

REPORT ON MACHINERY.

No. 19962

Port of Hull

Received at London Office WED. 15 APR 1908

No. in Survey held at Hull Date, first Survey Aug 23rd 07 Last Survey 1st Apr 1908
 Reg. Book. 38 on the Steel S. S. Bienvaux Abbey (Number of Visits 60)
 Master Hull Built at Hull By whom built Messrs Earles & Co Ltd Tons { Gross 1162
 Engines made at } Hull By whom made } Messrs Earles & Co Ltd when made } 1908
 Boilers made at } Hull By whom made } Messrs Earles & Co Ltd when made } 1908
 Registered Horse Power 499 Owners Hull & Netherlands S. S. Co. Ltd. Port belonging to Hull
 Nom. Horse Power as per Section 28 499 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Triple Expansion No. of Cylinders 3 No. of Cranks 3
 Dia. of Cylinders 25 1/4 - 40 1/2 - 64 Length of Stroke 42 Revs. per minute 106 Dia. of Screw shaft 13 1/2 as per rule 13 1/2 Material of Steel
 Is the screw shaft fitted with a continuous liner the whole length of the stern tube No 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 No liners 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 No liners Length of stern bush 60 1/4
 Dia. of Tunnel shaft 12 1/2 as per rule 12 1/2 Dia. of Crank shaft journals 12 1/2 as per rule 12 1/2 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 13 1/2 Pitch of Screw 16 1/2 No. of Blades 4 State whether moveable No Total surface 68 ϕ
 No. of Feed pumps 2 Diameter of ditto 5 1/4 Stroke 14 Can one be overhauled while the other is at work Yes
 No. of Bilge pumps 2 Diameter of ditto 4 Stroke 24 Can one be overhauled while the other is at work Yes
 No. of Donkey Engines 3 Sizes of Pumps 10 1/2 Gals. 10 x 6 x 10 No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room Two 2 1/2, One 2 1/4, Special Bilge 4 In Holds, &c. Aft hold port 2, star 2, Tunnel well 2 1/2
No. 1 tank, port 2 1/2, star 2 1/2, No. 2 tank, One 2 1/2, A. P. tank one 2 1/2, Main hold port 2, star 2, Fore hold one 2 1/4
 No. of Bilge Injections 1 sizes 7 Connected to condenser, or to circulating pump pump Is a separate Donkey Suction fitted in Engine room & size Yes
 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
 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 5.2.08 of Stern Tube 5.2.08 Screw shaft and Propeller 5.2.08
 Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from deck

BOILERS, &c.—(Letter for record 5) Manufacturers of Steel The Steel Company of Scotland.
 Total Heating Surface of Boilers 8100 ϕ Is Forced Draft fitted Yes No. and Description of Boilers 3 Cyl. Multi
 Working Pressure 185 lbs Tested by hydraulic pressure to 370 lbs Date of test 24.12.07 No. of Certificate 1621
 Can each boiler be worked separately Yes Area of fire grate in each boiler 60 1/2 ϕ No. and Description of Safety Valves to
 each boiler Two Spring Area of each valve 8.290 Pressure to which they are adjusted 189 lbs Are they fitted with easing gear Yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 18 ϕ Mean dia. of boilers 15' 0" Length 12' 0" Material of shell plates Steel
 Thickness 1 1/2 Range of tensile strength 29 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams L. O.
 long. seams O. B. S. J. R. Diameter of rivet holes in long. seams 1 1/2 Pitch of rivets 9 1/2 Lap of plates or width of butt straps 2 1/4
 Per centages of strength of longitudinal joint 90.6 Working pressure of shell by rules 215 lbs Size of manhole in shell 16 x 12
 Size of compensating ring 40 x 30 x 1 1/2 No. and Description of Furnaces in each boiler 3 Imp. Furnaces Material Steel Outside diameter 45 1/4
 Length of plain part top Thickness of plates crown 5 Description of longitudinal joint Welded No. of strengthening rings
 Working pressure of furnace by the rules 205 lbs Combustion chamber plates: Material Steel Thickness: Sides 5 Back 5 Top 5 Bottom 5
 Pitch of stays to ditto: Sides 8 x 8 Back 8 x 8 Top 8 x 7 1/2 If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 210 lbs
 Material of stays Steel Diameter at smallest part 1 3/8 Area supported by each stay 64 Working pressure by rules 185 lbs End plates in steam space:
 Material Steel Thickness 1 1/2 Pitch of stays 20 x 14 1/4 How are stays secured able. Nuts Working pressure by rules 186 lbs Material of stays Steel
 Diameter at smallest part 2 1/2 Area supported by each stay 335 Working pressure by rules 192 lbs Material of Front plates at bottom Steel
 Thickness 3/2 Material of Lower back plate Steel Thickness 3/2 Greatest pitch of stays 14 x 8 Working pressure of plate by rules 189 lbs
 Diameter of tubes 2 1/2 Pitch of tubes 3 3/4 x 3 3/4 Material of tube plates Steel Thickness: Front 3/2 Back 7/8 Mean pitch of stays 7 1/2
 Pitch across wide water spaces 12 1/2 Working pressures by rules 186 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 1/2 Distance apart 7 3/8 Number and pitch of stays in each 3 - 8
 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

