

# REPORT ON MACHINERY.

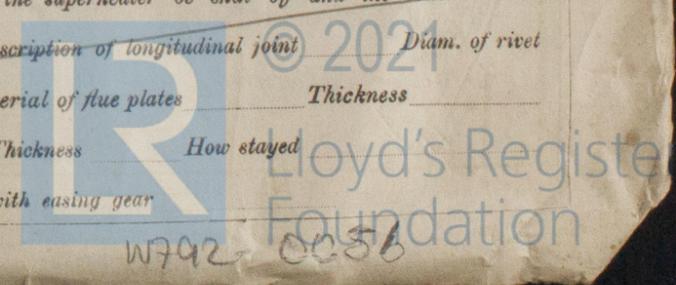
No. 22204  
SAT. 26 FEB 1910

Received at London Office

Date of writing Report Feb. 23 1910 When handed in at Local Office 25/21 1910 Port of Hull  
 No. in Survey held at Hull Date, First Survey Oct 27/09 Last Survey Feb. 17<sup>th</sup> 1910  
 Reg. Book. 33 on the 1/2 Hawker - Lois (Number of Visits 29)  
 Master Selby Built at Selby By whom built Bochrane & Sons Tons { Gross 310  
 Engines made at Hull By whom made Amos & Smith L<sup>d</sup> when made 5 Net 125  
 Boilers made at 5 By whom made 5 when made 5  
 Registered Horse Power 91 Owners Hullwood Steam Fishing & L<sup>d</sup> Port belonging to Hullwood  
 Nom. Horse Power as per Section 28 91 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 1/2 - 22 3/4 - 37 Length of Stroke 26 Revs. per minute 107 Dia. of Screw shaft 7 3/4 as per rule 7 3/4 Material of screw shaft 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 Yes  
 If two liners are fitted, is the shaft lapped or protected between the liners Yes Length of stern bush 2'9"  
 Dia. of Tunnel shaft 6'8" as per rule 6'8" Dia. of Crank shaft journals 7'2" as per rule 7'2" Dia. of Crank pin 7 3/4 Size of Crank webs 15' x 4 1/2 Dia. of thrust shaft under collars 7 3/4 Dia. of screw 9'9" Pitch of Screw 11'3" No. of Blades 4 State whether moceable No. Total surface 34 sq.  
 No. of Feed pumps 2 Diameter of ditto 27 1/2 Stroke 12 Can one be overhauled while the other is at work Yes  
 No. of Bilge pumps 2 Diameter of ditto 27 1/2 Stroke 12 Can one be overhauled while the other is at work Yes  
 No. of Donkey Engines one Sizes of Pumps 6 x 3 x 6 No. and size of Suctions connected to both Bilge and Donkey pumps  
 In Engine Room one - 2' aft In Holds, &c. 2-2' (Fore hold & fish room)  
2' Geyser suction connected to all bilges with discharge on deck.  
 No. of Bilge Injections / sizes 3 Connected to condenser, or to circulating pump pump Is a separate Donkey Suction fitted in Engine room & size 2' Geyser  
 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 11. 1. 10 of Stern Tube 11. 1. 10 Screw shaft and Propeller 11. 1. 10  
 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 Phoenix & Howard, Leeds & Halifax  
 Total Heating Surface of Boilers 1624 sq. Is Forced Draft fitted No. No. and Description of Boilers 1 S.E. Multitubular  
 Working Pressure 180 lbs. Tested by hydraulic pressure to 360 lbs. Date of test 25. 1. 10 No. of Certificate 1729  
 Can each boiler be worked separately Yes Area of fire grate in each boiler 49.55 No. and Description of Safety Valves to each boiler 2 Spring loaded Area of each valve 5.9 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 20" Mean dia. of boilers 14'0" Length 10'9" Material of shell plates Steel  
 Thickness 1/2" Range of tensile strength 29-33 Are the shell plates welded or flanged No. Descrip. of riveting: cir. seams SR Lap  
 long. seams SR Lap Diameter of rivet holes in long. seams 1 5/32 Pitch of rivets 7 3/4 Lap of plates or width of butt straps 17 1/2  
 Per centages of strength of longitudinal joint rivets 89 Working pressure of shell by rules 182 Size of manhole in shell 16 x 12  
 Size of compensating ring 40 x 30 x 1 1/2 No. and Description of Furnaces in each boiler 3 plain Material Steel Outside diameter 34 3/32  
 Length of plain part top 81 Thickness of plates crown 7/16 Description of longitudinal joint Welded No. of strengthening rings one  
 bottom 81 bottom 7/16  
 Working pressure of furnace by the rules 180 Combustion chamber plates: Material Steel Thickness: Sides 13/32 Back 7/16 Top 7/16 Bottom 13/32  
 Pitch of stays to ditto: Sides 9 x 7 3/4 Back 9 1/2 x 9 Top 7 3/4 x 9 If stays are fitted with nuts or riveted heads Yes Working pressure by rules 192  
 Material of stays Steel Diameter at smallest part 2.39 Area supported by each stay 107 Working pressure by rules 200 End plates in steam space: Material Steel Thickness 1/32 Pitch of stays 20 1/2 x 15 How are stays secured Washer Working pressure by rules 181 Material of stays Steel  
 Diameter at smallest part 6.1 Area supported by each stay 307.5 Working pressure by rules 206 Material of Front plates at bottom Steel  
 Thickness 27/32 Material of Lower back plate Steel Thickness 27/32 Greatest pitch of stays 14 3/4 x 9 1/2 Working pressure of plate by rules 380  
 Diameter of tubes 3 1/2 Pitch of tubes 5 x 4 3/4 Material of tube plates Steel Thickness: Front 27/32 Back 27/32 Mean pitch of stays 10 x 9 1/2  
 Pitch across wide water spaces 14 3/4 Working pressures by rules 268 Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 9 x 2 Length as per rule 3-0 Distance apart 9 Number and pitch of stays in each 32 7 3/4  
 Working pressure by rules 188 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



