

REPORT ON MACHINERY.

No. 18580

TUES. DEC 18 1906

Port of Hull

Received at London Office

19

No. in Survey held at Hull Date, first Survey Sep 10th Last Survey 13th Dec 1906
 Reg. Book. 9 on the Steel S. K. Venture (Number of Visits 32)
 Master Built at Hull By whom built Messrs Earles & Co. Ltd Tons Gross 288
Engines made at Hull By whom made Messrs Earles & Co. Ltd Net 113
Boilers made at Hull By whom made Messrs Earles & Co. Ltd When built 1906
 Registered Horse Power 44 Owners G. Blashill Port belonging to Hull
 Com. Horse Power as per Section 28 44 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted No

GINES, &c.—Description of Engines Triple Expansion No. of Cylinders 3 No. of Cranks 3
 Dia. of Cylinders 12 $\frac{3}{4}$ " - 22" - 36" Length of Stroke 24 Revs. per minute 110 Dia. of Screw shaft 7 $\frac{1}{2}$ " as per rule 7 $\frac{1}{2}$ " Material of Iron
 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
 Is the propeller boss Yes If the liner is in more than one length are the joints burned one length 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 34 $\frac{1}{2}$ "
 Dia. of Plain part as per rule 6 $\frac{7}{8}$ " Dia. of Crank shaft journals 7 $\frac{1}{2}$ " as per rule 7 $\frac{1}{2}$ " Dia. of Crank pin 7 $\frac{1}{2}$ " Size of Crank webs 14" x 4 $\frac{7}{8}$ " Dia. of thrust shaft under
 rollers 4 $\frac{1}{2}$ " Dia. of screw 9" - 0" Pitch of Screw 11" - 0" to 12" - 0" No. of Blades 4 State whether moveable No Total surface 27 $\frac{1}{2}$ sq ft
 No. of Feed pumps 1 Diameter of ditto 3 Stroke 12" Can one be overhauled while the other is at work —
 No. of Bilge pumps 1 Diameter of ditto 3 Stroke 12" Can one be overhauled while the other is at work —
 No. of Donkey Engines Two Sizes of Pumps 6" x 3" x 6" No. and size of Suctions connected to both Bilge and Donkey pumps
 Engine Room Two 2 $\frac{1}{2}$ " One 3 $\frac{1}{2}$ " In Holds, &c. One each 2" To fore slush well,
 To aft slush well, To fore compartment, and ejector suction from holds & R. bilge
 No. of Bilge Injections 1 sizes 3 $\frac{1}{2}$ " 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 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
 That 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 17. 12. 06 of Stern Tube 17. 11. 06 Screw shaft and Propeller 17. 11. 06
 Is the Screw Shaft Tunnel watertight — Is it fitted with a watertight door — worked from —

BOILERS, &c.—(Letter for record 8) Manufacturers of Steel Steel Co. of Scotland
 Total Heating Surface of Boilers 1260 sq ft Is Forced Draft fitted No No. and Description of Boilers One cyl. Multi.
 Working Pressure 200 lbs Tested by hydraulic pressure to 400 lbs Date of test 26. 11. 06 No. of Certificate 1530
 Can each boiler be worked separately — Area of fire grate in each boiler 40 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 7" Mean dia. of boilers 13" - 0" Length 10" - 6" Material of shell plates Steel
 Thickness 1 $\frac{3}{16}$ " Range of tensile strength 28. 32 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams L. D.
 Long. seams DRS. J. R. Diameter of rivet holes in long. seams 1 $\frac{3}{16}$ " Pitch of rivets 7 $\frac{1}{16}$ " Lap of plates or width of butt straps 17 $\frac{1}{2}$ "
 Percentages of strength of longitudinal joint 90. 1 Working pressure of shell by rules 200 lbs Size of manhole in shell 16" x 12"
 Size of compensating ring 40" x 30" x 1 $\frac{3}{16}$ " No. and Description of Furnaces in each boiler 3 plain Material Steel Outside diameter 37"
 Length of plain part 5' - 7' Thickness of plates 3 $\frac{1}{4}$ " Description of longitudinal joint Welded No. of strengthening rings 0
 Working pressure of furnace by the rules 213 lbs Combustion chamber plates: Material Steel Thickness: Sides 1 $\frac{1}{16}$ " Back 5 $\frac{1}{8}$ " Top 1 $\frac{1}{16}$ " Bottom 1 $\frac{1}{16}$ "
 Pitch of stays to ditto: Sides 9 $\frac{1}{2}$ " x 8" Back 8" x 7 $\frac{7}{8}$ " Top 8" x 7 $\frac{5}{8}$ " If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 212 lbs
 Material of stays Steel Diameter at smallest part 1 $\frac{5}{8}$ " Area supported by each stay 76 sq in Working pressure by rules 245 lbs End plates in steam space:
 Material Steel Thickness 1 $\frac{3}{16}$ " Pitch of stays 15 $\frac{1}{4}$ " x 17 $\frac{3}{4}$ " How are stays secured D. Nuts Working pressure by rules 231 lbs Material of stays Steel
 Diameter at smallest part 2 $\frac{13}{16}$ " Area supported by each stay 270. 68 sq in Working pressure by rules 229 lbs Material of Front plates at bottom Steel
 Thickness 1" Material of Lower back plate Steel Thickness 1 $\frac{1}{8}$ " Greatest pitch of stays 14 $\frac{1}{2}$ " - 10" Working pressure of plate by rules 213 lbs
 Diameter of tubes 3 $\frac{1}{4}$ " Pitch of tubes 4 $\frac{3}{4}$ " x 4 $\frac{3}{4}$ " Material of tube plates Steel Thickness: Front 1" Back 1 $\frac{1}{8}$ " Mean pitch of stays 9 $\frac{1}{2}$ "
 Pitch across wide water spaces 14" Working pressures by rules 208 lbs Girders to Chamber tops: Material Steel Depth and
 Thickness of girder at centre 9 $\frac{1}{2}$ " x 1 $\frac{3}{4}$ " Length as per rule 2' - 11" Distance apart 7 $\frac{7}{8}$ " Number and pitch of stays in each 3 - 8"
 Working pressure by rules 216 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
 Pitch of rivets — Working pressure of shell by rules — Diameter of flue — Material of flue plates — Thickness —
 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 —

