

REPORT ON MACHINERY.

No. 17996

Port of *Knull*

Received at London Office WED. 13 JUN 1906

No. in Survey held at *Selby & Knull* Date, first Survey *Jan 26th* Last Survey *May 25th 1906*
 Reg. Book. *40* Supp. on the *Screw Trawler Father O'Flynn* (Number of Visits *24*)
 Master *Selby* Built at *Selby* By whom built *Cochrane & Sons* Tons { Gross *223*
 Engines made at *Knull* By whom made *Charles D. Holmes & Co.* Net *53*
 Boilers made at *do* By whom made *do* When built *1906*
 Registered Horse Power *1* Owners *The Dublin Steam Trawling Co.* Port belonging to *Dublin*
 Nom. Horse Power as per Section 28 *69.74* 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 *12½, 22, 35* Length of Stroke *24* Revs. per minute *116* Dia. of Screw shaft *7.15* 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 *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 *Plain part* as per rule *6.4* Dia. of Crank shaft journals as per rule *6.7* Dia. of Crank pin *7"* Size of Crank webs *13½ x 4½* Dia. of thrust shaft under
 collars *7"* Dia. of screw *8-7½* Pitch of Screw *11-0"* No. of Blades *4* State whether moveable *No* Total surface *27½ sq. ft.*
 No. of Feed pumps *1* Diameter of ditto *2½"* Stroke *24"* Can one be overhauled while the other is at work *✓*
 No. of Bilge pumps *1* Diameter of ditto *2½"* Stroke *24"* Can one be overhauled while the other is at work *✓*
 No. of Donkey Engines *One* Sizes of Pumps *2¾ x 5"* No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room *Two 2" dia.* In Holds, &c. *One 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 & sized 2½" 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 *6/4/06* of Stern Tube *9/4/06* Screw shaft and Propeller *9/4/06*
 Is the Screw Shaft Tunnel watertight *None* Is it fitted with a watertight door *✓* worked from *✓*

BOILERS, &c.—(Letter for record *(S)* Manufacturers of Steel *Wm Beardmore & Co. Ld.*
 Total Heating Surface of Boilers *1140 sq. ft.* Is Forced Draft fitted *No* No. and Description of Boilers *One 16 cyl. multi.*
 Working Pressure *180 lbs* Tested by hydraulic pressure to *360 lbs* Date of test *26.4.06* No. of Certificate *1468*
 Can each boiler be worked separately *✓* Area of fire grate in each boiler *33.25 sq. ft.* No. and Description of Safety Valves to
 each boiler *Two direct spring* Area of each valve *3.9"* 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 *12"* Mean dia. of boilers *12-6"* Length *10-0"* Material of shell plates *Steel*
 Thickness *1½"* Range of tensile strength *29-32 lbs* Are the shell plates welded or flanged *No* Descrip. of riveting: cir. seams *DR Lap*
 long. seams *DR Lap* Diameter of rivet holes in long. seams *1½"* Pitch of rivets *7"* Top 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 1½"* No. and Description of Furnaces in each boiler *Two plain* Material *Steel* Outside diameter *3-7"*
 Length of plain part top *5-10"* bottom *5-3½"* Thickness of plates crown *4.9"* bottom *6.4"* Description of longitudinal joint *Welded* No. of strengthening rings *✓*
 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 *9 x 8½"* Back *9 x 8½"* Top *8½ x 8½"* If stays are fitted with nuts or riveted heads *Nuts* Working pressure by rules *194 lbs*
 Material of stays *Steel* Diameter at smallest part *1½"* Area supported by each stay *76.5"* Working pressure by rules *244 lbs* End plates in steam space:
 Material *Steel* Thickness *1½"* Pitch of stays *17½ x 17½"* How are stays secured *Nuts & washers* Working pressure by rules *185 lbs* Material of stays *Steel*
 Area at smallest part *6.21* Area supported by each stay *306.25"* 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 *12 x 21"* Working pressure of plate by rules *204 lbs*
 Diameter of tubes *3½"* Pitch of tubes *4½ x 4½"* Material of tube plates *Steel* Thickness: Front *7/8"* Back *7/8"* Mean pitch of stays *9½ x 9½"*
 Pitch across wide water spaces *15"* Working pressures by rules *313 lbs* Girders to Chamber tops: Material *Iron* Depth and
 thickness of girder at centre *9 x 1½"* Length as per rule *2-8"* Distance apart *8½"* Number and pitch of stays in each *30 8½"*
 Working pressure by rules *193 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 *✓*

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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
 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 S. Holmes Manufacturer.

Dates During progress of work in shops— 1906:— Jan 26. Feb 7. 15. 21. 23. Mar 5. 14. 22. 30 Apr 6. 9. 10. 20. 26. 27 May 1. 3
 of Survey During erection on May 10. 11. 14. 18. 21. 22. 25.
 while board vessel —
 building Total No. of visits 24
 Is the approved plan of main boiler forwarded herewith *yes*

" " " donkey " " "
 Dates of Examination of principal parts—Cylinders 27/4/06 1/5/06 Slides 14/5/06 Covers 14/5/06 Pistons 10/5/06 Rods 27/4/06
 Connecting rods 27/4/06 Crank shaft 27/4/06 1/5/06 Thrust shaft 27/4/06 1/5/06 Tunnel shafts ✓ Screw shaft 6/4/06 Propeller 6/4/06
 Stern tube 6/4/06 Steam pipes tested 21/5/06 Engine and boiler seatings 6/4/06 Engines holding down bolts 16/5/06
 Completion of pumping arrangements 22/5/06 Boilers fixed 18/5/06 Engines tried under steam 22/5/06
 Main boiler safety valves adjusted 22/5/06 Thickness of adjusting washers $F \frac{3}{16}$ " $A \frac{1}{4}$ "
 Material of Crank shaft *Steel* Identification Mark on Do. *LLOYDS K.N. 2751 3.1906* Material of Thrust shaft *Steel* Identification Mark on Do. *LLOYDS K.N. 2752 3.1906*
 Material of Tunnel shafts ✓ Identification Marks on Do. ✓ Material of Screw shafts *Steel* Identification Marks on Do. *LLOYDS K.N. 2753 3.1906*
 Material of Steam Pipes *Solid drawn copper* Test pressure 360 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 @ 5, 06 in the Register Book.

It is submitted that
 this vessel is eligible for
 THE RECORD *+ L M @ 5.06*

The amount of Entry Fee. £ 1 : - : -
 Special £ 10 : 7 : -
 Donkey Boiler Fee £ : : -
 Travelling Expenses (if any) £ : 8 : 2
 When applied for, 8/6/1906
 When received, 19.6.06

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

Committee's Minute

FRI 15 JUN 1906

Assigned

MACHINERY CERTIFICATE
 WRITTEN.