

# REPORT ON MACHINERY.

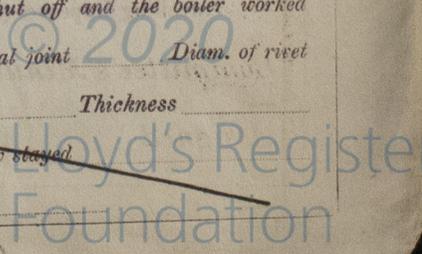
No. 26027  
FRI. APR. 4 - 1913

Received at London Office

Date of writing Report 19 When handed in at Local Office 24/1 1913 Port of Hull  
 No. in Survey held at Hull. Date, First Survey Nov 13<sup>th</sup> Last Survey Mar 25 1913.  
 Reg. Book. 6 Years on the Ship S.S.K. "TRIBUNE" (Number of Visits 21)  
 Master Built at Sully By whom built Gwynne & Sons Ltd. Tons { Gross 293.  
 Net 135  
 When built 1913.  
 Engines made at } By whom made } when made 1913.  
 Boilers made at } Hull. By whom made } Messrs Charles R. Holmes & Co. Ltd. when made 1913.  
 Registered Horse Power Owners G. H. Union, Ship, Ltd. Port belonging to G. H. Union.  
 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 12<sup>3</sup>/<sub>4</sub>" - 22" - 36" Length of Stroke 24" Revs. per minute Dia. of Screw shaft as per rule 7.44" Material of screw shaft Iron  
 as fitted 4<sup>3</sup>/<sub>4</sub>" 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 Yes 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 36"  
 Dia. of Tunnel shaft as per rule 6.73" Dia. of Crank shaft journals as per rule 7.068" Dia. of Crank pin 4<sup>3</sup>/<sub>4</sub>" Size of Crank webs 4<sup>3</sup>/<sub>4</sub>" x 14" Dia. of thrust shaft under  
 collars 4<sup>3</sup>/<sub>4</sub>" Dia. of screw 9'-0" Pitch of Screw 11'-0" No. of Blades 4 State whether moveable No Total surface 29 ft<sup>2</sup>  
 No. of Feed pumps 1 Diameter of ditto 2<sup>3</sup>/<sub>4</sub>" Stroke 24" Can one be overhauled while the other is at work Yes  
 No. of Bilge pumps 1 Diameter of ditto 2<sup>3</sup>/<sub>4</sub>" Stroke 24" Can one be overhauled while the other is at work Yes  
 No. of Donkey Engines 1 Sizes of Pumps 5" x 2<sup>3</sup>/<sub>4</sub>" x 5" No. and size of Suctions connected to both Bilge and Donkey pumps  
 In Engine Room Two 2" one forward & one aft. In Holds, &c. One 2" aft stow well, one 2" fore stow well,  
 one 2" fore hold, one 2" fore hold Ejector suction from all bilges with discharge on deck.  
 No. of Bilge Injections 1 sizes 3" Connected to condenser, or to circulating pump Is a separate Donkey Suction fitted in Engine room & size 2<sup>3</sup>/<sub>4</sub>" ejector  
 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  
 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 9.1.13 of Stern Tube 9.1.13 Screw shaft and Propeller 9.1.13  
 Is the Screw Shaft Tunnel watertight Is it fitted with a watertight door worked from

