

REPORT ON MACHINERY.

No. 21, 153

Port of Hull.

Received at London Office

SAT. 8 MAY 1909

No. in Survey held at Hull.

Date, first Survey Jan. 2nd Last Survey May 4th 1909.

Reg. Book. 65 Supp on the S. Hawley CANADA

(Number of Visits 29)

Master Selby. Built at Selby. By whom built Lochran & Son

Tons } Gross 483

Net 308

When built 1909.

Engines made at Hull By whom made Amos & Smith

when made 5

Boilers made at H By whom made H

when made 5

Registered Horse Power 113. Owners Joseph Hurst

Port belonging to Boulogne.

Nom. Horse Power as per Section 28 113. Is Refrigerating Machinery fitted for cargo purposes No

Is Electric Light fitted Yes.

ENGINES, &c.—Description of Engines

Vertical triple expansion No. of Cylinders 3. No. of Cranks 3.

Dia. of Cylinders 15-25-42 Length of Stroke 27 Revs. per minute 109 Dia. of Screw shaft 8.47 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 Yes.

If two liners are fitted, is the shaft lapped or protected between the liners Yes. Length of stern bush 40

Dia. of Tunnel shaft 7.46 Dia. of Crank shaft journals 7.84 Dia. of Crank pin 8 Size of Crank webs 5 3/4 x 5 Dia. of thrust shaft under collars 8 Dia. of screw 11.6 Pitch of Screw 11.9 No. of Blades 4 State whether moveable No. Total surface 38 sq ft

No. of Feed pumps 2 Diameter of ditto 2 1/2 Stroke 18 Can one be overhauled while the other is at work Yes.

No. of Bilge pumps 2 Diameter of ditto 2 1/2 Stroke 18 Can one be overhauled while the other is at work Yes.

No. of Donkey Engines Two. Sizes of Pumps 6x4 1/2 x 6 - 7x7 x 8 No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room 2-2 (Fore & aft) 2-2 (top & bottom) In Holds, &c. 6-2 (Fore hold, Starboard well, main hold, sea tank (2), & after tank)

No. of Bilge Injections 1 sizes 3 1/2 Connected to condenser, or to circulating pump Condenser Is a separate Donkey Suction fitted in Engine room & size 1-2

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 20.2.09 of Stern Tube 20.7.09. Screw shaft and Propeller 5.4.09.

Is the Screw Shaft Tunnel watertight None. Is it fitted with a watertight door Yes. worked from Yes.

BOILERS, &c.—(Letter for record S) Manufacturers of Steel Phoenix & Howard, Westphalia.

Total Heating Surface of Boilers 1940 sq ft Is Forced Draft fitted No. No. and Description of Boilers 1 S.E. Multitubular

Working Pressure 180. Tested by hydraulic pressure to 360. Date of test 5.4.09. No. of Certificate 1697.

Can each boiler be worked separately Yes. Area of fire grate in each boiler 65 1/2 sq ft No. and Description of Safety Valves to each boiler 2 Spring loaded. Area of each valve 4.37 sq in 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 5 1/2 Mean dia. of boilers 15.0 in Length 11.0 Material of shell plates Steel

Thickness 1 3/16 Range of tensile strength 28.72 Are the shell plates welded or flanged No. Descrip. of riveting: cir. seams SA Lap.

long. seams SA Lap. Diameter of rivet holes in long. seams 1 3/32 Pitch of rivets 8 1/2 Lap of plates or width of butt straps 18

Per centages of strength of longitudinal joint rivets 85.9 Working pressure of shell by rules 185 lbs Size of manhole in shell 16 x 12

Size of compensating ring 30 x 40 x 1 3/16 No. and Description of Furnaces in each boiler 3 Brighton Material Steel. Outside diameter 3' 11 3/4"

Length of plain part top 3 1/2 Thickness of plates crown 3 5/8 Description of longitudinal joint Welded. No. of strengthening rings Yes.

Working pressure of furnace by the rules 211 Combustion chamber plates: Material Steel. Thickness: Sides 2 3/32 Back 4 1/8 Top 4 1/8 Bottom 2 3/32

Pitch of stays to ditto: Sides 7 1/2 x 10 Back 8 x 9 3/8 Top 7 1/2 x 10 If stays are fitted with nuts or riveted heads Yes. Working pressure by rules 229.

