

## REPORT ON MACHINERY.

No. 17605

Port of HullReceived at London Office WED. 7 MAR 1906

No. in Survey held at Selby & Hull Date, first Survey Nov. 2/05 Last Survey 28<sup>th</sup> Feby 1906  
 Reg. Book. 35 Supp on the Steel Sc. K. Northward (Number of Visits 27) Tons { Gross 204 Net 63  
 Master Built at Selby By whom built Messrs. Buchanan Sons When built 1906  
 Engines made at } By whom made } Messrs when made }  
 Boilers made at } Hull By whom made } Charles D. Holmes & Co. when made } 1906  
 Registered Horse Power 67 Owners Forward Steam Fishing Co. Ltd Port belonging to Gimsby  
 Nom. Horse Power as per Section 28 66.99 Is Refrigerating Machinery fitted 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" - 21" - 34" Length of Stroke 24" Revs. per minute 112 Dia. of Screw shaft 7" Material of screw shaft 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 Length of stern bush 30 1/2"  
 Dia. of Thrust shaft 6 5/8" Dia. of Crank shaft journals 6 3/4" Dia. of Crank pin 6 3/4" Size of Crank webs 12 3/8" x 4 7/8" Dia. of thrust shaft under collars 6 3/4" Dia. of screw 8" - 6" Pitch of screw 10" - 9" No. of blades 4 State whether moveable No Total surface 27.5 sq ft  
 No. of Feed pumps One Diameter of ditto 2 1/8" Stroke 24" Can one be overhauled while the other is at work  
 No. of Bilge pumps One Diameter of ditto 2 1/8" Stroke 24" Can one be overhauled while the other is at work  
 No. of Donkey Engines Two Sizes of Pumps 2 3/4" x 5" and 2 3/4" x 4" duplex No. and size of Suctions connected to both Bilge and Donkey pumps  
 In Engine Room Two 2" In Holds, &c. One 2" to each slush well, + injector suction from engine room bilge + slush wells, + 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 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 Slush well 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 Yes  
 Is it fitted with a watertight door worked from

OILERS, &c.— (Letter for record 6) Total Heating Surface of Boilers 1110 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 9.2.06 Can each boiler be worked separately Area of fire grate in each boiler 31.3 sq ft No. and Description of safety valves to each boiler Two Spring Area of each valve 3.98 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 1/2" 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 2.0 long. seams D.B.S.I.R  
 Diameter of rivet holes in long. seams 1 3/32" Pitch of rivets 7" Lap of plates or width of butt straps 15"  
 Per centages of strength of longitudinal joint 88.4 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 2 Holmes Material Steel Outside diameter 41"  
 Length of plain part top 2 1/2" bottom 32" Thickness of plates 2 1/2" 32" Description of longitudinal joint Welded No. of strengthening rings 4 Corrugated  
 Working pressure of furnace by the rules 195 lbs Combustion chamber plates: Material Steel Thickness: Sides 11/16" Back 11/16" Top 31/32" Bottom 11/16"  
 Pitch of stays to ditto: Sides 9" x 8 1/2" Back 9" x 8 1/2" Top 8" x 8 1/2" If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 201 lbs  
 Material of stays Steel Diameter at smallest part 1 3/4" Area supported by each stay 105.75 sq in Working pressure by rules 204 lbs End plates in steam space: Material Steel Thickness 1 1/32" Pitch of stays 16" x 16" How are stays secured margin secured into both end plates and washer outside Working pressure by rules 196 lbs Material of stays Steel  
 Diameter at smallest part 5.78 Area supported by each stay 256 sq in Working pressure by rules 225 lbs Material of Front plates at bottom Steel  
 Thickness 31/32" 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 27/32" 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 13 1/4" Length as per rule 2'-8 7/8" Distance apart 8" Number and pitch of Stays in each 3 - 8 1/2"  
 Working pressure by rules 199 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 plates 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



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

The foregoing is a correct description,

Charles Holmes, Manufacturer.

Dates of Survey while building { During progress of work in shops - 1905:- Nov 2, 14, 22, 24, Dec 6, 13, 20, 21, 27 1906:- Jan 2, 9, 11, 19, 22, 26, 30, 31 Feb. 7, 9.  
During erection on board vessel - Feb. 15, 19, 20, 21, 23, 24, 26, 28.  
Total No. of visits 27

Is the approved plan of main boiler forwarded herewith Yes

General Remarks (State quality of workmanship, opinions as to class, &c.) The machinery & boilers of this vessel have been inspected throughout 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. 2.06** in the Register Book.

It is submitted that this vessel is eligible for THE RECORD L.M.C. 2.06

Ex. 7.3.06

7.3.06

The amount of Entry Fee... £ 1 : : : When applied for, 5/31/06  
Special... £ 10 : : :  
Donkey Boiler Fee... £ : : :  
Travelling Expenses (if any) £ : : : 8 2 : : : When received, 31.3.06

Committee's Minute

Assigned

FRI 9 MAR 1906

+ L.M.C. 2.06

MACHINERY CERTIFICATE WRITTEN.

James Barclay  
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.  
1.3.06



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