W705 - 0011

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
Valves	No. of Safety Valves	Area of each	Pressure to which they are adjusted
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
Working pressure of shell by rules	Thickness of shell crown plates	Radius of do.	No. of stays to do.
Diameter of furnace Top	Bottom	Length of furnace	Thickness of furnace plates
Working pressure of furnace by rules	Thickness of furnace crown plates	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 and bottom end connecting rod bolts and nuts, two main bearing bolts and nuts, one set coupling bolts nuts, one set feed & bilge pump valves, and a quantity of bolts nuts etc.

The foregoing is a correct description,

F. J. Palethorpe

Manufacturer.

Dates of Survey while building	During progress of work in shops—	1906:—Sep 10, 19, 20, 27, Oct 3, 5, 22, 25, Oct 29, 31, Nov 1, 2, 6, 7, 10, 12, 13, 15, 17, 21, 23, 24.
	During erection on board vessel—	Nov 26, 29, 30, Dec 3, 4, 6, 7, 10, 11, 13.
Total No. of visits		32

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

Dates of Examination of principal parts—	Cylinders 12. 11. 06	Slides 15. 11. 06	Covers 7. 11. 06	Pistons 7. 11. 06	Rods 7. 11. 06
Connecting rods	4. 11. 06	Crank shaft 29. 10. 06	Thrust shaft 29. 10. 06	Tunnel shafts	Screw shaft 29. 10. 06
Stern tube	4. 11. 06	Steam pipes tested 6. 12. 06	Engine and boiler seatings 26. 11. 06	Engines holding down bolts 6. 12. 06	
Completion of pumping arrangements	11. 12. 06	Boilers fixed 6. 12. 06	Engines tried under steam 11. 12. 06		
Main boiler safety valves adjusted	7. 12. 06	Thickness of adjusting washers	Port $\frac{1}{4}$ "	Starboard $\frac{1}{6}$ "	
Material of Crank shaft	Steel	Identification Mark on Do. 1771 ATG	Material of Thrust shaft	Steel	Identification Mark on Do. 68 GAH
Material of Tunnel shafts		Identification Marks on Do.	Material of Screw shafts	Iron	Identification Marks on Do. 68 GAH
Material of Steam Pipes	Solid drawn Copper	Test pressure	400 lbs per sq inch		

General Remarks (State quality of workmanship, opinions as to class, &c. The engines and boiler of this vessel have been inspected during construction in accordance with the Society's Rules. The materials and workmanship are good. The boiler tested by hydraulic pressure, and with the engines placed on board and tested under steam, they are now in good order and safe working condition, and respectfully submitted as being eligible in my opinion to be classed with the notation of *L.M.C. 12.06* in the Register Book.

These Engines and boiler, are similar to those fitted on the "Spider" Hull Report No. 18488. Attached to this report, are Letters from builders Owners, agreeing to one feed, one bilge pump to main engines, Forging reports for shafts, & steel advice notes for plates furnaces, & steel castings.

The amount of Entry Fee..	£ 1 : . : .	When applied for,	15/12/1906
Special	£ 11 : 14 : .	When received,	19/12/1906
Donkey Boiler Fee	£ - : - : .		
Travelling Expenses (if any) £	- : - : .		

It is submitted that this vessel is eligible for THE RECORD

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

Committee's Minute

FRI. 21 DEC 1906

Assigned

L.M.C. 12.06

MACHINERY CERTIFICATE
WRITTEN.



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