

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. 2ndLast Survey May 4th

1909.

Reg. Book.

65 Supp on the

S. Hawley CANADA(Number of Visits 29)

Master

Built at Leby.By whom built Lochran & SonTons } Gross 483Net 308When built 1909.Engines made at HullBy whom made Amos & Smithwhen made 5Boilers made at 5By whom made 5when made 5

Registered Horse Power

Owners Joseph HurstPort belonging to Boulogne.Nom. Horse Power as per Section 28 113.Is Refrigerating Machinery fitted for cargo purposes NoIs Electric Light fitted Yes.

ENGINES, &c.—Description of Engines

Inverted triple expansionNo. of Cylinders 3.No. of Cranks 3.Dia. of Cylinders 15-25-42Length of Stroke 27Revs. per minute 109

Dia. of Screw shaft

as per rule 8.47Material of 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 ✓

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

Length of stern bush 40

Dia. of Tunnel shaft

as per rule 7.46

Dia. of Crank shaft journals

as per rule 7.84Dia. of Crank pin 8Size of Crank webs 15 1/2 x 5

Dia. of thrust shaft under

collars 8Dia. of screw 11-6Pitch of Screw 11-9No. of Blades 4State whether moveable No.Total surface 38 1/2No. of Feed pumps 2Diameter of ditto 2 1/2Stroke 18Can one be overhauled while the other is at work Yes.No. of Bilge pumps 2Diameter of ditto 2 1/2Stroke 18Can one be overhauled while the other is at work Yes.No. of Donkey Engines Two.Sizes of Pumps 6 1/2 x 6 - 7 1/2 x 8

No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room 2-2 (4 1/2 x 6 1/2) 3 1/2 x 8In Holds, &c. 6-2 (4 1/2 x 6 1/2) 3 1/2 x 8main tank, sea tank (2), & after tankNo. of Bilge Injections 1sizes 3 1/2Connected to condenser, or to circulating pump CondenserIs a separate Donkey Suction fitted in Engine room & size 1-2Are 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 suctionHow are they protected Wood casingAre 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 20.2.09. Screw shaft and Propeller 5.4.09.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 & Co. Hull & Westphalia.Total Heating Surface of Boilers 1940 1/2Is Forced Draft fitted No.No. and Description of Boilers 1 S.E. MultitubularWorking Pressure 180.Tested by hydraulic pressure to 360.Date of test 5.4.09.No. of Certificate 1697.Can each boiler be worked separately ✓Area of fire grate in each boiler 65 1/2

No. and Description of Safety Valves to

each boiler 2 Spring loaded.Area of each valve 4.37Pressure 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 1/2Mean dia. of boilers 15 1/2Length 11 1/2Material of shell plates SteelThickness 1 3/8Range of tensile strength 28.32Are 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 3/8Pitch of rivets 8 1/2Lap of plates or width of butt straps 18

Per centages of strength of longitudinal joint

rivets 85.9plate 85.6Working pressure of shell by rules 185 lbs.Size of manhole in shell 16 x 12Size of compensating ring 30 x 40 x 1 3/8No. and Description of Furnaces in each boiler 3 BrightonMaterial Steel.Outside diameter 3' 11 1/2"

Length of plain part

top 3bottom 3

Thickness of plates

crown 3 5/8bottom 3 5/8Description of longitudinal joint Welded.No. of strengthening rings ✓Working pressure of furnace by the rules 211Combustion chamber plates: Material Steel.Thickness: Sides 1 3/8Back 1 3/8Top 1 3/8Bottom 1 3/8Working pressure by rules 229.Pitch of stays to ditto: Sides 7 1/2 x 10Back 8 x 9 3/8Top 7 1/2 x 10If stays are fitted with nuts or riveted heads Yes.Working pressure by rules 229.Material of stays Steel.Diameter at smallest part 1 3/8Area supported by each stay 103Working pressure by rules 209.

End plates in steam space:

Material Steel.Thickness 1 3/8Pitch of stays 17 x 18How are stays secured By washersWorking pressure by rules 185Material of stays SteelDiameter at smallest part 6 1/8Area supported by each stay 306Working pressure by rules 206.Material of Front plates at bottom SteelThickness 2 3/8Material of Lower back plate Steel.Thickness 2 3/8Greatest pitch of stays 14 x 9 3/8Working pressure of plate by rules 200Diameter of tubes 3 1/2Pitch of tubes 4 7/8 x 4 1/2Material of tube plates Steel.Thickness: Front 2 1/8Back 2 1/8Mean pitch of stays 9 1/2 x 9 1/2Pitch across wide water spaces 14Working pressures by rules 183Girders to Chamber tops: Material Iron

Depth and

thickness of girder at centre 9 3/4 x 2 1/2Length as per rule 2-10Distance apart 10Number and pitch of stays in each 327 1/2Working pressure by rules 189.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

Pitch of rivets

Working pressure of shell by rules

Diameter of flue

Material of flue plates

Thickness

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 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	Plates
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 & nuts, two main bearing bells, one set of coupling tree & nuts, one set of feed & high pump valves, one main & one donkey feed check valve, one piston rod, one set of air & circulating pump valves, assorted worm gear, assorted tree & 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	Managing Director.
	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 *23.2.09* 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 *7/16, 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 7145*

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 THE RECORD.

+ L M C 5-09
Elec. Light.

H. S. D.
11/5/09

RS
11.5.09

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

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

Committee's Minute

MAY 11 1909

Assigned

+ L M C 5-09

MACHINERY CERTIFICATE
WRITTEN.



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Foundation

Certificate (if required) to be sent to

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