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 and bilge pump valves, & a quantity of assorted bolts nuts etc. ✓

The foregoing is a correct description,

J. J. Falathorpe Manufacturer.

Dates	During progress of work in shops—	1907:— Aug 23. 30. Sep 4. 9. 12. 19. 24. Oct 10. 18. 23. Nov 1. 8. 14. 18. 21. 26. 27. Dec 2. 4. 7. 8. 13. 16. 17. 20. 21. 23.
of Survey while building	During erection on board vessel—	Dec 24. 30. 1908:— Jan 2. 3. 6. 7. 8. 9. 10. 14. 15. 17. 18. 20. 21. 22. 23. 24. 25. 31. Feb 5. 11. 17. 24. 26. 27. 28. Mar 18. Apr 1. 6.
	Total No. of visits	60

Is the approved plan of main boilers forwarded herewith *Yes*

Dates of Examination of principal parts—	Cylinders 13.12.07	Slides 30.12.07	Covers 30.12.07	Pistons 13.12.07	Rods 16.12.07
Connecting rods 7.12.07	Crank shaft 4.12.07	Thrust shaft 14.1.07	Tunnel shafts 14.1.07	Screw shaft 11.12.07	Propeller 11.12.07
Stern tube 13.12.07	Steam pipes tested 21.10.07	Engine and boiler seatings 2.1.08	Engines holding down bolts 23.1.08		
Completion of pumping arrangements 7.4.08	Boilers fixed 23.1.08	Engines tried under steam 7.4.08			
Main boiler safety valves adjusted 8.4.08	Thickness of adjusting washers $3\frac{1}{2} \times \frac{3}{8}$	Port $3\frac{1}{2} \times \frac{3}{8}$	Star $3\frac{1}{2} \times \frac{3}{8}$		
Material of Crank shaft <i>Steel</i>	Identification Mark on Do. 1659a.F.C.	Material of Thrust shaft <i>Steel</i>	Identification Mark on Do. 1659a.F.C.		
Material of Tunnel shafts <i>Steel</i>	Identification Marks on Do. 1659a.F.C.	Material of Screw shafts <i>Steel</i>	Identification Marks on Do. 1659a.F.C.		
Material of Steam Pipes <i>Steel</i>		Test pressure 600 lbs			

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, and with the engines fitted and secured 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. 4.08* in the Register Book.

It is submitted that
this vessel is eligible for
THE RECORD. **L.M.C. 4.08.*
ELEC LIGHT
F. II.

The amount of Entry Fee..	£ 3 : -	When applied for, 6/4/1908
Special	£ 44 : 19	
Donkey Boiler Fee	£ - : -	When received, 13/4/1908
Travelling Expenses (if any) £	- : -	

Committee's Minute THUR. 16 APL 1908
Assigned *James Barclay*

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



These	Signal Letter
Official	
124	
No., Date, and	
Whether British or Foreign Built	
British	
Number of Decks	
Number of Masts	
Rigged	
Stern	
Build	
Galleries	
Head	
Framework and vessel	
Number of Buoy	
Number of water and their capacity	
Total to quarter at side amidships	
No. of Engines	
One	Recy triple direct cycle
No. of shafts	One
One	Iron or Pressure
Under Tonnage	
Closed-in spaces	
Space or space	
Peep	
Forecastle	
Round House	
Other closed-in	
Spaces for machinery Section 78 (2) 1894, if required	
Gross Tonnage	
Deductions, as per Register	
Name of	
No. of Owners	
Name, Residence	
The Hull	
Dated	
Noted by	
W B & L (830)—408	