

REPORT ON MACHINERY.

No. 20,422.

Received at London Office

MUN. 17 AUG 1908

Date of writing Report 14.8.08 When handed in at Local Office 14.8.08 Port of Hull
 No. in Survey held at Hull Date, First Survey Mar 3rd Last Survey Aug 5th 1908
 Reg. Book. 8 Supp. on the 1st Lawler ANTONIO (Number of Visits 36) Gross 202
 Master Built at Hull By whom built Eales & Co. Tons Net 79
 Engines made at Hull By whom made Amos & Smith when made 1908
 Boilers made at Hull By whom made 1 when made 1908
 Registered Horse Power 46 Owners Kelvin's Steam Towing & Co. Port belonging to Hull
 Nom. Horse Power as per Section 28 46 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted No

ENGINES, &c.—Description of Engines *Two-cylinder expansion* No. of Cylinders 3 *2.23* No. of Cranks 3
 Dia. of Cylinders 10-16 1/2-28 Length of Stroke 24 Revs. per minute 99 Dia. of Screw shaft as per rule 15 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 32
 Dia. of Tunnel shaft as per rule 5.75 Dia. of Crank shaft journals as per rule 6 1/2 Dia. of Crank pin 6 1/2 Size of Crank webs 17 1/2 x 4 1/2 Dia. of thrust shaft under
 collars 6 1/2 Dia. of screw 10-0 Pitch of Screw 9-1 1/2 (mean) No. of Blades 4 State whether moveable No Total surface 29.8 ft.
 No. of Feed pumps 1 Diameter of ditto 2 1/2 Stroke 11 Can one be overhauled while the other is at work Yes
 No. of Bilge pumps 1 Diameter of ditto 2 1/2 Stroke 11 Can one be overhauled while the other is at work Yes
 No. of Donkey Engines 2 Sizes of Pumps 6 1/2 x 3 1/2 5 x 5 x 5 No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room 2-2 (Ford & apt) In Holds, &c. 2-2 (Batten tank, main
 hold). 2 Eye in suction to all holds with an change or deck.
 No. of Bilge Injections 1 sizes 2 1/2 Connected to condenser, or to circulating pump Yes Is a separate Donkey Suction fitted in Engine room & size 2-2 Eye in
 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 No
 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 1 1/2 in suction How are they protected Under 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 25.6.08 of Stern Tube 25.6.08 Screw shaft and Propeller 25.6.08
 Is the Screw Shaft Tunnel watertight No Is it fitted with a watertight door Yes worked from Yes

BOILERS, &c.—(Letter for record S.) Manufacturers of Steel Phoenix & Hornsby. West & Platt in.
 Total Heating Surface of Boilers 750 ft Is Forced Draft fitted No No. and Description of Boilers 1-SE. Muenchmuller.
 Working Pressure 200 lbs. Tested by hydraulic pressure to 400 lbs. Date of test 8.7.08. No. of Certificate 1652.
 Can each boiler be worked separately Yes Area of fire grate in each boiler 25.5 ft. No. and Description of Safety Valves to
 each boiler 2 Spring loaded. Area of each valve 3.14 Pressure to which they are adjusted 205. Are they fitted with easing gear Yes.
 Smallest distance between boilers or uptakes and bunkers or woodwork 6 1/2 Ext. Mean dia. of boilers 10-7 Length 9-3 3/4 Material of shell plates Steel.
 Thickness 3/4 Range of tensile strength 28-32 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams 2 1/2 Lap.
 long. seams 2 1/2 Diameter of rivet holes in long. seams 1 1/2 Pitch of rivets 7-6 Lap of plates or width of butt straps 16 1/2
 Per centages of strength of longitudinal joint rivets 100 plate 88.2 Working pressure of shell by rules 201. Size of manhole in shell 16 x 12
 Size of compensating ring 30 x 40 x 3/4 No. and Description of Furnaces in each boiler 2 plain Material Steel. Outside diameter 2-11 1/2
 Length of plain part top 6 1/2 bottom 6 1/2 Thickness of plates crown 1 1/4 bottom 1 1/4 Description of longitudinal joint welded. No. of strengthening rings 1
 Working pressure of furnace by the rules 228. Combustion chamber plates: Material Steel. Thickness: Sides 3/4 Back 1/2 Top 1/2 Bottom 3/4
 Pitch of stays to ditto: Sides 8 3/4 x 8 1/2 Back 8 3/4 x 8 Top 1 1/2 x 8 1/4 If stays are fitted with nuts or riveted heads Yes Working pressure by rules 239.
 Material of stays Steel. Diameter at smallest part 1 1/2-2.06 Area supported by each stay 74.3 Working pressure by rules 249. End plates in steam space:
 Material Steel. Thickness 1 1/2 Pitch of stays 2 1/2 x 3 1/4 How are stays secured 2 1/2 Water Working pressure by rules 246. Material of stays Steel.
 Diameter at smallest part 4/4 Area supported by each stay 169 Working pressure by rules 250. Material of Front plates at bottom Steel
 Thickness 1 1/2 Material of Lower back plate Steel. Thickness 1 1/2 Greatest pitch of stays 14 x 8 Working pressure of plate by rules 234
 Diameter of tubes 3 1/2 Pitch of tubes 4 1/2 x 4 1/2 Material of tube plates Steel. Thickness: Front 1 1/2 Back 3/4 Mean pitch of stays 9
 Pitch across wide water spaces 13 3/4 Working pressures by rules 203 Girders to Chamber tops: Material Iron Depth and
 thickness of girder at centre 8 1/2 x 1 1/2 Length as per rule 30 3/8 Distance apart 7 3/8 Number and pitch of stays in each 208 1/4
 Working pressure by rules 232 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

