

REPORT ON MACHINERY.

No. 19911

Received at London Office

FRI. 27 MAR 1908

Date of writing Report 26/3/1908 When handed in at Local Office 26/3/1908 Port of Hull.
 No. in Survey held at Hull. Date, First Survey Nov 20/07 Last Survey Mar. 16th 1908.
 Reg. Book. 50 on the Steamer 'LABRADOR' (Number of Visits 32)
 Master Selby. Built at Selby. By whom built Colman & Sons. Tons { Gross 399
 Engines made at Hull. By whom made Amos & Smith when made 1908
 Boilers made at Hull. By whom made Amos & Smith when made 1908
 Registered Horse Power 99. Owners J. Hunt. Port belonging to Boulogne
 Nom. Horse Power as per Section 28 99. 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 14-23-38 Length of Stroke 27 Revs. per minute 116 Dia. of Screw shaft 8 1/2 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 No. 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 No. If two liners are fitted, is the shaft lapped or protected between the liners No. Length of stern bush 40
 Dia. of Tunnel shaft 7 1/2 Dia. of Crank shaft journals 7 1/2 Dia. of Crank pin 7 1/2 Size of Crank webs 15 1/2 x 5 Dia. of thrust shaft under collars 7 1/2 Dia. of screw 10 1/2 Pitch of Screw 11 1/3 No. of Blades 4 State whether moveable No. Total surface 36 sq.
 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 2. Sizes of Pumps 5 x 3 1/2 x 5 - 6 1/2 x 6 1/2 x 6 No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room 1 1/2, 1 1/2 from upper engine large pump main Holds, &c. 3-2. (Food hold, chum well, & water
 Reservoir tank, 2' Ejector suction to all bilges with anchorage on ship's side with non return
 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 2' 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 Hot water return 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 4.1.08 of Stern Tube 4.1.08. Screw shaft and Propeller 4.1.08.
 Is the Screw Shaft Tunnel watertight None Is it fitted with a watertight door Yes worked from Yes

BOILERS, &c.—(Letter for record 5) Manufacturers of Steel Wm Beameson & Sons Colman & Sons
 Total Heating Surface of Boilers 1765 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 12.2.08. No. of Certificate 1632.
 Can each boiler be worked separately Yes Area of fire grate in each boiler 53.62 sq. No. and Description of Safety Valves to each boiler 2 Spring loaded. Area of each valve 6.41. Pressure to which they are adjusted 184 lbs. Are they fitted with easing gear Yes.
 Smallest distance between boilers or uptakes and bunkers or woodwork 6 Mean dia. of boilers 14-0 Length 11-0 Material of shell plates Steel
 Thickness 1 1/4 Range of tensile strength 28-32 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 1/2 Pitch of rivets 7.87 Lap of plates or width of butt straps 1 1/2
 Per centages of strength of longitudinal joint rivets 88. Working pressure of shell by rules 180. 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 3-4 1/2
 Length of plain part top 6-11 3/4 bottom 6-7 1/4 Thickness of plates crown 3/4 bottom 3/4 Description of longitudinal joint lapped No. of strengthening rings Yes
 Working pressure of furnace by the rules 180. Combustion chamber plates: Material Steel. Thickness: Sides 4 1/2 Back 4 1/2 Top 5 Bottom 4 1/2
 Pitch of stays to ditto: Sides 10 x 7 1/2 Back 9 3/4 x 8 Top 9 x 7 1/2 If stays are fitted with nuts or riveted heads None. Working pressure by rules 245.
 Material of stay Steel. Diameter at smallest part 1 3/4 Area supported by each stay 750 Working pressure by rules 248. End plates in steam space: Material Steel. Thickness 1 1/4 Pitch of stays 18 x 16 How are stays secured By hooks Working pressure by rules 184. Material of stays Steel.
 Diameter at smallest part 6-10 Area supported by each stay 2880 Working pressure by rules 220. Material of Front plates at bottom Steel.
 Thickness 3/32 Material of Lower back plate Steel. Thickness 3/32 Greatest pitch of stays 15 1/2 x 9 3/4 Working pressure of plate by rules 180.
 Diameter of tubes 3 1/2 Pitch of tubes 4 1/2 x 4 1/2 Material of tube plate Steel. Thickness: Front 3/32 Back 3/32 Mean pitch of stays 9 1/4
 Pitch across wide water spaces 14 Working pressures by rules 187. Girders to Chamber tops: Material Iron Depth and thickness of girder at centre 9 1/2 x 2 Length as per rule 2-10 Distance apart 9 Number and pitch of stays in each 30 7 1/2
 Working pressure by rules 198. Superheater or Steam chest; how connected to boiler None Can the superheater be shut off and the boiler worked separately Yes
 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

W660-0036

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	
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 tops & two bottom end connecting rods bolts & nuts, two main bearing bolts, one set of coupling bolts, one set of feed & large pump valves, one set of air pump valves, one set of circulating pump valves, assorted bolts & nuts etc.*

The foregoing is a correct description,

FOR AMOS & SMITH
W. S. Hill
 MANAGING PARTNER

Dates of Survey while building
 During progress of work in shops: 1907 - Nov 20, 23, 27, Dec 3, 12, 14, 21, 1908 - Jan 3, 4, 6, 10, 14, 18, 21, 23, 27, 29, Feb 3, 4, 8, 11, 12, 17, 18.
 During erection on board vessel: Feb 21, 25, 26, Mar 2, 6, 10, 12, 16.
 Total No. of visits: 32

Is the approved plan of main boiler forwarded herewith *Yes*
 " " " donkey " " " *Yes*

Dates of Examination of principal parts—Cylinders 29.1.08, Slides 6.2.08, Covers 3.2.08, Pistons 6.2.08, Rods 18.1.08.
 Connecting rods 29.1.08, Crank shaft 27.1.08, Thrust shaft 9.2.08, Tunnel shafts —, Screw shaft 21.2.08, Propeller 4.1.08.
 Stern tube 2.1.08, Steam pipes tested 25.2.08, Engine and boiler seatings 4.1.08, Engines holding down bolts 21.2.08.
 Completion of pumping arrangements 16.3.08, Boilers fixed 6.3.08, Engines tried under steam 6.3.08.
 Main boiler safety valves adjusted 6.3.08, Thickness of adjusting washers 15 F 3/4
 Material of Crank shaft *Steel*, Identification Mark on Do. *415-208*, Material of Thrust shaft *Steel*, Identification Mark on Do. *415-208*
 Material of Tunnel shafts —, Identification Marks on Do. —, Material of Screw shafts *Iron*, Identification Marks on Do. *415-208*
 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, all 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 1/2 L.M.C. 3-08 in the Register Book.*

It is submitted that this vessel is eligible for THE RECORD, 1/2 L.M.C. 3-08. ELEC. LIGHT.

J.H. 27.3.08
J.S. 27.3.08

The amount of Entry Fee .. £ 1 : : : When applied for, 26/3/1908
 Special .. £ 14 : : :
 Donkey Boiler Fee .. £ 7 : : :
 Travelling Expenses (if any) £ 8 : : : When received, 31.3.1908

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

Committee's Minute **TUES. 31 MAR 1908**
 Assigned + L.M.C. 3-08
elec. light.



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

MACHINERY CERTIFICATE WRITTEN.