

## REPORT ON MACHINERY.

No. 17404

Port of Hull

Received at London Office 12 DEC 1905

No. in Survey held at Hull Date, first Survey July 17<sup>th</sup> Last Survey 8<sup>th</sup> Dec 1905  
 Reg. Book. 77 Suppon the Steel S. K. Concord (Number of Visits 35) Tons Gross 235  
 Master Selby Built at Selby By whom built Messrs Lochane Sons When built 1905  
 Engines made at Hull By whom made Messrs Charles D. Holmes & Co when made 1905  
 Boilers made at Hull By whom made White & Willows when made 1905  
 Registered Horse Power 68 Owners White & Willows Port belonging to Grimsby  
 Nom. Horse Power as per Section 28 68 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 12 1/4" - 22" - 35" Length of Stroke 24" Revs. per minute 112 Dia. of Screw shaft 7 1/2" Material of Steel  
 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 Yes Length of stern bush 30 1/2"  
 Dia. of plain part shaft as per rule 6.38 Dia. of Crank shaft journals as per rule 6.7" Dia. of Crank pin 7" Size of Crank webs 13 1/8" x 4 1/2" Dia. of thrust shaft under  
 collars 7" Dia. of screw 8 1/2" Pitch of screw 11' - 0" No. of blades 4 State whether moveable No Total surface 28 sq ft  
 No. of Feed pumps 1 Diameter of ditto 2 1/8" Stroke 24" Can one be overhauled while the other is at work  
 No. of Bilge pumps 1 Diameter of ditto 2 1/8" 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 two inches In Holds, &c. One each 2" to each slush well,  
one 2" to main hold, and ejector suction from Eng. room bilge holds with  
 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"  
 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  
 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 8) Total Heating Surface of Boilers 1096 sq ft Is forced draft fitted No  
 No. and Description of Boilers One byl. Multi. Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs  
 Date of test 16. 11. 05 Can each boiler be worked separately Yes Area of fire grate in each boiler 32.8 sq ft No. and Description of safety valves to  
each boiler Two Spring Area of each valve 3.98 sq in 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' - 0" Material of shell plates Steel  
 Thickness 1 1/2" Range of tensile strength 29.32 Are they welded or flanged Yes Descrip. of riveting: cir. seams L. D. long. seams D. 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 86 Working pressure of shell by rules 185 lbs Size of manhole in shell 16" x 12"  
 Size of compensating ring 7" x 1 1/2" No. and Description of Furnaces in each boiler 2. plain Material Steel Outside diameter 43"  
 Length of plain part top 5' - 10" Thickness of plates crown 4 1/2" Description of longitudinal joint Welded No. of strengthening rings 0  
 Working pressure of furnace by the rules 185 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 8" Back 9" x 8 1/2" Top 8 1/2" x 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 7/8" - 1 1/2" Area supported by each stay 105.75 sq in Working pressure by rules 204 lbs End plates in steam space:  
 Material Steel Thickness 1 3/32" Pitch of stays 17 1/2" x 17 1/2" How are stays secured sewed into both Working pressure by rules 185 lbs Material of stays Steel  
 Diameter at smallest part 6.210" Area supported by each stay 306.25 sq in Working pressure by rules 202 lbs Material of Front plates at bottom Steel  
 Thickness 7/8" Material of Lower back plate Steel Thickness 15/16" 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 7/8" Back 7/8" Mean pitch of stays 9 1/4"  
 Pitch across wide water spaces 15" Working pressures by rules 180 lbs Girders to Chamber tops: Material Iron Depth and  
 thickness of girder at centre 9" x 1 3/4" Length as per rule 2' - 8" Distance apart 8 3/4" Number and pitch of Stays in each 3 - 8 1/2"  
 Working pressure by rules 193 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



## 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

Plates

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, and bottom and connecting rod bolts, and nuts, two main bearing bolts + nuts, One set coupling bolts and nuts, one set each, air, circulating feed and bilge pump valves, and a quantity of assorted bolts, nuts, etc

The foregoing is a correct description,

Charles O. Scholmer

Dates of Survey while building

During progress of work in shops -

During erection on board vessel -

Total No. of visits

1905: July 17. 27 Aug 15. 21. 22. 25. 31. Sep 7. 8. 12. 13. 19. 26. 27 Oct 3. 4. 10. 13. 19. 24. 25.

Nov 1. 2. 13. 14. 17. 22. 24. 28. 30. Dec 1. 2. 5. 7. 8.

35

Is the approved plan of main boiler forwarded herewith

Yes

## General Remarks

(State quality of workmanship, opinions as to class, &amp;c.)

The machinery and boiler of this vessel have been constructed under special survey, in accordance with the Rules of the Society. 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. 12.05* in the Register Book.

It is submitted that  
this vessel is eligible for  
THE RECORD *L.M.C. 12.05.*

Pms

12.12.05

12.12.05

The amount of Entry Fee.

£

1

When applied for,

Special

£

10

9/12/05

Donkey Boiler Fee

£

8

When received,

Travelling Expenses (if any) £

£

8

29/12/05

FRI. 15 DEC 1905

Committee's Minute

Assigned

+ L.M.C. 12.05

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



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Foundation