1137-0090

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, two main turning bolts, one set of coupling bolts, one set of feed & high pump valves, one main & one donkey feed check valve, assorted bolts, nuts etc.*

The foregoing is a correct description,

James & Smith Manufacturer.

Dates of Survey while building: During progress of work in shops— 1908:— Mar 3, 9, 14, 18, 31, Apr 6, 8, 13, 16, 22, 28, May 2, 6, 9, 11, 16, 19, 23, 26, 30, June 2, 6, 9, 12, 19, 25, 27, July 2, 4, 8, 11, 13, 22, 23, 27, 28, Aug 5.

Is the approved plan of main boiler forwarded herewith *Ref 20.331*

Dates of Examination of principal parts—Cylinders 16.5.08, Slides 6.6.08, Covers 27.6.08, Pistons 6.6.08, Rods 28.4.08, Connecting rods 23.5.08, Crank shaft 27.6.08, Thrust shaft 9.5.08, Tunnel shafts ✓, Screw shaft 30.5.08, Propeller 6.6.08, Stern tube 6.6.08, Steam pipes tested 23.7.08, Engine and boiler seatings 22.7.08, Engines holding down bolts 22.7.08, Completion of pumping arrangements 5.8.08, Boilers fixed 22.7.08, Engines tried under steam 28.7.08, Main boiler safety valves adjusted 28.7.08, Thickness of adjusting washers *P 3.53*, Material of Crank shaft *Steel*, Identification Mark on Do. *430. 27.6.08 J.H.G.*, Material of Thrust shaft *Steel*, Identification Mark on Do. *430. 27.6.08 J.H.G.*, Material of Tunnel shafts ✓, Identification Marks on Do. ✓, Material of Screw shafts *Iron*, Identification Marks on Do. *430. 27.6.08 J.H.G.*, Material of Steam Pipes *Solid drawn copper*, Test pressure *40 lbs.*

General Remarks (State quality of workmanship, opinions as to class, &c. *The machinery & boiler of this vessel have been constructed under Special License, are 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 V.L.M.C. 8-08 in the Register Book.*

It is submitted that this vessel is eligible for THE RECORD. 7 LMC 8-08

J.W.R.
17.8.08

The amount of Entry Fee £ 100 : 0 : 0 When applied for, 15/8/08
Special £ 8 : 0 : 0
Donkey Boiler Fee £ - : - : -
Travelling Expenses (if any) £ - : - : - When received, 31.8.08

Committee's Minute

11.8.18 AUG 1908

Assigned

LMC 8-08

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



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MACHINER
WRITTEN

Certificate (if required) to be sent to

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