Material of stays Steel. Diameter at smallest part 1 7/8 Area supported by each stay 103 sq in Working pressure by rules 209. End plates in steam space: Material Steel. Thickness 1 3/32 Pitch of stays 17 x 18 How are stays secured By washers Working pressure by rules 185 Material of stays Steel

Diameter at smallest part 6 1/8 Area supported by each stay 306 sq in Working pressure by rules 206. Material of Front plates at bottom Steel

Thickness 2 3/32 Material of Lower back plate Steel. Thickness 2 3/32 Greatest pitch of stays 14 x 9 3/8 Working pressure of plate by rules 200

Diameter of tubes 3 1/2 Pitch of tubes 4 7/8 x 4 3/4 Material of tube plates Steel. Thickness: Front 2 1/32 Back 2 1/32 Mean pitch of stays 9 3/8 x 9 3/8

Pitch across wide water spaces 14 Working pressures by rules 183 Girders to Chamber tops: Material Iron Depth and thickness of girder at centre 9 3/4 x 2 1/2 Length as per rule 2-10 Distance apart 10 Number and pitch of stays in each 327 1/2

Working pressure by rules 189. Superheater or Steam chest; how connected to boiler None Can the superheater be shut off and the boiler worked separately Yes.

Diameter 10 Length 10 Thickness of shell plates 1 3/32 Material Steel. Description of longitudinal joint Welded. Diam. of rivet 1 3/32

Pitch of rivets 8 1/2 Working pressure of shell by rules 185 Diameter of flue 10 Material of flue plates Steel. Thickness 1 3/32

Stays stiffened with rings Yes. Distance between rings 10 Working pressure by rules 183 End plates: Thickness 1 3/32 How stayed By washers

Working pressure of end plates 189. Area of safety valves to superheater 103 sq in Are they fitted with easing gear Yes.

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Lloyd's Register Foundation

1918-0034

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 rods bolts & nuts two main bearing bolts, one set of coupling bolt nuts, one set of feed helix pump rollers, one main one donkey feed check valve, one piston rod, one set of air & circulating pump rollers, assorted worm gear, assorted bolt nuts*

The foregoing is a correct description,

FOR AMOS & SMITH LTD.

Manufacturer. *W.S. White* Managing Director.

Dates of Survey while building

During progress of work in shops - -	1909 - Jan 2 7 27 Feb 6 10 20 25 Mar 4 6 11 13 16 23 24 26 31
During erection on board vessel - -	Apr 14 20 23 26 27 29 May 1 4
Total No. of visits	28

Is the approved plan of main boiler forwarded herewith Yes

Dates of Examination of principal parts—Cylinders *23.7.09* Slides *5.4.09* Covers *31.3.09* Pistons *5.4.09* Rods *1.4.09*

Connecting rods *31.3.09* Crank shaft *5.4.09* Thrust shaft *5.4.09* Tunnel shafts _____ Screw shaft *13.3.09* Propeller *26.3.09*

Stern tube *10.2.09* Steam pipes tested *20.4.09* Engine and boiler seatings *5.4.09* Engines holding down bolts *20.4.09*

Completion of pumping arrangements *1.5.09* Boilers fixed *23.4.09* Engines tried under steam *22.4.09*

Main boiler safety valves adjusted *23.4.09* Thickness of adjusting washers *7/8, 5/16*

Material of Crank shaft *Steel* Identification Mark on Do. *484* Material of Thrust shaft *Steel* Identification Mark on Do. *484 7145*

Material of Tunnel shafts _____ Identification Marks on Do. _____ Material of Screw shafts *Steel* Identification Marks on Do. *484 3145*

Material of Steam Pipes *Solid drawn copper* Test pressure *360*

General Remarks (State quality of workmanship, opinions as to class, &c. *The machinery & parts of this vessel have been constructed under Special Survey, all of good material & workmanship, & have been fitted & secured in accordance with the Rules. They are now in good working condition & eligible in my opinion to have record of T.L.M.C. 5-09 in the Register Book.*

It is submitted that this vessel is eligible for **TUB RECORD.** + L M C 5.09 elec. light.

H.S.D.
11/5/09.
R.S.
11.5.09

The amount of Entry Fee.	£ 2 : - : -	When applied for.	
Special	£ 16 : 19 : -	7.5.09	
Donkey Boiler Fee	£ - : - : -		
Traveling Expenses (if any)	£ - : 8 : 2	28.5.09	

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

Committee's Minute **MES. 11 MAY 1909**

Assigned *+ L M C 5.09*



Certificate (if required) to be sent to _____