W792 0056

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, one set of coupling bolts & nuts, one set of feed & bly pump valves, one main & one donkey feed check valves assorted bolts & nuts etc*

The foregoing is a correct description,

FOR AMOS & SMITH LTD.

Manufacturer.

*AS Hyde*

Dates of Survey while building: During progress of work in shops— 1909: Oct 27, Nov 2, 5, 10, 20, 25 Dec 1, 2, 7, 8, 13, 16, 18, 25, 30, 1910: Jan 6, 11.  
 During erection on board vessel— Jan 13, 20, 25, 27 Feb 1, 3, 5, 7, 9, 11, 15, 17.  
 Total No. of visits 29  
 Managing Director: *B. J. P.*  
 Is the approved plan of main boiler forwarded herewith *yes.*

Dates of Examination of principal parts—Cylinders 13. 1. 10. Slides 6. 1. 10 Covers 13. 1. 10 Pistons 6. 1. 10 Rods 30. 12. 09  
 Connecting rods 30. 12. 09 Crank shaft 6. 1. 10 Thrust shaft 6. 1. 10 Tunnel shafts ✓ Screw shaft 2. 12. 09 Propeller 2. 12. 09  
 Stern tube 2. 12. 09 Steam pipes tested 6. 2. 10 Engine and boiler seatings 11. 1. 10 Engines holding down bolts 5. 2. 10  
 Completion of pumping arrangements 17. 2. 10. Boilers fixed 11. 2. 10 Engines tried under steam 11. 2. 10  
 Main boiler safety valves adjusted 11. 2. 10. Thickness of adjusting washers *P 5 5/32*  
 Material of Crank shaft *S* Identification Mark on Do. *658. J.M.C.* Material of Thrust shaft *Steel* Identification Mark on Do. *658. J.M.C.*  
 Material of Tunnel shafts ✓ Identification Marks on Do. ✓ Material of Screw shafts *Iron* Identification Marks on Do. *658. J.M.C.*  
 Material of Steam Pipes *Solid drawn copper* Test pressure *360 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 record of T.L.M.C. 2. 10 in the Register Book.*

It is submitted that this vessel is eligible for THE RECORD. + L.M.C 2.10

*J. W. Swaine*  
 28-2-10.

The amount of Entry Fee £ 1 : 0 : 0 When applied for, 25/2/10  
 Special £ 13 : 13 : 0  
 Donkey Boiler Fee £ : : :  
 Travelling Expenses (if any) £ : 8 : 2 When received, 29/2/10

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

Committee's Minute

TUES. 1 MAR 1910

Assigned

+ L.M.C. 2.10.



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Lloyd's Register Foundation

ST  
 FLAT PLAT (If Bar Kee GARBOARD  
 State actual thickness in way of Doubt Bottom.  
 Write 'Sheer Stroke' opposite its corresponding letter  
 DOUBLING O  
 Length and thickness of  
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 RAISED QU  
 BRIDGE SID  
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