

# REPORT ON MACHINERY.

No. 25467

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st. 4.

Port of *Hull* Date, First Survey *June 11th* Last Survey *Sept 11th 1912*  
 When handed in at Local Office *12-9-12* (Number of Visits *24*)

Survey held at *Hull* Tons *Gross* *Net*  
 on the *Ship S. K. "YUCCA"* When built *1912*

Master *Selby* By whom built *Cothran & Sons* when made *1912*

Engines made at *Hull* 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 *60* 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 *11 1/2 - 19 1/2 - 32* Length of Stroke *23* Revs. per minute *as per rule 664* Material of screw shaft *as fitted 4 1/2*

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

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 *Yes* If two

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

Dia. of Tunnel shaft *as per rule 5.96* Dia. of Crank shaft journals *as per rule 6.26* 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 1/2* 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" 10 main hold.*

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 *Yes* Are the sluices on Engine room bulkheads always accessible *0*

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 *Below*

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 *Yes* Is it fitted with a watertight door *Yes* worked from *Yes*

BOILERS, &c.—(Letter for record *S.*) Manufacturers of Steel *Blueford & Sons, Thos. Handl. & Co. Ltd. of Birmingham.*

Total Heating Surface of Boilers *1020* Is Forced Draft fitted *No* No. and Description of Boilers *One up. mult. simple mid.*

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 *Yes* Area of fire grate in each boiler *32.5* 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 *S. R.* Diameter of rivet holes in long. seams *1 1/2* Pitch of rivets *4 1/2* Lap of plates or width of butt straps *16"*

Per centages of strength of longitudinal joint *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 *6-4 1/2* Thickness of plates *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 1/2* 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 *2-40* 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. H. & W.* Working pressure by rules *24 lbs.* Material of Front plates at bottom *S.*

Diameter at smallest part *2-2 1/2* Area supported by each stay *256* Working pressure by rules *24 lbs.* Working pressure of plate by rules *208 lbs.*

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

Pitch across wide water spaces *14 1/2 x 4 1/2* Working pressures by rules *213 lbs.* Girders to Chamber tops: Material *S.* Depth and

thickness of girder at centre *4 1/2 - 1 1/2* Length as per rule *2-8 1/4* 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 *Yes* Diameter *18 1/2* Length *18 1/2* Thickness of shell plates *16* Material *S.* Description of longitudinal joint *Welded* Diam. of rivet

holes *1 1/2* Pitch of rivets *4* Working pressure of shell by rules *24 lbs.* End plates: Thickness *16* How stayed *Yes*

If stiffened with rings *Yes* Distance between rings *2-8 1/4* Working pressure by rules *24 lbs.* Are they fitted with easing gear *Yes*

Working pressure of end plates *208 lbs.* Area of safety valves to superheater *2-8 1/4*

Lloyd's Register  
W730-0048



# 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  
 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 L. 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 - - -  
 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 14.4.12  
 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 1/16" After 3/16"*  
 Material of Crank shaft *I.* Identification Mark on Do. N° 9527.62 Material of Thrust shaft *I.* Identification Mark on Do. N° 9527.62  
 Material of Tunnel shafts *v* Identification Marks on Do. *v* Material of Screw shafts *I.* Identification Marks on Do. N° 9527.62  
 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.*

The amount of Entry Fee .. £ 1 : 0 : When applied for,  
 Special .. £ 9 : 0 : 17-9-1912  
 Donkey Boiler Fee .. £ : : When received,  
 Travelling Expenses (if any) £ 8/2 : 29/9/12

Committee's Minute

FRI. SEP. 20. 1912

Assigned

*+ L.M.C. 9.12*

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



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