

REPORT ON MACHINERY.

No. 20, 656

Port of Hull

Received at London **10 NOV 1908**

No. in Survey held at Hull Date, first Survey June 3rd Last Survey 7th Nov 1908
 Reg. Book. 14 on the Steel S.S. Kilnsea (Number of Visits 39) Tons { Gross 3269 Net 2050
 Master Hull Built at Hull By whom built Messrs Charles C^o Ltd When built 1908
 Engines made at } By whom made } Messrs Charles C^o Ltd when made 1908
 Boilers made at } Hull By whom made } Charles C^o Ltd when made 1908
 Registered Horse Power 307 Owners W^{ms} Brown, Atkinson & C^o Ltd Port belonging to Hull
 Nom. Horse Power as per Section 28 307 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 24" - 39" - 66" Length of Stroke 45" Revs. per minute 65 Dia. of Screw shaft 13.5" Material of Steel
 as fitted 14" 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 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 Yes If two
 liners are fitted, is the shaft lapped or protected between the liners Yes Length of stern bush 61 1/2"
 Dia. of Tunnel shaft 12.07" as per rule 12.67" Dia. of Crank shaft journals 12.67" as per rule 13" Dia. of Crank pin 13" Size of Crank webs 19 1/2" x 8 1/2" Dia. of thrust shaft under
 collars 13" Dia. of screw 16" - 6" Pitch of Screw 16" - 8 5/8" No. of Blades 4 State whether moveable No Total surface 88 sq
 No. of Feed pumps 2 Diameter of ditto 3 1/2" Stroke 24" Can one be overhauled while the other is at work Yes
 No. of Bilge pumps 2 Diameter of ditto 4 1/2" Stroke 24" Can one be overhauled while the other is at work Yes
 No. of Donkey Engines 3 Sizes of Pumps one 7" x 4 1/2" x 10" No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room Four 3 1/2" In Holds, &c. One 2 1/2" to F.P. Two each 3 1/2" to each of 1.2 & 4 holds
Four 3 1/2" to 1.4 tank, one 3" tunnel well, One ea. 3 1/2" to 1.5 tanks, two 3" one 3 1/2" to 1.2 tank, Two 3 1/2" to 6.8 tank, Three 3 1/2" to
to 1.4 tank, one 2 1/2" 6" off tank.
 No. of Bilge Injections 1 sizes 6" Connected to condenser, or to circulating pump Yes Is a separate Donkey Suction fitted in Engine room & size Yes 3 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 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 13.10.08 of Stern Tube 13.10.08 Screw shaft and Propeller 13.10.08
 Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from top platform

BOILERS, &c.—(Letter for record 5) Manufacturers of Steel Phoenix A.M. Ges. A.M. Hoeberl Vienna
 Total Heating Surface of Boilers 4590 sq Is Forced Draft fitted No No. and Description of Boilers 3 Multi Single Ended
 Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 13.10.08 No. of Certificate 1680
 Can each boiler be worked separately Yes Area of fire grate in each boilers 125 1/4 sq No. and Description of Safety Valves to
 each boiler Two Spring Area of each valve 4.91 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 38" Mean dia. of boilers 13" - 6" Length 10' - 9" Material of shell plates Steel
 Thickness 1 3/32" Range of tensile strength 28 - 32 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams L. D.
 long. seams D. S. J. R. Diameter of rivet holes in long. seams 1 1/8" Pitch of rivets 7 1/8" Lap of plates or width of butt straps 16 3/4"
 Per centages of strength of longitudinal joint 85.8 Working pressure of shell by rules 180 lbs Size of manhole in shell 16" x 12"
 Size of compensating ring 31" x 28" x 1 3/32" No. and Description of Furnaces in each boiler Two Dightons Material Steel Outside diameter 4' - 2 1/4"
 Length of plain part 5" Thickness of plates 5" Description of longitudinal joint Welded No. of strengthening rings 0
 Working pressure of furnace by the rules 200 lbs Combustion chamber plates: Material Steel Thickness: Sides 7/16" Back 7/16" Top 7/16" Bottom 7/16"
 Pitch of stays to ditto: Sides 9" x 8" Back 9 1/2" x 8" Top 9" x 8" If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 211 lbs
 Material of stays Steel Diameter at smallest part 1 1/2" Area supported by each stay 76 sq Working pressure by rules 186 lbs End plates in steam space:
 Material Steel Thickness 1 5/32" Pitch of stays 18" x 14 1/8" How are stays secured D. No. Working pressure by rules 191 lbs Material of stays Steel
 Diameter at smallest part 2 3/16" Area supported by each stay 312.75 sq Working pressure by rules 206 lbs Material of Front plates at bottom Steel
 Thickness 3 1/32" Material of Lower back plate Steel Thickness 1 5/16" Greatest pitch of stays 14 1/2" x 8" Working pressure of plate by rules 221 lbs
 Diameter of tubes 3 1/2" Pitch of tubes 5 1/2" x 4 3/4" Material of tube plates Steel Thickness: Front 3 1/32" Back 13/16" Mean pitch of stays 9 1/8"
 Pitch across wide water spaces 14 1/2" Working pressures by rules 194 lbs Girders to Chamber tops: Material Steel Depth and
 thickness of girder at centre 9 1/2" x 13 1/4" Length as per rule 36" Distance apart 9" Number and pitch of stays in each 3 - 8"
 Working pressure by rules 185 lbs Superheater or Steam chest; how connected to boiler Can the superheater be shut off and the boiler worked
 separately Yes Diameter 14 1/2" Length 36" Thickness of shell plates 1 1/2" Material Steel Description of longitudinal joint Welded Diam. of rivet
 holes 1 1/8" Pitch of rivets 7 1/8" Working pressure of shell by rules 180 lbs Diameter of flue 13" Material of flue plates Steel Thickness 1 1/2"
 If stiffened with rings Yes Distance between rings 36" Working pressure by rules 180 lbs End plates: Thickness 1 1/2" How stayed Welded
 Working pressure of end plates 180 lbs Area of safety valves to superheater 180 lbs Are they fitted with easing gear Yes

