

# REPORT ON MACHINERY.

No. 25467

Received at London Office WED. SEP. 18. 1912

pt. 4.

of writing Report 10-9-12 19 When handed in at Local Office 12-9-12 19 Port of Hull Date, First Survey June 11th Last Survey Sept 11th 1912

in Survey held at Hull. Tons Gross 24 Net 24

g. Book. on the Ship S.C.K. "YUCCA". When built 1912

Master Built at Selby By whom built Cochrane & Sons when made 1912

Engines made at } By whom made } Messrs. Charles D. Thomas & Co. Ltd. when made 1912

Boilers made at } Hull Owners Southern Steam Traction Co. Ltd. Port belonging to Trilford.

Registered Horse Power Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted No.

Com. Horse Power as per Section 28 60 No. of Cylinders 3 No. of Cranks 3

ENGINES, &c.—Description of Engines Triple Expansion Dia. of Screw shaft as per rule 6.64 as fitted 4 1/2 Material of screw shaft 2

Dia. of Cylinders 11 1/2 - 19 1/2 - 32 Length of Stroke 23 Revs. per minute 110 Is the after end of the liner made water tight

Is the screw shaft fitted with a continuous liner the whole length of the stern tube 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 Yes. If two

liners are fitted, is the shaft lapped or protected between the liners Length of stern bush 31"

Dia. of Tunnel shaft as per rule 5.96 as fitted 6 3/4 Dia. of Crank shaft journals as per rule 6.26 as fitted 6 1/2 Dia. of Crank pin 6 1/2 Size of Crank webs 4 1/2 x 12 1/4 Dia. of thrust shaft under

collars 6 1/2 Dia. of screw 8 3/4 Pitch of Screw 10-0 No. of Blades 4 State whether moveable No. Total surface 29 1/2

No. of Feed pumps 1 Diameter of ditto 2 1/2 Stroke 12 Can one be overhauled while the other is at work Yes

No. of Bilge pumps 1 Diameter of ditto 2 1/2 Stroke 12 Can one be overhauled while the other is at work Yes

No. of Donkey Engines 1 Sizes of Pumps 4 1/2 x 3 x 6 Duplex 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" to main hold.

Episin suction from all bilges with discharge on deck. Is a separate Donkey Suction fitted in Engine room & size 2 1/2

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

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 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 2.7.12 of Stern Tube 2.7.12 Screw shaft and Propeller 2.7.12

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

BOILERS, &c.—(Letter for record S.) Manufacturers of Steel trusses. Blueford & Co. Ltd. & Messrs. Thandi. Ltd. of Bombay.

Total Heating Surface of Boilers 1020 sq ft Is Forced Draft fitted No. No. and Description of Boilers One up. mult. simple mdid.

Working Pressure 180 lbs. Tested by hydraulic pressure to 360 lbs. Date of test 29.8.12 No. of Certificate 1921.

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 185 lbs. Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork 5" Mean dia. of boilers 11-6 Length 10-0 Material of shell plates S

Thickness 1" Range of tensile strength 29 tons. Are the shell plates welded or flanged No. Descrip. of riveting: cir. seams S.R.

long. seams D.S.S.P. Diameter of rivet holes in long. seams 1 1/2 Pitch of rivets 4 1/2 Lap of plates or width of butt straps 15"

Per centages of strength of longitudinal joint rivets 87.3 Working pressure of shell by rules 198 lbs. Size of manhole in shell 16 x 12"

Size of compensating ring 4 x 1" No. and Description of Furnaces in each boiler Two plain Material S. Outside diameter 40"

Length of plain part top 6-4 1/2 Thickness of plates crown 3" Description of longitudinal joint Welded. No. of strengthening rings 0

Working pressure of furnace by the rules 185 lbs. Combustion chamber plates: Material S. Thickness: Sides 16" Back 16" Top 16" Bottom 16"

Pitch of stays to ditto: Sides 9 1/2 x 9 3/8 Back 9 x 9 1/2 Top 8 x 9 1/2 If stays are fitted with nuts or riveted heads No. Working pressure by rules 200 lbs. End plates in steam space:

Material of stays S. Diameter at smallest part 3.40 Area supported by each stay 1080 Working pressure by rules 185 lbs. Material of stays S.

Material S. Thickness 1" Pitch of stays 16 x 16 How are stays secured D.T. & W. Working pressure by rules 240 lbs. Material of Front plates at bottom S.

