

Received at London Office... **FRI. 24 MAY 1907**

ENGINES, &c.—Description of Engines *Triple* No. of Cylinders *3* No. of Cranks *3*
 Dia. of Cylinders *12 1/2, 21, 34* Length of Stroke *24* Revs. per minute *114* Dia. of Screw shaft as per rule *7 1/2* Material of screw shaft *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 in the propeller boss *yes* If the liner is in more than one length are the joints burned *✓* 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 *2-11"*
 Dia. of Tunnel shaft as per rule *6-3/4* Dia. of Crank shaft journals as per rule *6-6"* Dia. of Crank pin *6 7/8* Size of Crank webs *10 1/2 x 4 1/2* Dia. of thrust shaft under collars *6 7/8* Dia. of screw *8-7"* Pitch of Screw *10-2"* No. of Blades *4* State whether moveable *No* Total surface *27 sq. ft.*
 No. of Feed pumps *1* Diameter of ditto *2 5/8* Stroke *13* Can one be overhauled while the other is at work *✓*
 No. of Bilge pumps *1* Diameter of ditto *3* Stroke *13* Can one be overhauled while the other is at work *✓*
 No. of Donkey Engines *One* Sizes of Pumps *6" x 3" x 6"* No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room *One 2" dia.* In Holds, &c. *Three 2" dia.*
 Ejector suction from engine room bilge & discharge on deck.
 No. of Bilge Injections *1* sizes *3"* Connected to condenser, or to circulating pump *Pump* Is a separate Donkey Suction fitted in Engine room & size *2" 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 *None*
 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 *14.2.07* of Stern Tube *14.2.07* Screw shaft and Propeller *14.2.07*
 Is the Screw Shaft Tunnel watertight *None* Is it fitted with a watertight door *✓* worked from *✓*

Is the Screw Shaft Tunnel watertight None Is it fitted with a watertight door None
BOILERS, &c.—(Letter for record (5)) Manufacturers of Steel The Steel Coy of Scotland
Total Heating Surface of Boilers 1192 sq. ft. Is Forced Draft fitted No No. and Description of Boilers One S.E. Cyl. Mult.
Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 10.4.07 No. of Certificate 1555
Can each boiler be worked separately ✓ Area of fire grate in each boiler 35 sq. ft. No. and Description of Safety Valves to
each boiler Two spring Area of each valve 3.9" 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 7" Mean dia. of boilers 12.6" Length 10.132" Material of shell plates Steel
Thickness 1 1/32" Range of tensile strength 28-32 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams bx lap
long. seams bx lap Diameter of rivet holes in long. seams 1 1/8" Pitch of rivets 7.6" Lap of plates or width of butt straps 16 1/4"
Per centages of strength of longitudinal joint rivets 94 plate 85.2 Working pressure of shell by rules 181 lbs Size of manhole in shell 16 x 12"
Size of compensating ring 40 x 30 x 1 1/32" No. and Description of Furnaces in each boiler Two plain Material Steel Outside diameter 43.53"
Length of plain part top 6.4" Thickness of plates crown 4 1/2" bottom 6 1/2" Description of longitudinal joint Welded No. of strengthening rings ✓
bottom 5.10 1/2" Working pressure of furnace by the rules 180 lbs Combustion chamber plates: Material Steel Thickness: Sides 2 3/32" Back 1 1/16" Top 5/8" Bottom 2 3/32"
Pitch of stays to ditto: Sides 9 1/4 x 7" Back 9 x 8 3/4" Top 8 1/2 x 7" If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 208 lbs
Material of stays Steel Diameter at smallest part 1 1/2" Area supported by each stay 64.75 Working pressure by rules 218 End plates in steam space:
Material Steel Thickness 1 1/32" Pitch of stays 16 1/4 x 15" How are stays secured to W. outside Working pressure by rules 196 lbs Material of stays Steel
Area at smallest part 5.05 Area supported by each stay 244 Working pressure by rules 207 Material of Front plates at bottom Steel
Thickness 29/32" Material of Lower back plate Steel Thickness 15/16" Greatest pitch of stays 14 x 8 3/4" Working pressure of plate by rules 222
Diameter of tubes 3 1/2" Pitch of tubes 4 15/16 x 4 3/4" Material of tube plates Steel Thickness: Front 29/32" Back 27/32" Mean pitch of stays 9 7/8 x 9 1/2"
Pitch across wide water spaces 14" Working pressures by rules 183 lbs Girders to Chamber tops: Material Iron Depth and
thickness of girder at centre 8 3/4 x 2" Length as per rule 2-9" Distance apart 8 1/2" Number and pitch of stays in each 3 @ 7"
Working pressure by rules 188 lbs Superheater or Steam chest; how connected to boiler None 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	Stayed by			
Diameter of uptake	Thickness of uptake plates	Thickness of water tubes	Dates of survey		

SPARE GEAR. State the articles supplied:—Two top + two bottom-end connecting rod bolts + nuts. Two main bearing bolts + nuts. One set of coupling bolts + nuts. One set of feed + bilge pump valves. Main + donkey feed check valves. Assorted bolts + nuts &c.

The foregoing is a correct description, FOR AMOS & SMITH
Manufacturer.

Dates of Survey while building
During progress of work in shops— 1906—Dec 7. 1907—Jan. 1. 2. 7. 9. 10
During erection on board vessel— Feb 14. 18. Mar. 5. 13. 15. 22. Apr. 5. 6. 10. 25. 29. May 1. 3. 6. 9.
Total No. of visits 26
Is the approved plan of main boiler forwarded herewith *yes*

Dates of Examination of principal parts—Cylinders 2.1.07 Slides 5.4.07 Covers 25.4.07 Pistons 5.3.07 Rods 5.3.07
Connecting rods 7.2.07 Crank shaft 25.4.07 Thrust shaft 25.4.07 Tunnel shafts ✓ Screw shaft 7.2.07 Propeller 7.2.07
Stern tube 7.2.07 Steam pipes tested 3.5.07 Engine and boiler seatings 14.2.07 Engines holding down bolts 29.4.07
Completion of pumping arrangements 6.5.07 Boilers fixed 1.5.07 Engines tried under steam 6.5.07
Main boiler safety valves adjusted 6.5.07 Thickness of adjusting washers $P\frac{5}{16} S\frac{3}{8}$
Material of Crank shaft *Steel* Identification Mark on Do. 25.4.07 Material of Thrust shaft *Steel* Identification Mark on Do. 25.4.07
Material of Tunnel shafts ✓ Identification Marks on Do. ✓ Material of Screw shafts *Iron* Identification Marks on Do. 7.2.07
Material of Steam Pipes *Solid drawn copper* Test pressure 360 lbs

General Remarks (State quality of workmanship, opinions as to class, &c.)

The Engines and Boiler of this vessel have been constructed under Special Survey, are of good material and workmanship, and have been fitted and secured on board in accordance with the Rules. They are now in good working condition and in my opinion eligible to have the notation of + L M C 5.07 in the Register Book.

It is submitted that this vessel is eligible for THE RECORD.

L. M. C. 5.07

HC 24/5/07

The amount of Entry Fee.. £ 1 : : :
Special .. £ 10 : 10 : :
Donkey Boiler Fee .. £ : : :
Travelling Expenses (if any) £ : 12 3 : :
When applied for. 23/5/07
When received. 31/5/07

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

Committee's Minute

TUES. 28 MAY 1907

Assigned

MACHINERY CERTIFICATE WRITTEN.



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