

# REPORT ON MACHINERY.

No. 25641

Received at London Office

WED. NOV. 20. 1912

Date of writing Report 19 When handed in at Local Office 19/11/12 Port of Hull

No. in Survey held at 1/ull. Date, First Survey Aug 16<sup>th</sup> Last Survey Nov 7<sup>th</sup> 1912  
 Reg. Book. 3504 on the SS. S. K. "LUNEDA" (Number of Visits 19) Tons } Gross 288  
 Net 116

Master Selby Built at Selby By whom built Cochran & Sons When built 1912

Engines made at } By whom made } when made 1912

Boilers made at Hull By whom made Trussers, Charles R. Holmes & Co. Ltd when made 1912

Registered Horse Power 81 Owners Lancashire Steam Traction Co. Ltd. Port belonging to Hullwood

Nom. Horse Power as per Section 28 81 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 3/4" - 22" - 36" Length of Stroke 24" Revs. per minute 109 Dia. of Screw shaft 4 3/4" Material of screw shaft Steel

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 No If two liners are fitted, is the shaft lapped or protected between the liners Yes Length of stern bush 36"

Dia. of Tunnel shaft 6 1/4" as per rule 6.74 Dia. of Crank shaft journals 4 1/2" as per rule 4.26 Dia. of Crank pin 4 1/4" Size of Crank webs 4 3/4" x 1 1/4" Dia. of thrust shaft under collars 4 1/4" Dia. of screw 9'-0" Pitch of Screw 11'-0" No. of Blades 4 State whether moveable No Total surface 29 sq ft

No. of Feed pumps 1 Diameter of ditto 2 3/8" Stroke 14 1/2" Can one be overhauled while the other is at work Yes

No. of Bilge pumps 1 Diameter of ditto 2 3/8" Stroke 14 1/2" Can one be overhauled while the other is at work Yes

No. of Donkey Engines 1 Sizes of Pumps 6" x 4 1/2" x 6" No. and size of Suctions connected to both Bilge and Donkey pumps One 2" 1/2" main

In Engine Room Yes In Holds, &c. One 2" 1/2" main

No. of Bilge Injections 1 sizes 2" Connected to condenser, or to circulating pump Yes Is a separate Donkey Suction fitted in Engine room & size 2 1/2" dia.

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 2" dia. cuttings 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 12.9.12 of Stern Tube 12.9.12 Screw shaft and Propeller 12.9.12

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

**BOILERS, &c.**—(Letter for record S) Manufacturers of Steel Flügelwerkwerk Schulte Strandl. A. G. of Hamburg

Total Heating Surface of Boilers 1340 sq ft Is Forced Draft fitted No No. and Description of Boilers One up. mult. single ended.

Working Pressure 200 lbs. Tested by hydraulic pressure to 400 lbs. Date of test 24.10.12 No. of Certificate 1936

Can each boiler be worked separately Yes Area of fire grate in each boiler 45.6 sq ft No. and Description of Safety Valves to each boiler Two Spring Area of each valve 4.9 sq in 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 11'-0" Material of shell plates S

Thickness 1 1/8" Range of tensile strength 29 tons Are the shell plates welded or flanged No Descrip. of riveting: cir. seams 70.8.2 long. seams 70.8.5.7.9 Diameter of rivet holes in long. seams 1 1/2" Pitch of rivets 8 3/8" Lap of plates or width of butt straps 16 5/8"

Per centages of strength of longitudinal joint rivets 84.2 Working pressure of shell by rules 204 lbs. Size of manhole in shell 16" x 12" plate 85.4

Size of compensating ring 4" x 1 3/8" No. and Description of Furnaces in each boiler 3 plain Material S Outside diameter 3'-4"

Length of plain part top 6'-4 1/2" Thickness of plates crown 13" Description of longitudinal joint Weld No. of strengthening rings 0 bottom 7'

Working pressure of furnace by the rules 205 lbs. Combustion chamber plates: Material S Thickness: Sides 2 3/8" Back 2 3/8" Top 3" Bottom 2 3/8"

Pitch of stays to ditto: Sides 8 1/2" x 8 1/2" Back 8" x 10 1/2" Top 8 1/2" x 11" If stays are fitted with nuts or riveted heads No Working pressure by rules 205 lbs.

