

REPORT ON MACHINERY.

No. 23713

Received at London Office

JUL 23 MAY 1911

Date of writing Report May 13 1911 When handed in at Local Office

17.5-1911 Port of Hull

No. in Survey held at Hull

Date, First Survey Aug 27

Last Survey May 4

1911

Reg. Book.

36 Supp. on the 1/2 ton NORMAN

(Number of Visits 74)

Gross 345

Net 135

Master Built at Beverley By whom built Brok. William Gemmell When built 1911

Engines made at Hull By whom made Amos Smith Ltd when made 5

Boilers made at 5 By whom made 5 when made 5

Registered Horse Power 87 Owners Imperial Steam Towing Co Ltd Port belonging to Hull

Nom. Horse Power as per Section 28 87 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines

Inverted triple expansion

No. of Cylinders 3

No. of Cranks 3

Dia. of Cylinders 13-22-37 Length of Stroke 24 Revs. per minute 115 Dia. of Screw shaft as per rule 7.68 as fitted 8.2 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 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 4'0"

Dia. of Tunnel shaft as per rule 6.8 as fitted 7.2 Dia. of Crank shaft journals as per rule 7.14 as fitted 7.4 Dia. of Crank pin 7.2 Size of Crank webs 5x4 1/2 Dia. of thrust shaft under

collars 7 1/2 Dia. of screw 9-6 Pitch of Screw 10-10 No. of Blades 4 State whether moveable No Total surface 34 sq. ft.

No. of Feed pumps 4 Diameter of ditto 3 Stroke 13 Can one be overhauled while the other is at work Yes

No. of Bilge pumps 2 Diameter of ditto 3 Stroke 13 Can one be overhauled while the other is at work Yes

No. of Donkey Engines 2 Sizes of Pumps 6x3x6 - 5x5x5 No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room 2-2 (7/8" dia) 1-2 Strokehold In Holds, &c. 4-2 (4" dia, hull and main hold

after fore room) 2-2 (2" dia) Suction to all holds with discharge on deck

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

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 Cold Suction How are they protected With 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 13.2.11. of Stern Tube 13.2.11. Screw shaft and Propeller 13.2.11

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

BOILERS, &c.—(Letter for record S)

Manufacturers of Steel Phoenix & Sons, Westphalia

Total Heating Surface of Boilers 1476 sq. ft. Is Forced Draft fitted No No. and Description of Boilers 1 S.E. 9" horizontal

Working Pressure 200 lbs. Tested by hydraulic pressure to 400 lbs. Date of test 23.3.11. No. of Certificate 1795

Can each boiler be worked separately Yes Area of fire grate in each boiler 50.8 sq. ft. No. and Description of Safety Valves to

each boiler 2 Spring loaded Area of each valve 4.9 sq. ft. Pressure to which they are adjusted 205 lbs. Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork 6 1/2 Mean dia. of boilers 13-0 Length 10-6 Material of shell plates Steel

Thickness 1/2 Range of tensile strength 29-33 ksi Are the shell plates welded or flanged No Descrip. of riveting: cir. seams 5/8" lap

long. seams 5/8" 5" rivets Diameter of rivet holes in long. seams 1 1/8 Pitch of rivets 8 1/2 Lap of plates or width of butt straps 17 1/2

Per centages of strength of longitudinal joint rivets 87 plate 85.9 Working pressure of shell by rules 200 lbs. Size of manhole in shell 16x12

Size of compensating ring 40x30x1/8 No. and Description of Furnaces in each boiler 3 plain Material Steel Outside diameter 3'2 1/2

Length of plain part top 6'7 3/8 bottom 5'2 1/2 Thickness of plates crown 1 1/8 bottom 1 1/2 Description of longitudinal joint welded No. of strengthening rings

Working pressure of furnace by the rules 209 Combustion chamber plates: Material Steel Thickness: Sides 7/16 Back 7/16 Top 7/16 Bottom 3/4

Pitch of stays to ditto: Sides 9 1/2 x 8 Back 8 1/2 x 8 1/2 Top 8 1/2 x 9 1/2 If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 212