**BOILERS, &c.**—(Letter for record S.) Manufacturers of Steel Messrs. Schickel & Maudslayi, Ltd. of Huddersfield  
 Total Heating Surface of Boilers 1295 ft<sup>2</sup> Is Forced Draft fitted No No. and Description of Boilers One cyl. mult. on fire mtd.  
 Working Pressure 200 lbs. Tested by hydraulic pressure to 400 lbs. Date of test 28.2.13 No. of Certificate 1965  
 Can each boiler be worked separately Area of fire grate in each boiler 48 ft<sup>2</sup> No. and Description of Safety Valves to  
 each boiler Two Spring Area of each valve 4.90" Pressure to which they are adjusted 205 lbs. Are they fitted with easing gear Yes  
 Smallest distance between boilers or uptakes and bunkers or woodwork 6" Mean dia. of boilers 13'-6" Length 10'-6" Material of shell plates S  
 Thickness 1<sup>3</sup>/<sub>16</sub>" Range of tensile strength 29 tons Are the shell plates welded or flanged No Descrip. of riveting: cir. seams R. P. S.  
 long. seams Y. P. R. P. S. Diameter of rivet holes in long. seams 1<sup>3</sup>/<sub>16</sub>" Pitch of rivets 8" Lap of plates or width of butt straps 16<sup>5</sup>/<sub>8</sub>"  
 Per centages of strength of longitudinal joint rivets 85% plate 85% Working pressure of shell by rules 206 lbs. Size of manhole in shell 16" x 12"  
 Size of compensating ring 4" x 1<sup>3</sup>/<sub>16</sub>" No. and Description of Furnaces in each boiler 3 plain Material S. Outside diameter 38"  
 Length of plain part top 6'-4" crown 26" Description of longitudinal joint Welded No. of strengthening rings 3 x 3" x 2" L on bottom.  
 bottom 4'-2" Thickness of plates bottom 3/32" Working pressure of furnace by the rules 204 lbs. Combustion chamber plates: Material S. Thickness: Sides 3/32" Back 3/32" Top 3/4" Bottom 3/32"  
 Pitch of stays to ditto: Sides 9<sup>1</sup>/<sub>2</sub>" x 8<sup>1</sup>/<sub>2</sub>" Back 14<sup>1</sup>/<sub>2</sub>" x 8" Top 14<sup>1</sup>/<sub>2</sub>" x 8<sup>1</sup>/<sub>2</sub>" If stays are fitted with nuts or riveted heads Yes Working pressure by rules 205 lbs.  
 Material of stays S. Diameter at smallest part 2.40" Area supported by each stay 100 in<sup>2</sup> Working pressure by rules 216 lbs. End plates in steam space:  
 Material S. Thickness 1<sup>3</sup>/<sub>32</sub>" Pitch of stays 18" x 19" How are stays secured R. P. S. Working pressure by rules 205 lbs. Material of stays S.  
 Diameter at smallest part 3.50" Area supported by each stay 346.5 in<sup>2</sup> Working pressure by rules 225 lbs. Material of Front plates at bottom S.  
 Thickness 1<sup>5</sup>/<sub>16</sub>" Material of Lower back plate S. Thickness 3/32" Greatest pitch of stays 14<sup>1</sup>/<sub>2</sub>" x 8" Working pressure of plate by rules 206 lbs.  
 Diameter of tubes 3<sup>1</sup>/<sub>2</sub>" Pitch of tubes 5" x 5" Material of tube plates S. Thickness: Front 1<sup>5</sup>/<sub>16</sub>" Back 3/8" Mean pitch of stays 10"  
 Pitch across wide water spaces 14" x 14" Working pressures by rules 315 lbs. Girders to Chamber tops: Material S. Depth and  
 thickness of girder at centre 10<sup>3</sup>/<sub>4</sub>" - 1<sup>3</sup>/<sub>4</sub>" Length as per rule 2'-11<sup>7</sup>/<sub>8</sub>" Distance apart 10<sup>1</sup>/<sub>2</sub>" Number and pitch of stays in each 3 - 8<sup>1</sup>/<sub>2</sub>"  
 Working pressure by rules 211 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 \_\_\_\_\_ 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:— Two each top & bottom end connecting rod bolts & nuts, two main bearing bolts & nuts, one set of coupling bolts & nuts, one set each fwd & aft pump valves, iron of various sizes, a quantity of assorted bolts, nuts etc.

The foregoing is a correct description,  
p. pro **CHARLES D. HOLMES & Co. Ltd.** Manufacturer.

*Arthur Holmes* DIRECTOR. 1912:— Nov 13. Dec 24. 1913. Jan 7. 8. 9. 10. 17. 30. Feb. 4. 5. 6. 12. 17. 19.  
 Dates of Survey while building: During progress of work in shops --- Feb 26. 28. Mar 12. 13. 17. 19. 25.  
 During erection on board vessel ---  
 Total No. of visits 21

Is the approved plan of main boiler forwarded herewith *R/L 25993*  
 " " " donkey " " *s/s Venator*

Dates of Examination of principal parts—Cylinders 30. 1. 13 Slides 28. 2. 13 Covers 28. 2. 13 Pistons 26. 2. 13 Rods 17. 2. 13  
 Connecting rods 26. 2. 13 Crank shaft 12. 2. 13 Thrust shaft 26. 2. 13 Tunnel shafts \* Screw shaft 7. 1. 13 Propeller 7. 1. 13  
 Stern tube 7. 1. 13 Steam pipes tested 12. 3. 13 Engine and boiler seatings 9. 1. 13 Engines holding down bolts 12. 3. 13  
 Completion of pumping arrangements 19. 3. 13 Boilers fixed 14. 3. 13 Engines tried under steam 14. 3. 13  
 Main boiler safety valves adjusted 14. 3. 13 Thickness of adjusting washers *Forward & aft 1/16"*  
 Material of Crank shaft *Iron* Identification Mark on Do. *N° 9907.67* Material of Thrust shaft *Steel* Identification Mark on Do. *N° 9907.67*  
 Material of Tunnel shafts *✓* Identification Marks on Do. *✓* Material of Screw shafts *Iron* Identification Marks on Do. *N° 9907.67*  
 Material of Steam Pipes *Solid drawn copper ✓* Test pressure *400 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 1. 1. 4. 1. 3. 13 in the Register's Book.*

*It is submitted that this vessel is eligible for THE RECORD. + LMC 3. 13.*

Certificate (if required) to be sent to (The Surveyor may request not to write on or below the space for Committee's Minute.)

The amount of Entry Fee	£ 1 : 0 :	When applied for,
Special	£ 11 : 14 :	28. 3. 13
Donkey Boiler Fee	£ :	When received, <i>NR</i>
Travelling Expenses (if any) £	£ 4 : 11 :	31. 3. 13

*J.W.N.* 4/4/13  
*H. P. ...*  
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute TUE APR 8 - 1913

Assigned *Thurs 3. 13*

MACHINERY CERTIFICATE WRITTEN



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