

# REPORT ON MACHINERY.

No. 18795

Port of Hull

Received at London **TUES. MAR 12 1907**

No. in Survey held at Selby & Hull Date, first Survey Sep 25/06 Last Survey Feb. 26<sup>th</sup> 1907  
 Reg. Book. "Ugadale" (Number of Visits 23)  
 Master Selby Built at Selby By whom built Cochrane & Sons Tons Gross 255  
 Engines made at Hull By whom made Charles D. Holmes & Co. when made 1907 Net 107  
 Boilers made at do By whom made do when made 1907  
 Registered Horse Power 70 Owners Union Steam Fishing Co. Ltd. Port belonging to Grimby  
 Nom. Horse Power as per Section 28 70 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted No

**ENGINES, &c.**—Description of Engines Triple No. of Cylinders 3 No. of Cranks 3  
 Dia. of Cylinders 12 1/2", 22", 35" Length of Stroke 24" Revs. per minute 110 Dia. of Screw shaft as per rule 7.39" Material of screw shaft Iron  
 as fitted 7 1/2"  
 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 yes 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 36"  
 Dia. of Tunnel shaft as per rule 6.60" Dia. of Crank shaft journals as per rule 6.99" Dia. of Crank pin 7 1/8" Size of Crank webs 13 1/2" x 4 3/8" Dia. of thrust shaft under collars 7 1/8" Dia. of screw 8-7 1/2" Pitch of Screw 10-6 to 11-6" 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 2" dia. In Holds, &c. Three 2" dia.  
 Ejector suction from all bilges & 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 1/2" 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 18.10.06 of Stern Tube 18.10.06 Screw shaft and Propeller 18.10.06  
 Is the Screw Shaft Tunnel watertight None Is it fitted with a watertight door ✓ worked from ✓

**BOILERS, &c.**—(Letter for record (5)) Manufacturers of Steel David Colville & Sons Ltd.  
 Total Heating Surface of Boilers 1120 sq. ft. Forced Draft fitted No No. and Description of Boilers One S. C. Cyl. Multitubular  
 Working Pressure 200 lbs Tested by hydraulic pressure to 400 lbs Date of test 30.1.07 No. of Certificate 1543  
 Can each boiler be worked separately ✓ Area of fire grate in each boiler 38 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 205 lbs Are they fitted with easing gear yes  
 Smallest distance between boilers or uptakes and bunkers or woodwork 6 1/2" Mean dia. of boilers 13-0" Length 10-0" Material of shell plates Steel  
 Thickness 1 3/16" Range of tensile strength 28 1/2 - 32 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams DR Lap  
 long. seams DR S. Rivet Diameter of rivet holes in long. seams 1 1/16" Pitch of rivets 7 1/2" Lap of plates or width of butt straps 17 1/8"  
 Per centages of strength of longitudinal joint rivets 92.5 Working pressure of shell by rules 204 lbs Size of manhole in shell 16" x 12"  
 plate 84  
 Size of compensating ring 7" x 1 3/16" No. and Description of Furnaces in each boiler Two Holmes Material Steel Outside diameter 3'-7"  
 Length of plain part top ✓ Thickness of plates crown 23/32" Description of longitudinal joint Welded No. of strengthening rings ✓  
 bottom ✓ bottom 32 Thickness: Sides 23/32" Back 11/16" Top 23/32" Bottom 23/32"  
 Working pressure of furnace by the rules 209 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 9" Back 9 1/4" x 8 5/8" Top 8 3/4" x 8 1/4" If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 205 lbs  
 Material of stays Steel Diameter at smallest part 1 5/8" Area supported by each stay 81" Working pressure by rules 230 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 on w Working pressure by rules 206 Material of stays Steel  
 Diameter at smallest part 3" Area supported by each stay 306" Working pressure by rules 228 Material of Front plates at bottom Steel  
 Thickness 15/16" Material of Lower back plate Steel Thickness 15/16" Greatest pitch of stays 14 1/2" x 8 5/8" Working pressure of plate by rules 213  
 Diameter of tubes 3 1/4" Pitch of tubes 5" x 4 3/4" Material of tube plates Steel Thickness: Front 15/16" Back 29/32" Mean pitch of stays 9 3/4"  
 Pitch across wide water spaces 15" Working pressures by rules 200 lbs Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 9 1/4" x 1 3/4" Length as per rule 2-8 7/8" Distance apart 8 3/4" Number, and pitch of stays in each 3 @ 8 1/2"  
 Working pressure by rules 211 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 ✓

W761-0090

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,  
 Charles D. Holmes, Manufacturer.

Dates of Survey while building: During progress of work in shops— 1906:— Sep. 25, Oct. 3, 9, 16, 18, 24, 31, Nov. 7, 14, Dec. 4, 6, 17, 1907:— Jan. 4, 15, 16, 22.  
 During erection on board vessel— Jan. 30, Feb. 5, 18, 20, 21, 23, 26.  
 Total No. of visits 23.

Is the approved plan of main boiler forwarded herewith Ref 18783  
 " " " donkey " " " " " " " " " " " "

Dates of Examination of principal parts—Cylinders 4.1.07 Slides 5.2.07 Covers 5.2.07 Pistons 5.2.07 Rods 22.1.07  
 Connecting rods 22.1.07 Crank shaft 5.2.07 Thrust shaft 5.2.07 Tunnel shafts ✓ Screw shaft 16.10.06 Propeller 16.10.06  
 Stern tube 16.10.06 Steam pipes tested 21.2.07 Engine and boiler seatings 18.10.06 Engines holding down bolts 18.2.07  
 Completion of pumping arrangements 23.2.07 Boilers fixed 20.2.07 Engines tried under steam 23.2.07  
 Main boiler safety valves adjusted 23.2.07 Thickness of adjusting washers  $F\frac{5}{16}$  A  $\frac{1}{4}$ "  
 Material of Crank shaft Iron Identification Mark on Do. 288 J.K. 5.2.07 Material of Thrust shaft Iron Identification Mark on Do. 288 J.K. 5.2.07  
 Material of Tunnel shafts ✓ Identification Marks on Do. ✓ Material of Screw shafts Iron Identification Marks on Do. 288 J.K. 16.10.06  
 Material of Steam Pipes Solid drawn copper Test pressure 400 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. 2.07 in the Register Book.

It is submitted that this vessel is eligible for THE BOARD H.L.M.C. 2.07.

The amount of Entry Fee.. £ 1 : : : : When applied for.  
 Special .. .. . £ 10 : 10 : : : : 5/31 1907.  
 Donkey Boiler Fee .. .. . £ : : : :  
 Travelling Expenses (if any) £ - : 8 : 2 : : : : 28/3/07 2/4/07

Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.  
 R. S. Kerr  
 12.3.07

Committee's Minute  
 Assigned + L.M.C. 2.07  
 FRI. MAR 15 1907

MACHINERY CERTIFICATE WRITTEN.



Certificate (if required) to be sent to Hull

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