Material of stays Steel Diameter at smallest part 1 1/2 Area supported by each stay 76 Working pressure by rules 242 End plates in steam space:

Material Steel Thickness 1/8 Pitch of stays 17 1/2 x 17 How are stays secured 10 washers Working pressure by rules 201 Material of stays Steel

Diameter at smallest part 1 1/2 Area supported by each stay 298 Working pressure by rules 250 Material of Front plates at bottom Steel

Thickness 1/2 Material of Lower back plate Steel Thickness 1/2 Greatest pitch of stays 14 x 8 1/2 Working pressure of plate by rules 225

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

Pitch across wide water spaces 14 Working pressures by rules 201 Girders to Chamber tops: Material Steel Depth and

thickness of girder at centre 9 1/2 x 2 1/4 Length as per rule 2-10 Distance apart 9 1/2 Number and pitch of stays in each 30 8 1/2

Working pressure by rules 238 Superheater or Steam chest; how connected to boiler 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

W383-0225

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	Radius of do.	Stayed by		
Diameter of uptake	Thickness of uptake plates	Thickness of water tubes	Dates of survey		

SPARE GEAR. State the articles supplied:— Two top's two bottom end connecting rods & bolts & nuts, two main bearing bolts & nuts, one set of coupling bolts & nuts, one set of feed & bilge pump valves, one set of air & circulating pump valves, one main & one donkey feed check valve, assorted bolts & nuts etc.

The foregoing is a correct description,

FOR AMOS & SMITH LTD.

Manufacturer.

W. B. Hill

Dates of Survey while building: During progress of work in shops -- 1910: Aug 27, Sep 8, 10, 14, 17, 21, 26, Oct 3, 6, 8, 13, 14, 17, 18, 21, 27, 31. Managing Director per Mr. Hill Nov 2, 5, 9, 10, 15, 17, 19, 22. During erection on board vessel -- Nov 24, 26, 29, Dec 2, 8, 13, 16, 20, 22, 30, 1911: Jan 5, 10, 12, 17, 20, 21, 23, 25, 27, Feb 4, 6, 7, 8, 9, 13, 15, 17, 20, 24, Mar 2, 8, 11, 13, 21, 23, 24, 27, Apr 4, 6, 7, 10, 13, 18, 20, 26, May 1, 3, 4. Total No. of visits 74. Is the approved plan of main boiler forwarded herewith R/L 23614

Dates of Examination of principal parts—Cylinders 13.1.11 Slides 27.3.11 Covers 20.2.11 Pistons 20.2.11 Rods 13.3.11 Connecting rods 13.3.11 Crank shaft 15.2.11 Thrust shaft 15.2.11 Tunnel shafts 15.2.11 Screw shaft 24.11.10 Propeller 24.11.10 Stern tube 24.11.10 Steam pipes tested 16.4.11 Engine and boiler seatings 13.2.11 Engines holding down bolts 10.4.11 Completion of pumping arrangements 4.5.11 Boilers fixed 20.4.11 Engines tried under steam 26.4.11 Main boiler safety valves adjusted 26.4.11 Thickness of adjusting washers F 7/16 A 1/2. Material of Crank shaft Steel. Identification Mark on Do. 15.2.11 Material of Thrust shaft Steel. Identification Mark on Do. 15.2.11 Material of Tunnel shafts Steel. Identification Marks on Do. 15.2.11 Material of Screw shafts Iron. Identification Marks on Do. 15.2.11 Material of Steam Pipes Solid drawn copper 15.2.11 Test pressure 400 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 & are respectfully submitted as being eligible in my opinion to have record of T.L.M.C. 5-11 in the Register Book.

It is submitted that this vessel is eligible for THE RECORD + LMC 5.11.

J.W.D. 13/5/11

The amount of Entry Fee .. £ 1 : 0 : 0 When applied for, Special .. £ 13 : 0 : 0 22-5-11 Donkey Boiler Fee .. £ 2 : 0 : 0 When received, Travelling Expenses (if any) £ 2 : 0 : 0 31/5/11

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

Committee's Minute FRI. 26 MAY 1911

Assigned

FRI. FEB. 9 - 1912



© 2020 Lloyd's Register Foundation