

## REPORT ON MACHINERY.

No. 19990

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Date of writing Report *Apr 14 1908* When handed in at Local Office24/4/ 1908 Port of *Hull*No. in Survey held at *Hull*  
Reg. Book.Date, First Survey *Dec 16/07* Last Survey *April 23<sup>rd</sup> 1908*Supp on the *S/Hawler ONWARD*(Number of Visits *35*)Tons { Gross *266*  
Net *112*  
When built *1908*Master *Selby* Built at *Selby* By whom built *Lochane & Sons*Engines made at *Hull* By whom made *C. D. Holmes & Co.* when made *S*Boilers made at *S* By whom made *S* when made *S*Registered Horse Power *—* Owners *Gr Northen S.P. Fishing Co Ltd* Port belonging to *Hull*Nom. Horse Power as per Section 28 *86.98* Is Refrigerating Machinery fitted for cargo purposes *No* Is Electric Light fitted *No*ENGINES, &c.—Description of Engines *Inverted triple expansion* No. of Cylinders *3* No. of Cranks *3*Dia. of Cylinders *13'-22'-27'* Length of Stroke *27'* Revs. per minute *116* Dia. of Screw shaft *7 1/2"* as per rule *7 1/2"* Material of *Iron*  
as fitted *8 1/2"* screw shaftIs 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 tightin 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 partbetween the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive *✓* If twoliners are fitted, is the shaft lapped or protected between the liners *✓* Length of stern bush *42"*Dia. of Tunnel shaft *7 1/2"* as per rule *7 1/2"* Dia. of Crank shaft journals *7 1/2"* as per rule *7 1/2"* Dia. of Crank pin *7 1/2"* Size of Crank webs *4 1/2" x 5"* Dia. of thrust shaft undercollars *7 1/2"* Dia. of screw *10'-0"* Pitch of Screw *11'-9"* No. of Blades *4* State whether moveable *No* Total surface *31.75 sq ft*No. of Feed pumps *2* Diameter of ditto *22"* Stroke *16"* Can one be overhauled while the other is at work *Yes*No. of Bilge pumps *2* Diameter of ditto *22"* Stroke *16"* Can one be overhauled while the other is at work *Yes*No. of Donkey Engines *one* Sizes of Pumps *7 x 4 1/2 x 6"* No. and size of Suctions connected to both Bilge and Donkey pumpsIn Engine Room *2-2 1/2"* In Hold, &c. *1-2 1/2"* Main *hose**2 1/2"* *Exhaust Suction, to all engines with discharge on deck.*No. of Bilge Injections *1* sizes *3 1/2"* Connected to condenser, or to circulating pump *pump* Is a separate Donkey Suction fitted in Engine room & size *3"* *Exhaust*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 *Yes*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 *21.2.08* of Stern Tube *21.2.08* Screw shaft and Propeller *21.2.08*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 *Dana Bolander & Sons*Total Heating Surface of Boilers *1384 sq ft* Is Forced Draft fitted *No* No. and Description of Boilers *1 S.P. Mueschling*Working Pressure *200 lbs.* Tested by hydraulic pressure to *400 lbs.* Date of test *21.3.08* No. of Certificate *1638*Can each boiler be worked separately *✓* Area of fire grate in each boiler *45 sq ft* No. and Description of Safety Valves toeach boiler *2 Spring loaded* Area of each valve *4.9 sq in* 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 *7"* Mean dia. of boilers *13'-6"* Length *10'-9 1/2"* Material of shell plates *Steel*Thickness *1 1/2"* Range of tensile strength *28-32* Are the shell plates welded or flanged *No* Descrip. of riveting: cir. seams *S.R. Lap.*long. seams *S.R. S. rivet* Diameter of rivet holes in long. seams *1 1/2"* Pitch of rivets *8 1/2"* Lap of plates or width of butt straps *18"*Per centages of strength of longitudinal joint *86.7* Working pressure of shell by rules *201* Size of manhole in shell *16' x 12"*Size of compensating ring *Imperial* No. and Description of Furnaces in each boiler *3 plain* Material *Steel* Outside diameter *3'-2"*Length of plain part *6'-4"* Thickness of plates *1 1/2"* Description of longitudinal joint *Welded* No. of strengthening rings *✓*Working pressure of furnace by the rules *201* Combustion chamber plates: Material *Steel* Thickness: Sides *2 1/2"* Back *2 1/2"* Top *4"* Bottom *2 1/2"*Pitch of stays to ditto: Sides *8 1/2" x 8 1/2"* Back *8 1/2" x 8 1/2"* Top *9 1/2" x 8"* If stays are fitted with nuts or riveted heads *Yes* Working pressure by rules *206*Material of stays *Steel* Diameter at smallest part *1 1/2"* Area supported by each stay *72 sq in* Working pressure by rules *252* End plates in steam space:Material *Steel* Thickness *1 1/2"* Pitch of stays *20 x 20* How are stays secured *Stays are secured by nuts and washers* Working pressure by rules *203* Material of stays *Steel*Diameter at smallest part *8-7/8"* Area supported by each stay *400 sq in* Working pressure by rules *227* Material of Front plates at bottom *Steel*Thickness *1 1/2"* Material of Lower back plate *Steel* Thickness *3"* Greatest pitch of stays *12 1/2" x 8 1/2"* Working pressure of plate by rules *221*Diameter of tubes *3 1/2"* Pitch of tubes *5 1/2" x 5"* Material of tube plates *Steel* Thickness: Front *1"* Back *3"* Mean pitch of stays *10 1/4"*Pitch across wide water spaces *13 1/2"* Working pressures by rules *203* Girders to Chamber tops: Material *Steel* Depth andthickness of girder at centre *9 1/2" x 2 1/2"* Length as per rule *3'-3"* Distance apart *9 1/2"* Number and pitch of stays in each *308*Working pressure by rules *—* Superheater or Steam chest; how connected to boiler *—* Can the superheater be shut off and the boiler workedseparately *—* Diameter *—* Length *—* Thickness of shell plates *—* Material *—* Description of longitudinal joint *—* Diam. of rivetholes *—* 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 *—*