Material of stays S Diameter at smallest part 2.4" Area supported by each stay 100 sq in Working pressure by rules 215 lbs. End plates in steam space: Material S Thickness 1 3/16" Pitch of stays 18" x 18 1/2" How are stays secured 70.7.20 Working pressure by rules 204 lbs. Material of stays S

Diameter at smallest part 4.5" Area supported by each stay 333 sq in Working pressure by rules 234 lbs. Material of Front plates at bottom S

Thickness 1 5/16" Material of Lower back plate S Thickness 2 7/8" Greatest pitch of stays 4 1/2" x 8" Working pressure of plate by rules 204 lbs.

Diameter of tubes 3 1/2" Pitch of tubes 5" x 5 1/2" Material of tube plates S Thickness: Front 1 1/8" Back 3/8" Mean pitch of stays 10 1/2"

Pitch across wide water spaces 14" x 8 1/2" Working pressures by rules 315 lbs. Girders to Chamber tops: Material S Depth and thickness of girder at centre 12" x 1 3/4" Length as per rule 3'-2 3/8" Distance apart 11" Number and pitch of stays in each 3 - 8 1/2"

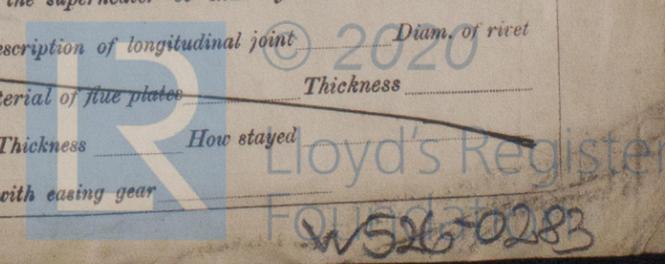
Working pressure by rules 206 lbs. Superheater or Steam chest; how connected to boiler No Can the superheater be shut off and the boiler worked separately Yes

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 Yes

If not, state whether, and when, one will be sent? If a Report also sent on the Hull of the Ship?



FW52650283

**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 casing 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 fore & aft pump valves, iron of various sizes, a quantity of assorted bolts, nuts &c.*

The foregoing is a correct description,  
 P. PRO. CHARLES D. HOLMES & Co. LTD. Manufacturer.

*Charles D. Holmes* DIRECTOR

Dates of Survey while building: During progress of work in shops — 1912:— Aug 16, 29, Sep 11, 12, 19, 23, 25, Oct 2, 3, 8, 10, 16, 18, 23, 24, Nov 1, 2, 5  
 During erection on board vessel — Nov 7.  
 Total No. of visits — 19  
 Is the approved plan of main boiler forwarded herewith *yes*

Dates of Examination of principal parts—Cylinders 8.10.12 Slides 24.10.12 Covers 24.10.12 Pistons 18.10.12 Rods 16.10.12  
 Connecting rods 16.10.12 Crank shaft 2.10.12 Thrust shaft 18.10.12 Tunnel shafts \_\_\_\_\_ Screw shaft 11.9.12 Propeller 11.9.12  
 Stern tube 11.9.12 Steam pipes tested 2.11.12 Engine and boiler seatings 12.9.12 Engines holding down bolts 1.11.12  
 Completion of pumping arrangements 4.11.12 Boilers fixed 5.11.12 Engines tried under steam 5.11.12  
 Main boiler safety valves adjusted 5.11.12 Thickness of adjusting washers *Forward 3/8" 11/8"*  
 Material of Crank shaft *I* Identification Mark on Do. N: 941.60 Material of Thrust shaft *S* Identification Mark on Do. N: 941.60  
 Material of Tunnel shafts \_\_\_\_\_ Identification Marks on Do. \_\_\_\_\_ Material of Screw shafts *I* Identification Marks on Do. N: 941.60  
 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 inspected under special survey in accordance with the Rules. The materials & workmanship all sound & good. The boiler tested by hydraulic pressure, & with the engines covered 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

*E.P.S.*  
20.11.12.

*G.R.R.*

The amount of Entry Fee .. £ 1 : 0 :  
 Special .. £ 12 : 3 :  
 Donkey Boiler Fee .. £ : :  
 Travelling Expenses (if any) £ 8 : 2 :  
 When applied for, 19.11.12  
 When received, 29.11.12

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

Committee's Minute  
 Assigned  
 FRI. NOV. 22. 1912  
 + L.M.C. 11.12

MACHINERY CERTIFICATE WRITTEN.



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Certificate (if required) to be sent to Hull