

## REPORT ON MACHINERY.

No. 18783

MON. MAR 4 1907

Port of Hull

Received at London Office

19

No. in Survey held at Selby & Hull Date, first Survey Sep. 25<sup>th</sup> 06 Last Survey Feb. 19<sup>th</sup> 1907  
 Reg. Book. 13 on the Screw Trawler "Volante" (Number of Visits 27)  
 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 Atlas Steam Fishing Co. Ltd. Port belonging to Grimsby  
 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 7 1/2" Material of 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 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 6 1/2" Dia. of Crank shaft journals 6 1/2" Dia. of Crank pin 7 1/8" Size of Crank webs 13 1/2" x 4 1/2" Dia. of thrust shaft under  
 collars 7 1/8" Dia. of screw 8 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 ✓ Is a separate Donkey Suction fitted in Engine room & size 2 1/2" dia  
 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 17.10.06 of Stern Tube 17.10.06 Screw shaft and Propeller 17.10.06  
 Is the Screw Shaft Tunnel watertight None Is it fitted with a watertight door ✓ worked from ✓

OILERS, &c.—(Letter for record (S) Manufacturers of Steel Messrs. David Colville & Sons Ltd.  
 Total Heating Surface of Boilers 1120 sq. ft. Forced Draft fitted No No. and Description of Boilers One S.E. by Mr. Muller  
 Working Pressure 200 lbs Tested by hydraulic pressure to 400 lbs Date of test 15.1.07 No. of Certificate 1539  
 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" Mean dia. of boilers 13'-0" Length 10'-0" Material of shell plates Steel  
 Thickness 1 1/16" 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.P. 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 92.5 Working pressure of shell by rules 204 lbs Size of manhole in shell 16 x 12"  
 Size of compensating ring 7 x 1 1/16" No. and Description of Furnaces in each boiler Two Holmes Material Steel Outside diameter 3'-7"  
 Length of plain part top 23 1/32" Thickness of plates bottom 1/32" Description of longitudinal joint Welded No. of strengthening rings ✓  
 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 1/2" Top 8 3/4 x 8 1/2" 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 1/8" Area supported by each stay 81" Working pressure by rules 230 End plates in steam space:  
 Material Steel Thickness 1 1/32" Pitch of stays 17 1/2 x 17 1/2" How are stays secured by screwing into end plates Working pressure by rules 205 lbs 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 3/8" 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 ✓ 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 fitted \_\_\_\_\_

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.*

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. 8. 9. 16. 17. 24. 31 Nov. 2. 7. 14. Dec. 4. 5. 6. 17 1907:— Jan. 4. 8. 15. 16. 22  
During erection on board vessel — { Feb. 4. 6. 7. 9. 13. 15. 19  
Total No. of visits 27

Is the approved plan of main boiler forwarded herewith *yes*

" " " donkey " " " *✓*

Dates of Examination of principal parts—Cylinders *4.1.07* Slides *30.1.07* Covers *30.1.07* Pistons *22.1.07* Rods *22.1.07*  
Connecting rods *22.1.07* Crank shaft *22.1.07* Thrust shaft *22.1.07* Tunnel shafts *✓* Screw shaft *16.10.06* Propeller *16.10.06*  
Stern tube *9.10.06* Steam pipes tested *7.2.07* Engine and boiler seatings *17.10.06* Engines holding down bolts *4.2.07*  
Completion of pumping arrangements *15.2.07* Boilers fixed *6.2.07* Engines tried under steam *15.2.07*  
Main boiler safety valves adjusted *15.2.07* Thickness of adjusting washers *F 5/16" A 5/16"*  
Material of Crank shaft *Iron* Identification Mark on Do. *22.1.07* Material of Thrust shaft *Iron* Identification Mark on Do. *22.1.07*  
Material of Tunnel shafts *✓* Identification Marks on Do. *✓* Material of Screw shafts *Iron* Identification Marks on Do. *16.10.06*  
Material of Steam Pipes *Solid drawn copper* Test pressure *4.00 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 +LMC 2, 07 in the Register Book.*

It is submitted that  
this vessel is eligible for  
THE RECORD *LMC 2.07*

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

Committee's Minute

TUES. MAR 5 1907

Assigned

*+ LMC 2.07*

MACHINERY CERTIFICATE  
WRITTEN.

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



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Lloyd's Register  
Foundation

Certificate (if required) to be sent to

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