Diameter at smallest part 5.24 Area supported by each stay 256 Working pressure by rules 214 lbs. Material of Front plates at bottom S.

Thickness 15" Material of Lower back plate S. Thickness 16" Greatest pitch of stays 14 1/2 x 9 Working pressure of plate by rules 208 lbs.

Diameter of tubes 3 1/2 Pitch of tubes 4 3/4 x 4 3/4 Material of tube plates S. Thickness: Front 16" Back 8" Mean pitch of stays 9.5"

Pitch across wide water spaces 14 3/4 x 4 3/4 Working pressures by rules 213 lbs. Girders to Chamber tops: Material S. Depth and

thickness of girder at centre 4 3/4 - 1 3/4 Length as per rule 2-8 3/4 Distance apart 8" Number and pitch of stays in each 2-9 1/2"

Working pressure by rules 184 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

Lloyd's Register W730-0048

**VERTICAL DONKEY BOILER—** Manufacturers of Steel

No.	Description			When made	Where fixed
Made at	By whom made				
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 connecting rod tops and bolts & nuts, two connecting rod bottom and bolts & nuts, two main bearing bolts, one set of coupling bolts, one set of feed & bilge pump valves, a quantity of assorted bolts & nuts, iron of various sizes etc.

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

*Harold Shearman* 1912: Jun 11, 14, 18, 20, 27, 29, Jul 2, 4, 9, 17, 24, Aug 1, 4, 9, 14, 16, 22, 28, 29.  
 Dates of Survey while building: work in shops -- --  
 During erection on board vessel -- -- Sept: 5, 6, 7, 10, 11  
 Total No. of visits 24. Is the approved plan of main boiler forwarded herewith *yes*

Dates of Examination of principal parts—Cylinders 18.6.12 Slides 24.4.12 Covers 9.8.12 Pistons 24.4.12 Rods 17.4.12  
 Connecting rods 9.8.12 Crank shaft 20.6.12 Thrust shaft 3.8.12 Tunnel shafts -- Screw shaft 29.6.12 Propeller 29.6.12  
 Stern tube 29.6.12 Steam pipes tested 6.9.12 Engine and boiler seatings 2.4.12 Engines holding down bolts 5.9.12  
 Completion of pumping arrangements 10.9.12 Boilers fixed 4.9.12 Engines tried under steam 4.9.12  
 Main boiler safety valves adjusted 4.9.12 Thickness of adjusting washers Forward  $\frac{1}{16}$ " After  $\frac{3}{8}$ "  
 Material of Crank shaft *I.* Identification Mark on Do. N<sup>o</sup> 9527.6D Material of Thrust shaft *S.* Identification Mark on Do. N<sup>o</sup> 9527.6D  
 Material of Tunnel shafts *v* Identification Marks on Do. *v* Material of Screw shafts *I.* Identification Marks on Do. N<sup>o</sup> 9527.6D  
 Material of Steam Pipes *Solid drawn copper* Test pressure 360 lbs per sq. inch hydraulic.

**General Remarks** (State quality of workmanship, opinions as to class, &c. *The engine & 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 engine 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. 9.12 in the Register Book.*)

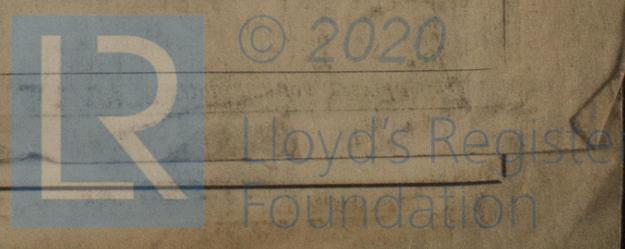
It is submitted that this vessel is eligible for THE RECORD + L.M.C. 9.12.

*J.W.D.*  
 18/9/12  
*J.M.*  
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

The amount of Entry Fee .. £ 1 : 0 :  
 Special .. £ 9 : 0 :  
 Donkey Boiler Fee .. £ : :  
 Travelling Expenses (if any) £ 8/2 : :  
 Committee's Minute FRI. SEP. 20. 1912

Assigned + Lond. 9.12

MECHANICAL CERTIFICATE WRITTEN.



Shell

Certificate (if required) to be sent to Registrar and Registrar not to write on or below the space for Committee's Minute.