

## REPORT ON MACHINERY.

No. 25884

Date of writing Report 19 When handed in at Local Office 7.12.12 Port of Hull  
No. in Survey held at Hull Date, First Survey Sep 3<sup>rd</sup> Last Survey Nov 28<sup>th</sup> 1912  
Reg. Book. 57 Suffer on the Ship S. K. "EGIR". (Number of Visits 22)  
Master Built at Selby By whom built Cochran & Sons. Tons Gross 244 Net 95  
Engines made at By whom made when made 1912.  
Boilers made at Hull By whom made Messrs. Charles R. Holmes & Co. Ltd. when made 1912.  
Registered Horse Power Owners R. J. Watley & Sons Ltd. Port belonging to Hull.  
Nom. Horse Power as per Section 28 48. Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted No.

## ENGINES, &amp;c.—Description of Engines

Compound

No. of Cylinders 2

No. of Cranks 2

Dia. of Cylinders 15" 30" Length of Stroke 21" Revs. per minute 130 Dia. of Screw shaft as per rule 6.91" Material of screw shaft Iron  
as fitted 6.5" Is the screw shaft fitted with a continuous liner the whole length of the stern tube No liners. 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 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 No If two liners are fitted, is the shaft lapped or protected between the liners No Length of stern bush 2'-4"

Dia. of Tunnel shaft as per rule 6.048" Dia. of Crank shaft journals as per rule 6.38" Dia. of Crank pin 6.3" Size of Crank webs 4.3" x 12.5" Dia. of thrust shaft under collars 6.5" Dia. of screw 4'-8" Pitch of Screw 8'-6" No. of Blades 4 State whether moveable No Total surface 25.5 sq ft  
No. of Feed pumps 1 Diameter of ditto 2.5" Stroke 11" Can one be overhauled while the other is at work Yes  
No. of Bilge pumps 1 Diameter of ditto 2.5" Stroke 11" Can one be overhauled while the other is at work Yes  
No. of Donkey Engines 1 Sizes of Pumps 5" x 2.5" x 5" No. and size of Suctions connected to both Bilge and Donkey pumps  
In Engine Room One 2" suction. In Holds, &c. Two 2" in main hold on port & one starboard. One 2.5" from ballast tank.

No. of Bilge Injections 1 sizes 3" Connected to condenser, or to circulating pump 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 No

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 27.9.12 of Stern Tube 27.9.12 Screw shaft and Propeller 27.9.12

Is the Screw Shaft Tunnel watertight Is it fitted with a watertight door worked from

## BOILERS, &amp;c.—(Letter for record S.) Manufacturers of Steel Cydonia Iron &amp; Steel Works, Trinidad.

Total Heating Surface of Boilers 900 sq ft Is Forced Draft fitted No No. and Description of Boilers One up. mult. compl. ind. d.

Working Pressure 130 lbs. Tested by hydraulic pressure to 260 lbs. Date of test 4.11.12 No. of Certificate 1939

Can each boiler be worked separately Area of fire grate in each boiler 32.5 sq ft No. and Description of Safety Valves to each boiler Two spring

Area of each valve 3.940 Pressure to which they are adjusted 135 lbs. Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork 5" EX. Mean dia. of boilers 11'-6" Length 9'-6" Material of shell plates S

Thickness 3/4" Range of tensile strength 28 tons Are the shell plates welded or flanged No Descrip. of riveting: cir. seams R.P.S.

long. seams R.P.S. Diameter of rivet holes in long. seams 3/4" Pitch of rivets 5 1/16" Lap of plates or width of butt straps 11 1/2"

Per centages of strength of longitudinal joint rivets 86 plate 85 Working pressure of shell by rules 135 lbs. Size of manhole in shell 16" x 12"

Size of compensating ring 4" x 3/4" No. and Description of Furnaces in each boiler Two plain Material S Outside diameter 3'-4"

Length of plain part top 6'-0 1/2" bottom 4" Thickness of plates crown 19" bottom 32 Description of longitudinal joint Weld No. of strengthening rings 0

Working pressure of furnace by the rules 132 lbs. Combustion chamber plates: Material S Thickness: Sides 32 Back 32 Top 32 Bottom 32

Pitch of stays to ditto: Sides 10" x 9" Back 9 1/2" x 9" Top 10" x 9" If stays are fitted with nuts or riveted heads No Working pressure by rules 135 lbs.

