

## REPORT ON MACHINERY.

No. 21224

Received at London Office FRI. 28 MAY 1909

Date of writing Report 25.5.1009 When handed in at Local Office 25/5/1009 Port of Hull  
 No. in Survey held at Hull Date, First Survey Feb. 3<sup>rd</sup> Last Survey 21<sup>st</sup> May 1909  
 Reg. Book. 658 Supp. on the Steel Twin Sc. 'La Loire' (Number of Visits 32)  
 Master Built at Hull By whom built Messrs Earle's & Co. Ltd Tons Gross 604 Net 272  
 Engines made at Hull By whom made Messrs Earle's & Co. Ltd when made 1909  
 Boilers made at Hull By whom made Messrs Earle's & Co. Ltd when made 1909  
 Registered Horse Power Owners Tilbury Contracting & Dredging Co. Port belonging to London  
 Nom. Horse Power as per Section 28 149 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted No

ENGINES, &c.—Description of Engines Triple Expansion No. of Cylinders 6 No. of Cranks 6  
 Dia. of Cylinders Two each 18" 20 1/2" Length of Stroke 18" Revs. per minute 170 Dia. of Screw shafts as per rule 6.72" Material of screw shafts Steel  
 Is the screw shaft fitted with a continuous liner the whole length of the stern tube No Is the after end of the shaft made water tight  
 in the propeller boss Yes If the liner is in more than one length are the joints burned No lines 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 bushes 29"  
 Dia. of Tunnel shafts as per rule 5.88" Dia. of Crank shaft journals as per rule 6.17" Dia. of Crank pin 6 3/4" Size of Crank webs 13 1/4" x 4 1/2" Dia. of thrust shaft under  
 collars 6 3/4" Dia. of screws 7'-6" Pitch of Screws 6'-6" No. of Blades 4 State whether moveable No Total surface 46 sq ft - 23 sq ft on each  
 No. of Feed pumps each Diameter of ditto 2 3/4" Stroke 9" Can one be overhauled while the other is at work Yes  
 No. of Bilge pumps one on each Diameter of ditto 2 3/4" Stroke 9" Can one be overhauled while the other is at work Yes  
 No. of Donkey Engines 3 Sizes of Pumps one 6" x 4" x 6" + one 6" x 6" x 6" No. and size of Suctions connected to both Bilge and Donkey pumps  
 In Engine Room Three 2 1/2", Two 2", In Holds, &c. One 2 1/2" to fore hold Star one ditto to port.  
 One each 2", to each aft peak, port star fore peak and store room  
 No. of Bilge Injections 2 sizes 3 1/2" Connected to condenser, or to circulating pump pumps 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 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 None How are they protected  
 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 1.5.09 of Stern Tube 1.5.09 Screw shaft and Propeller 1.5.09  
 Is the Screw Shaft Tunnel watertight None Is it fitted with a watertight door worked from

BOILERS, &c.—(Letter for record S V Manufacturers of Steel Phoenix & Co. Ltd. Ges. A. H. Vereen  
 Total Heating Surface of Boilers 3850 sq ft Is Forced Draft fitted No No. and Description of Boilers Two Cyl. Mult. Single Ended  
 Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 24.4.09 No. of Certificate 1700  
 Can each boiler be worked separately Yes Area of fire grate in each boiler 56 sq ft No. and Description of Safety Valves to  
 each boiler Two Spring Area of each valve 7.06 sq ft 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 14" Mean dia. of boilers 14'-6" Length 10'-3" Material of shell plates Steel  
 Thickness 1 3/8" Range of tensile strength 28-32 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams L. D.  
 long. seams D. B. S. J. R. Diameter of rivet holes in long. seams 1 3/8" Pitch of rivets 7 1/8" Lap of plates or width of butt straps 17 1/2"  
 Per centages of strength of longitudinal joint rivets 94.3 plate 84.9 Working pressure of shell by rules 182 lbs Size of manhole in shell 16" x 12"  
 Size of compensating ring 32 3/4" x 28 3/4" x 1 1/4" No. and Description of Furnaces in each boiler 3 Deighton's Material Steel Outside diameter 3'-9 1/4"  
 Length of plain part top Thickness of plates crown 9/16" Description of longitudinal joint Welded No. of strengthening rings 0  
 bottom Thickness of plates bottom 9/16" Working pressure of furnace by the rules 194 lbs Combustion chamber plates: Material Steel Thickness: Sides 1/8" Back 3/32" Top 5/8" Bottom 1/8"  
 Pitch of stays to ditto: Sides 9 1/4" x 8" Back 8" x 9" Top 8" x 8" If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 205 lbs  
 Material of stays Steel Diameter at smallest part 1 3/8" Area supported by each stay 64 sq ft Working pressure by rules 185 lbs End plates in steam space:  
 Material Steel Thickness 1 3/32" Pitch of stays 15" x 19" How are stays secured D. B. Working pressure by rules 182 lbs Material of stays Steel  
 Diameter at smallest part 2 9/16" Area supported by each stay 285 sq ft Working pressure by rules 188 lbs Material of Front plates at bottom Steel  
 Thickness 1 1/8" Material of Lower back plate Steel Thickness 3/8" Greatest pitch of stays 14 1/2" x 8" Working pressure of plate by rules 193 lbs  
 Diameter of tubes 3 1/2" Pitch of tubes 4 3/4" x 4 3/4" Material of tube plates Steel Thickness: Front 15/16" Back 7/8" Mean pitch of stays 9 1/2"  
 Pitch across wide water spaces 14 1/2" Working pressures by rules 181 lbs Girders to Chamber tops: Material Steel Depth and  
 thickness of girder at centre 7 3/4" x 1 3/4" Length as per rule 2'-7 1/2" Distance apart 8" Number and pitch of stays in each Three 8"  
 Working pressure by rules 189 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

