

REPORT ON MACHINERY.

No. 18935

Port of Hull

Received at London Office MUN. MAY 16 1907

No. in Survey held at Hull Date, first Survey Nov. 6/06. Last Survey 30th Apr 1907
 Reg. Book. 57 Supp on the Steel S.S. Co. Grenada (Number of Visits 52) Tons } Gross 183
 Master Hull Built at Hull By whom built Messrs Earles & Co Ltd when built 1907
 Engines made at } Hull By whom made } Messrs Earles & Co Ltd when made } 1907
 Boilers made at } Hull By whom made } Messrs Earles & Co 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 113 Dia. of Screw shaft 7.22" Material of Iron
 as per rule 7.22" as fitted 7.5/8" 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 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 plain shaft as per rule 5.7/16" Dia. of Crank shaft journals as per rule 6.0/8" 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 1/2" 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, one 2" from
tank, and ejector suction from eng. room bilge, hold and 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"
 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 tank 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 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 —

BOILERS, &c.—(Letter for record 8) Manufacturers of Steel Messrs Beardmore & Co
 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 1542
 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 190 lbs Are they fitted with easing gear Yes
 Smallest distance between boilers of uptakes and bunkers or woodwork 6" Mean dia. of boilers 10' - 9" Length 9' - 3" Material of shell plates Steel
 Thickness 1" Range of tensile strength 28. 32 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams L. O.
 long. seams O. A. S. Y. R. Diameter of rivet holes in long. seams 1 1/16" Pitch of rivets 7 1/16" Lap of plates or width of butt straps 16"
 Per centages of strength of longitudinal joint 91. 6 Working pressure of shell by rules 203 lbs Size of manhole in shell 16" x 12"
 plate 85. 21
 Size of compensating ring 40" x 30" x 1" No. and Description of Furnaces in each boiler Two plain Material steel Outside diameter 3' - 2 3/4"
 Length of plain part 5' - 7" Thickness of plates 49 Description of longitudinal joint Welded No. of strengthening rings 0
 bottom 64
 Working pressure of furnace by the rules 212 lbs Combustion chamber plates: Material Steel Thickness: Sides 11/16" Buck 5/8" Top 5/8" Bottom 11/16"
 Pitch of stays to ditto: Sides 7" x 8 1/2" Back 8 1/2" x 7 1/2" Top 8 1/2" x 7 1/2" 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 3/32" Pitch of stays 14 1/2" x 14 1/2" How are stays secured into ends Working pressure by rules 203 lbs Material of stays steel
 Diameter at smallest part 2 1/16" 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 1/2" Working pressure of plate by rules 230 lbs
 Diameter of tubes 3 1/4" Pitch of tubes 4 7/8" x 4 5/8" Material of tube plates Steel Thickness: Front 15/16" Back 7/8" 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 1/2"
 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 —

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

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 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. Palethorpe 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. 22. 24. }
 { During erection on board vessel - - Jan 29. Feb 5. 8. 12. 15. 18. 20. 26. Mar 1. 2. 6. 8. 11. 14. 15. 16. 21. 27. Apr 6. 9. 12. 15. 22. 23. 25. 26. }
 Total No. of visits *Apr 27. 30 = 52.*

Is the approved plan of main boiler forwarded herewith *no it was sent on with the rpt Hull 18864 on Barbados*
 " " " donkey " " "

Dates of Examination of principal parts—Cylinders *21. 3. 07* Slides *7. 12. 06* Covers *4. 12. 06* Pistons *19. 12. 06* Rods *10. 12. 06*
 Connecting rods *10. 12. 06* Crank shaft *14. 3. 07* Thrust shaft *14. 3. 07* Tunnel shafts _____ Screw shaft *14. 3. 07* Propeller *6. 4. 07*
 Stern tube *16. 3. 07* Steam pipes tested *23. 4. 07* Engine and boiler seatings *27. 3. 07* Engines holding down bolts *25. 4. 07*
 Completion of pumping arrangements *25. 4. 07* Boilers fixed *25. 4. 07* Engines tried under steam *25. 4. 07*
 Main boiler safety valves adjusted *25. 4. 07* Thickness of adjusting washers *5/16 port 1/2 starboard.*
 Material of Crank shaft *Steel* Identification Mark on Do. *81 GAH* Material of Thrust shaft *Steel* Identification Mark on Do. *81 GAH*
 Material of Tunnel shafts _____ Identification Marks on Do. _____ Material of Screw shafts *Iron* Identification Marks on Do. *81 GAH*
 Material of Steam Pipes *Solid drawn copper* Test pressure *400 lbs*

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 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. 407* in the Register Book.*

The above machinery is similar to that fitted on the *Barbados Hull Rpt 18864.*

It is submitted that this vessel is eligible for THE RECORD. **L.M.C. 407** *7/5/07*

The amount of Entry Fee.	£ 1	When applied for, <i>4/5/07</i>
Special	£ 8	<i>3/7/07</i>
Donkey Boiler Fee	£	When received, <i>8/7/07</i>
Travelling Expenses (if any) £	<i>19</i>

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

Committee's Minute **TUES. 7 MAY 1907**
 Assigned *L.M.C. 407*

MACHINERY CERTIFICATE WRITTEN.



Certificate (if required) to be sent to Hull