Material of stays S Diameter at smallest part 1 7/16" Area supported by each stay 1180 Working pressure by rules 130 lbs. End plates in steam space:

Material S Thickness 13" Pitch of stays 15" x 15" How are stays secured R.P.S. Working pressure by rules 139 lbs. Material of stays S

Diameter at smallest part 3 1/32" Area supported by each stay 2250 Working pressure by rules 140 lbs. Material of Front plates at bottom S

Thickness 25" Material of Lower back plate S Thickness 3/4" Greatest pitch of stays 14 1/2" x 9" Working pressure of plate by rules 133 lbs.

Diameter of tubes 3 1/2" Pitch of tubes 5" x 4 3/4" Material of tube plates S Thickness: Front 32 Back 34 Mean pitch of stays 9 3/4"

Pitch across wide water spaces 15" x 14 1/2" Working pressures by rules 180 lbs. Girders to Chamber tops: Material S Depth and

thickness of girder at centre 4" - 1 1/2" Length as per rule 2'-5 1/2" Distance apart 10" Number and pitch of stays in each 2-9"

Working pressure by rules 134 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		When made	Where made
Made at	By whom made		No. of Certificate	Fire grate area
Working pressure	tested by hydraulic pressure to	Date of test	No. of Certificate	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
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	Radius of do.	Stayed by	
Diameter of uptake	Thickness of uptake plates	Thickness of water tubes	Dates of survey	

SPARE GEAR. State the articles supplied:— *Four each top & bottom and intermediate rod bolts & nuts, two main bearing bolts & nuts, one set of coupling bolts & nuts, one set each side & bilge pump valves, iron of various sizes, a quantity of assorted bolts, nuts etc.*

The foregoing is a correct description,

*Arthur Palmer* Manufacturer.

Dates of Survey while building { During progress of work in shops -- } 1912:— Sep. 3. 19. 23. 25. 27. Oct. 3. 8. 10. 16. 18. 23. 29. Nov. 4. 7. 8. 15. 19. 21. 22. 25. 27. 28  
 { During erection on board vessel --- }  
 Total No. of visits 22

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

Dates of Examination of principal parts—Cylinders 10.10.12 Slides 8.11.12 Covers 8.11.12 Pistons 29.10.12 Rods 29.10.12  
 Connecting rods 4.11.12 Crank shaft 16.10.12 Thrust shaft 4.11.12 Tunnel shafts ✓ Screw shaft 25.9.12 Propeller 25.9.12  
 Stern tube 25.9.12 Steam pipes tested 22.11.12 Engine and boiler seatings 24.9.12 Engines holding down bolts 15.11.12  
 Completion of pumping arrangements 24.11.12 Boilers fixed 25.11.12 Engines tried under steam 25.11.12  
 Main boiler safety valves adjusted 25.11.12 Thickness of adjusting washers *PORT 3/8" STARBOARD 1/2"*  
 Material of Crank shaft *2* Identification Mark on Do. *Nº 915 T.G.D.* Material of Thrust shaft *2* Identification Mark on Do. *Nº 915 T.G.D.*  
 Material of Tunnel shafts ✓ Identification Marks on Do. ✓ Material of Screw shafts *2* Identification Marks on Do. *Nº 915 T.G.D.*  
 Material of Steam Pipes *Solid drawn copper* ✓ Test pressure *260 lbs. per sq. inch hydraulic*

General Remarks (State quality of workmanship, opinions as to class, &c.) *The engines & boiler of this vessel have been constructed under special survey in accordance with the Rules. The materials & workmanship are sound & good. The boiler tested by hydraulic pressure, & with the engines secured on board & tested under steam they are now in good order & safe working condition & respectfully submitted as being eligible in my opinion to be classed with the notation of + L.M.C. 11.12 in the Register Book.*

It is submitted that this vessel is eligible for THE RECORD + L.M.C. 11.12.

The amount of Entry Fee .. £ 1 : 0 :  
 Special .. £ 8 : 0 :  
 Donkey Boiler Fee .. £ 8 : 2 :  
 Travelling Expenses (if any) £

When applied for, 24.11.12  
 When received, 29.11.12

Committee's Minute TUE. DEC. 10. 1912

Assigned

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



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