W1443-0201



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:—Eight coupling bolts, and nuts, 4 top end corner rod bolts, 4 bottom end connecting rod bolts, 6 main bearing bolts, 2 Stern bushes, 2 check valves, 2 safety valve springs, Two sets each, air circulating, feed bilge pump valves, a quantity of assorted bolts nuts etc

The foregoing is a correct description,

*F. J. Gale Thorpe* Manufacturer.

Dates of Survey while building	During progress of work in shops - -	1909: - Feb 3. 9. 10. 13. 15. 24. Mar 3. 5. 12. 19. 27. 31. Apr 5. 14. 21. 22. 23. 24. 27. 2
	During erection on board vessel - -	May 1. 3. 5. 6. 7. 10. 11. 13. 15. 17. 18. 21.
	Total No. of visits	32.

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

Dates of Examination of principal parts—Cylinders	19. 3. 09	Slides	19. 3. 09	Covers	27. 4. 09	Pistons	19. 3. 09	Rods	15. 2. 09
Connecting rods	15. 2. 09	Crank shaft	27. 3. 09	Thrust shaft	1. 5. 09	Tunnel shafts	1. 5. 09	Screw shafts	1. 5. 09
Propellers	1. 5. 09	Stern tubes	1. 5. 09	Steam pipes tested	11. 5. 09	Engine and boiler seatings	1. 5. 09	Engines holding down bolts	13. 5. 09
Completion of pumping arrangements	18. 5. 09	Boilers fixed	12. 5. 09	Engines tried under steam	18. 5. 09	Thickness of adjusting washers	5 1/16	5 1/32	9 1/32
Main boiler safety valves adjusted	18. 5. 09	Material of Crank shafts	Steel	Identification Mark on Do.	164 G.A.H	Material of Thrust shafts	Steel	Identification Mark on Do.	6489 W.C.
Material of Tunnel shafts	Steel	Identification Marks on Do.	6489 W.C.	Material of Screw shafts	Steel	Identification Marks on Do.	6489 W.C.		
Material of Steam Pipes	Solid drawn Copper.	Test pressure	400 lbs						

General Remarks (State quality of workmanship, opinions as to class, &c. The engines boilers of this vessel have been constructed under special survey in accordance with the Societys Rules, the approved plan and Secretarys letter of the 9<sup>th</sup> Decr 1908. The material and workmanship are good, the boiler tested by hydraulic pressure and found satisfactory, the engine and boilers secured 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 have the notation of *⚓ L.M.C 5.09* in the Register Book.

It is submitted that this vessel is eligible for THE REGORIA. + L.M.C. 5.09

*J.B. Barclay* 28/5/09

The amount of Entry Fee	£ 2	When applied for,	25/5/09
Special	£ 26	When received,	4. 6. 09
Donkey Boiler Fee	£ -		
Travelling Expenses (if any)	£ -		

Committee's Minute

Assigned

10th. 31 AUG 1900

+ L.M.C 5.09

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

Lloyd's Register Foundation