W808-0147



VERTICAL DONKEY BOILER—

Manufacturers of Steel

No.	Description		When made	Where fixed
Made at	By whom made			
Working pressure	tested by hydraulic pressure to	Date of test	No. of Certificate	Fire grate area
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
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 rods  
bolts & nuts, two main bearing bolts, one set of coupling bolts &  
nuts, one set of feed & large pump valves, one donkey & one main  
feed check valve, assorted bolts & nuts etc.

The foregoing is a correct description,

PER PRO CHARLES D. HOLMES & Co.

Manufacturer.

26. Allon

Dates of Survey while building  
During progress of work in shops— 1907. Dec. 16. 21 1908. Jan. 2. 3. 9. 10. 14. 15. 18. 20. 21. 24. 25. Feb. 3. 8. 12. 14. 18. 20. 21. 26. 27  
During erection on board vessel— Mar. 3. 9. 12. 14. 18. 21. 26. 27. 28. 30 Apr. 2. 3. 23.  
Total No. of visits 35

Is the approved plan of main boiler forwarded herewith yes

Dates of Examination of principal parts—Cylinders 26.2.08 Slides 14.3.08 Covers 26.2.08 Pistons 3.3.08 Rods 3.3.08  
Connecting rods 26.2.08 Crank shaft 20.2.08 Thrust shaft 3.2.08 Tunnel shafts 14.2.08 Screw shaft 14.2.08 Propeller 14.2.08  
Stern tube 14.2.08 Steam pipes tested 28.3.08. Engine and boiler seatings 21.2.08. Engines holding down bolts 26.3.08.  
Completion of pumping arrangements 23.4.08. Boilers fixed 30.3.08. Engines tried under steam 30.3.08.  
Main boiler safety valves adjusted 30.3.08 Thickness of adjusting washers F 3/4 A 8  
Material of Crank shaft Steel. Identification Mark on Do. 407. J.W.G. Material of Thrust shaft Steel. Identification Mark on Do. 27.2.08.  
Material of Tunnel shafts Steel. Identification Marks on Do. 407. J.W.G. Material of Screw shafts Iron. Identification Marks on Do. 407. J.W.G.  
Material of Steam Pipes Solid drawn copper. Test pressure 400 lbs.

General Remarks

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

The machinery & boiler of this vessel have been constructed under Special Survey, are of good material & workmanship & have been fitted & secured on board in accordance with the Rules. They are now in good working condition & eligible in my opinion to have the notation L. M. C. 4-08 in the Register Book.

This vessel is fitted with Whitehead Bros of Farnley Patent firebars, with a steam jet in the ash pit under the bars & the system is styled by the Builder as Inca Draught

It is submitted that this vessel is eligible for THE RECORD. L. M. C. 4-08.

F. D.

The amount of Entry Fee .. £ 1 : 0 : 0  
Special .. £ 1 : 0 : 0  
Donkey Boiler Fee .. £ - : - : -  
Travelling Expenses (if any) £ - : 8 : 2

When applied for, 24/4/1908

When received, 30/4/1908

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

Committee's Minute

TUES. 28 APR 1908

Assigned

MACHINERY CERTIFICATE WRITTEN



Lloyd's Register Foundation