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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 feed bilge pump valves, and a quantity of assorted iron bolts, nuts etc.*

The foregoing is a correct description,
F. J. Paltorpe Manufacturer.

Dates of Survey while building { During progress of work in shops - - } **SECRETARY!** 1908:— Jun 3. 25. Jul 4. 9. 20. 25. 30. 31. Aug 21. 31. Sep 1. 2. 9. 10. 11. 16.
 { During erection on board vessel - - } Sep 17. 22. 23. 24. 25. 29. Oct 2. 6. 7. 9. 10. 12. 13. 15. 16. 19. 20. 21. 22. 23. 26. Nov 3. 7.
 Total No. of visits *39* Is the approved plan of main boiler forwarded herewith *Yes* ✓

Dates of Examination of principal parts—Cylinders *2.9.08* Slides *16.9.08* Covers *9.9.08* Pistons *2.9.08* Rods *2.9.08*
 Connecting rods *2.9.08* Crank shaft *2.9.08* Thrust shaft *13.8.08* Tunnel shafts *7.11.17.19.27* Screw shaft *7.10.08* Propeller *7.10.08*
 Stern tube *31.8.08* Steam pipes tested *21.10.08* Engine and boiler seatings *15.10.08* Engines holding down bolts *23.10.08*
 Completion of pumping arrangements *7.11.08* Boilers fixed *23.10.08* Engines tried under steam *23.10.08*
 Main boiler safety valves adjusted *23.10.08* Thickness of adjusting washers P *5* S *16 1/4* P.A. *8. B. C. B* *5. 16 5/16 3 1/2*

Material of Crank shaft *Steel* Identification Mark on Do. *2112 ATG* Material of Thrust shaft *Steel* Identification Mark on Do. *2726 PA*
 Material of Tunnel shafts *3933, 34. HK* Identification Marks on Do. *Steel* Material of Screw shafts *Steel* Identification Marks on Do. *2721 PA*
 Material of Steam Pipes *Solid drawn copper* Test pressure *360 lbs per sq inch*

General Remarks (State quality of workmanship, opinions as to class, &c. *The engines and boilers of this vessel have been constructed under special survey in accordance with the Rules, the materials and workmanship are good, the boilers tested by hydraulic pressure, found satisfactory and with the engines fastened 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 record of *L.M.C. 11.08* in the Register Book.*

It is submitted that this vessel is eligible for THE RECORD + L.M.C. 11.08.

J.P.S.C. J.W.D.
10/11/08 10/11/08

The amount of Entry Fee. . . £ 3 : . . . When applied for. . .
 Special . . . £ 35 . . . 4 } *2/11/19.08*
 Donkey Boiler Fee . . . £ } *NR*
 Travelling Expenses (if any) £ } *3/11/19.08*

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

Committee's Minute **FRI. 13 NOV 1908**
 Assigned *+ L.M.C. 11.08*

Certificate (if required) to be sent to Hull

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

MACHINERY CERTIFICATE WRITTEN

