

REPORT ON MACHINERY

No. 16439
SAT. 20 NOV 1904

Port of Hull

No. in Survey held at Hull Date, first Survey Aug 31st Last Survey Nov 17th 1904
 Reg. Book. 39 Sup. on the Sc. K. Manxman
 Master Built at Selby By whom built Messrs Cochrane Sons When built 1904
 Engines made at Hull By whom made Messrs C. D. Holmes & Co when made 1904
 Boilers made at Hull By whom made Messrs C. D. Holmes & Co when made 1904
 Registered Horse Power Owners W. H. Bailey Port belonging to Gumsby
 Nom. Horse Power as per Section 28 66 Is Refrigerating Machinery fitted No Is Electric Light fitted No

ENGINES, &c.—Description of Engines Tri Compound

No. of Cylinders 3 No. of Cranks 3

Dia. of Cylinders 12" - 21" - 34" Length of Stroke 24" Revs. per minute 109 Dia. of Screw shaft as per rule 7" Material of Steel
 as fitted 7 1/2" screw shaft

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 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 31"

Dia. of Thrust shaft as per rule 6 1/2" Dia. of Crank shaft journals as per rule 6 5/8" Dia. of Crank pin 6 1/2" Size of Crank webs 13 1/2" x 4 1/2" Dia. of thrust shaft under

collars 6 1/2" Dia. of screw 8" - 6" Pitch of screw 10" - 6" ~ 11" - 6" No. of blades 4 State whether moveable No Total surface 27 1/2 sq ft

No. of Feed pumps 1 Diameter of ditto 2 1/2" Stroke 24" Can one be overhauled while the other is at work

No. of Bilge pumps 1 Diameter of ditto 2 1/2" Stroke 24" Can one be overhauled while the other is at work

No. of Donkey Engines One Sizes of Pumps 2 3/4" x 5" No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room Two 2" In Holds, &c. One 2" to hold, One 2" to Slush

Well. Ejector suction from hold, Eng. 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 Yes 3"

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

When were stern tube, propeller, screw shaft, and all connections examined in dry dock before launching Is the screw shaft tunnel watertight None

Is it fitted with a watertight door worked from

BOILERS, &c.— (Letter for record S.) Total Heating Surface of Boilers 1095 sq ft Is forced draft fitted No

No. and Description of Boilers One Cyl. Multi. Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs

Date of test 26. 10. 04 Can each boiler be worked separately Area of fire grate in each boiler 32 sq ft No. and Description of safety valves to

each boiler Two Spring Area of each valve 3.98 sq ft 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 6 Ex Mean dia. of boilers 12' - 0" Length 10' - 0" Material of shell plates Steel

Thickness 1" Range of tensile strength 29-32 tons Are they welded or flanged Descrip. of riveting: cir. seams L. D. long. seams O. B. S. J. R

Diameter of rivet holes in long. seams 1 1/2" Pitch of rivets 7" Lap of plates or width of butt straps 15"

Per centages of strength of longitudinal joint rivets 89.25 Working pressure of shell by rules 186 lbs Size of manhole in shell 16" x 12"

Size of compensating ring 7" x 1" No. and Description of Furnaces in each boiler Two plain Material Steel Outside diameter 3' - 6"

Length of plain part top 5' - 70" Thickness of plates crown 3/4" Description of longitudinal joint welded No. of strengthening rings None

Working pressure of furnace by the rules 205 lbs Combustion chamber plates: Material Steel Thickness: Sides 23/32" Back 11/16" Top 23/32" Bottom 23/32"

Pitch of stays to ditto: Sides 9" x 8 1/2" Back 9" x 8 1/2" Top 8 1/2" If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 213 lbs

Material of stays Steel Diameter at smallest part 1 5/8" Area supported by each stay 76 1/2 sq ft Working pressure by rules 243 lbs End plates in steam space:

Material Steel Thickness 1 1/2" Pitch of stays 16" x 16" How are stays secured O. B. W. Working pressure by rules 196 lbs Material of stays Steel

Diameter at smallest part 2 1/2" Area supported by each stay 256 sq ft Working pressure by rules 225 lbs Material of Front plates at bottom Steel

Thickness 2 1/2" Material of Lower back plate Steel Thickness 1 5/8" Greatest pitch of stays 15" Working pressure of plate by rules 198 lbs

Diameter of tubes 3 1/4" Pitch of tubes 4 5/8" Material of tube plates Steel Thickness: Front 27/32" Back 1/8" Mean pitch of stays 9 1/4"

Pitch across wide water spaces 15" Working pressures by rules 188 lbs Girders to Chamber tops: Material Iron Depth and

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

Working pressure by rules 196 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

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DONKEY BOILER— No. Description

Made at By whom made When made Where fixed

Working pressure tested by hydraulic pressure to No. of Certificate Fire grate area Description of safety 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 Per centage of strength of joint Rivets 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

Thickness of furnace crown plates Stayed by Working pressure of shell by rules

Working pressure of furnace by rules Diameter of uptake Thickness of uptake plates Thickness of water tubes

SPARE GEAR. State the articles supplied:— Two each top bottom end connecting rod, main bearing bolts nuts, one set coupling bolts nuts, One set each feed bilge circulating pump valves, a quantity of assorted bolts nuts etc

The foregoing is a correct description,

Charles D. Holmes Manufacturer.

Dates of Survey while building { During progress of work in shops— 1904:— Aug 31 Sep. 6. 15. 17. 20. 22. 27. Oct 5. 6. 7. 14. 20. 24. 26.
During erection on board vessel— Nov 1. 7. 10. 11. 17.
Total No. of visits 19

Is the approved plan of main boiler forwarded herewith Yes

General Remarks (State quality of workmanship, opinions as to class, &c. The machinery and boiler) of this vessel have been inspected throughout construction in accordance with the Society's Rules. The materials workmanship are good. The boiler tested by hydraulic pressure, and with the engines placed on board 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. 11.04 in the Register Book.

It is submitted that this vessel is eligible for THE RECORD. ÷ L.M.C. 11.04

Bal.
26.11.04

R.S.
26.11.04

The amount of Entry Fee... £ 1 : . : . When applied for, 25/11/1904
Special ... £ 9 : 18 : .
Donkey Boiler Fee ... £ . : . : .
Travelling Expenses (if any) £ . : 8 : 2 When received, 30/11/04

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

Committee's Minute

TUES. 29 NOV 1904

Assigned

+ L.M.C. 11.04

MACHINERY CERTIFICATE WRITTEN.



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Certificate (if required) to be sent to Hull

(The Surveyors are requested not to write on or below the space for Committee's Minute.)