, or to circulating pump — Is a separate Donkey Suction fitted in Engine room & size Yes 2 1/2"  
 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 Tank 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 1.3.07 of Stern Tube 1.3.07 Screw shaft and Propeller 1.3.07  
 Is the Screw Shaft Tunnel watertight None Is it fitted with a watertight door — worked from —

**BOILERS, &c.**—(Letter for record 5) Manufacturers of Steel Messrs W Beardmore C<sup>o</sup> Glasgow  
 Total Heating Surface of Boilers 820 sq Is Forced Draft fitted No No. and Description of Boilers One Cyl. Multi.  
 Working Pressure 200 lbs Tested by hydraulic pressure to 400 lbs Date of test 22.1.07 No. of Certificate 1541  
 Can each boiler be worked separately — Area of fire grate in each boiler 27.4 sq No. and Description of Safety Valves to  
 each boiler Two Spring Area of each valve 3.14 sq 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 5" Mean dia. of boilers 10" - 9" Length 9" - 3" Material of shell plates Steel  
 Thickness 1" Range of tensile strength 28.32 tons Are the shell plates welded or flanged No Descrip. of riveting: cir. seams L. D.  
 long. seams D. B. S. I. R. Diameter of rivet holes in long. seams 1 1/16" Pitch of rivets 7 3/16" Lap of plates or width of butt straps 16"  
 Per centages of strength of longitudinal joint rivets 91.6 plate 85.21 Working pressure of shell by rules 203 lbs Size of manhole in shell 16" x 12"  
 Size of compensating ring 40" x 30" x 1" No. and Description of Furnaces in each boiler 2 plain Material Steel Outside diameter 3' - 2 1/2"  
 Length of plain part top 5' - 7" bottom — Thickness of plates crown 49" bottom 64" Description of longitudinal joint Welded No. of strengthening rings 0  
 Working pressure of furnace by the rules 212 lbs Combustion chamber plates: Material Steel Thickness: Sides 1 1/16" Back 5/8" Top 5/8" Bottom 1 1/16"  
 Pitch of stays to ditto: Sides 7" x 8 1/4" Back 8 1/4" x 7 1/4" Top 8 1/4" x 7 1/4" If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 223 lbs  
 Material of stays Steel Diameter at smallest part 1 1/2" Area supported by each stay 59.8 sq Working pressure by rules 236 lbs End plates in steam space:  
 Material Steel Thickness 3 1/32" Pitch of stays 14 1/2" x 14 1/4" How are stays secured D. Nuts Working pressure by rules 203 lbs Material of stays Steel  
 Diameter at smallest part 2 9/16" Area supported by each stay 206.6 sq Working pressure by rules 259 lbs Material of Front plates at bottom Steel  
 Thickness 15/16" Material of Lower back plate Steel Thickness 15/16" Greatest pitch of stays 14" x 8 1/4" Working pressure of plate by rules 230 lbs  
 Diameter of tubes 3 1/4" Pitch of tubes 4 1/8" x 4 5/8" Material of tube plates Steel Thickness: Front 15/16" Back 1/8" Mean pitch of stays 9 1/2"  
 Pitch across wide water spaces 13 3/4" Working pressures by rules 202 lbs Girders to Chamber tops: Material Steel Depth and  
 thickness of girder at centre 7 1/2" x 13 1/4" Length as per rule 2' - 6 1/2" Distance apart 7 1/2" Number and pitch of stays in each Two 8 1/4"  
 Working pressure by rules 219 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 —

W734-0155

**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 + nuts, one set coupling bolts, and nuts, one set each feed and bilge pump valves, and a quantity of assorted bolts nuts etc.*

The foregoing is a correct description,

*F. J. Dalrymple* Manufacturer.

Dates of Survey while building { During progress of work in shops - - } SECRETARY 1906: Nov 6, 7, 10, 12, 13, 15, 21, 23, 26, 30 Dec 4, 6, 7, 10, 19, 1907: Jan 1, 4, 7, 9, 11, 15, 21.  
 { During erection on board vessel - - } Jan 22, 24, 29, Feb 5, 8, 12, 15, 18, 20, 26 Mar 1, 2, 6, 8, 11, 12, 14, 15, 16, 20, 21, 23.  
 Total No. of visits 44 Is the approved plan of main boiler forwarded herewith Yes

Dates of Examination of principal parts—Cylinders 29.1.07 Slides 4.12.06 Covers 12.2.07 Pistons 19.12.06 Rods 29.1.07  
 Connecting rods 29.1.07 Crank shaft 19.12.06 Thrust shaft 7.12.06 Tunnel shafts \_\_\_\_\_ Screw shaft 7.12.06 Propeller 1.3.07  
 Stern tube 1.3.07 Steam pipes tested 12.3.07 Engine and boiler seatings 4.3.07 Engines holding down bolts 16.3.07  
 Completion of pumping arrangements 21.3.07 Boilers fixed 16.3.07 Engines tried under steam 21.3.07  
 Main boiler safety valves adjusted 16.3.07 Thickness of adjusting washers  $\frac{11}{32}$   $\frac{11}{32}$   
 Material of Crank shaft *Steel* Identification Mark on Do. 76. G.A.H. Material of Thrust shaft *Steel* Identification Mark on Do. 76. G.A.H.  
 Material of Tunnel shafts \_\_\_\_\_ Identification Marks on Do. \_\_\_\_\_ Material of Screw shafts *Steel* Identification Marks on Do. 76. G.A.H.  
 Material of Steam Pipes *Solid drawn copper* Test pressure 400 lbs per sq inch.

**General Remarks** (State quality of workmanship, opinions as to class, &c. *The engines and boiler of this vessel have been constructed under special survey in accordance with the Rules. The materials and workmanship are sound and 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  $\frac{1}{2}$  L.M.C. 307 in the Register Book*

It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 307.

*9/4/07*

The amount of Entry Fee... £ 1 : : : When applied for.  
 Special ... £ 8 : : : *8/4/07*  
 Donkey Boiler Fee ... £ . : : :  
 Travelling Expenses (if any) £ . : : : When received, *14/5/07*

*J.S.*  
*9.4.07*  
*James Barclay*  
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.  
 26.3.07

Committee's Minute

FRI. APR 12 1907

Assigned

*L.M.C. 307*

MACHINERY CERTIFICATE WRITTEN



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Lloyd's Register Foundation

Certificate (if required) to be sent to \_\_\_\_\_

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