

REPORT ON MACHINERY.

No. 24840

Port of Sunderland

Received at London Office

MAY 19 1911

No. in Survey held at Sunderland

Date, first Survey 19 Oct 1910

Last Survey 9 May 1911

Reg. Book. S.S. Bohème

on the

S.S. Bohème

(Number of Visits 38)

Gross 4432

Net 2721

When built 1911

Master Johritovich

Built at Sunderland

By whom built H. Delfords Sons Ltd

(No 1022)

Engines made at Sunderland

By whom made H. Delfords Sons Ltd

(No 1026)

when made 1911

Boilers made at Sunderland

By whom made H. Delfords Sons Ltd

(No 1022)

when made 1911

Registered Horse Power

Owners Johritovich, Manay & Sapiro

St. M. Marimolich

Port belonging to Mussimpicolo

Nom. Hors. Power as per Section 28 383

Is Refrigerating Machinery fitted for cargo purposes no

Is Electric Light fitted no

ENGINES, &c.—Description of Engines

Triple Expansion

No. of Cylinders 3

No. of Cranks 3

Dia. of Cylinders 25" x 41" x 68"

Length of Stroke 45"

Revs. per minute 110

Dia. of Screw shaft 13 1/2"

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 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 6'-0"

Dia. of Tunnel shaft 12-41"

Dia. of Crank shaft journals 12 1/2"

Dia. of Crank pin 13 1/2"

Size of Crank webs 18 1/2" x 9 1/2"

Dia. of thrust shaft under collars 13 1/2"

Dia. of screw 16-9"

Pitch of Screw 16'-6"

No. of Blades 4

State whether moceable no

No. of Feed pumps 2

Diameter of ditto 4 1/2"

Stroke 24"

Can one be overhauled while the other is at work yes

No. of Bilge pumps 2

Diameter of ditto 4 1/2"

Stroke 24"

Can one be overhauled while the other is at work yes

No. of Donkey Engines 3

Sizes of Pumps 2 @ 6" x 4" x 6", 1 @ 10" x 10" x 10"

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

In Engine Room 4 @ 3 1/2"

In Holds, &c. No 1 2 @ 3 1/2", No 2 2 @ 3 1/2", No 3 2 @ 3 1/2", No 4 (aft hold) 1 @ 3 1/2", Sumped well 1 @ 3 1/2"

No. of Bilge Injections 1

Connected to condenser, or to circulating pump C.P.

Is a separate Donkey Suction fitted in Engine room & size yes 3 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 none

How are they protected yes

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 17-4-11

of Stern Tube 17-4-11

Screw shaft and Propeller 21-4-11

Is the Screw Shaft Tunnel watertight yes

Is it fitted with a watertight door yes

worked from top platform

BOILERS, &c.—(Letter for record)

Manufacturers of Steel Spence & Sons

Total Heating Surface of Boilers 6536.4 sq ft

Forced Draft fitted no

No. and Description of Boilers Two single ended (aft)

Working Pressure 180 lbs

Tested by hydraulic pressure to 360 lbs

Date of test 20-3-11

No. of Certificate 2900

Can each boiler be worked separately yes

Area of fire grate in each boiler 61 sq ft

No. and Description of Safety Valves to each boiler 2 Spring loaded

Area of each valve 12.56 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 18"

Mean dia. of boilers 15'-4"

Length 10'-10"

Material of shell plates Steel

Thickness 1 1/4"

Range of tensile strength 28-32 tons

Are the shell plates welded or flanged no

Descrip. of riveting: cir. seams DR

long. seams T.R.D.B.S.

Diameter of rivet holes in long. seams 1 1/8"

Pitch of rivets 8 1/4"

Leop. of plates or width of butt straps 19 1/2" x 1 1/2"

Per centages of strength of longitudinal joint 92%

Working pressure of shell by rules 182.9 lbs

Size of manhole in shell 16 x 12

Size of compensating ring dished

No. and Description of Furnaces in each boiler Three Corrugated

Material Steel

Outside diameter 47 1/2"

Length of plain part top

Thickness of plates bottom

Description of longitudinal joint weld

No. of strengthening rings none

Working pressure of furnace by the rules 184 lbs

Combustion chamber plates: Material Steel

Thickness: Sides 2 1/2"

Back 2 1/2"

Top 2 1/2"

Bottom 1 3/4"

Pitch of stays to ditto: Sides 9 x 9"

Back 9 x 9"

Top 9 x 9"

If stays are fitted with nuts or riveted heads nuts

Working pressure by rules 183 lbs

Material of stays Steel

Diameter at smallest part 1 3/8"

Area supported by each stay 90 sq in

Working pressure by rules 203 lbs

End plates in steam space: Material of stays

Material Steel

Thickness 1 3/8"

Pitch of stays 16 x 19"

How are stays secured D.H. Wash

Working pressure by rules 183 lbs

Material of Front plates at bottom Steel

Diameter at smallest part 2 1/4"

Area supported by each stay 304 sq in

Working pressure by rules 208 lbs

Material of Lower back plate Steel

Thickness 1 1/2"

Greatest pitch of stays 13"

Working pressure of plate by rules 182 lbs

Diameter of tubes 3 1/2"

Pitch of tubes 4 1/2" x 4 1/2"

Material of tube plates Steel

Thickness: Front 1 5/16"

Back 1 3/16"

Mean pitch of stays 10 1/8"

Pitch across wide water spaces 13 1/4"

Working pressures by rules 192 lbs

Girders to Chamber tops: Material Steel

Depth and thickness of girder at centre 2 @ 8 1/2" x 3 1/2"

Length as per rule 31"

Distance apart 9"

Number and pitch of stays in each 2 @ 9"

Working pressure by rules 188 lbs

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

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W633-0251

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:— 2 Crank rods top end bolts + nuts, 2 Crank rod bottom end bolts + nuts, 2 Main Bearing bolts + nuts, 1 set coupling bolts, 1 set feed's bridge pump valves, 1 propeller, 6 Junking bolts, 6 lignite cover studs + nuts, 1 Tail end shaft, Assorted bolts nuts + iron.

The foregoing is a correct description,

WILLIAM DOXFORD & SONS, Limited.

Manufacturer.

William Doxford Director.

Dates of Survey while building	During progress of work in shops—	1910 Oct 19 24 Mar 2 3 7 14 22 30 Dec 7 15 19 28 1911 Jan 5 11 18 26 Feb 2 8 14 16 22 28
	During erection on board vessel—	Mar 4 8 17 20 23 30 Apr 7 12 21 24 25 26 May 2 4 9
	Total No. of visits	(38)

Is the approved plan of main boiler forwarded herewith Yes

Dates of Examination of principal parts—	Cylinders 30-11-10	Slides 8-2-11	Covers 28-12-10	Pistons 28-12-10	Rods 5-1-11
Connecting rods	9-10-10	Crank shaft 18-1-11	Thrust shaft 9-2-11	Tunnel shafts 4-4-11	Screw shaft 8-2-11
Stern tube	8-2-11	Steam pipes tested 24+25-4-11	Engine and boiler seatings 17-4-11	Engines holding down bolts 26-4-11	
Completion of pumping arrangements	2-5-11	Boilers fixed 21-4-11	Engines tried under steam 2-5-11		
Main boiler safety valves adjusted	2-5-11	Thickness of adjusting washers	aft top 1 1/16, 5 5/16, 5 5/16, 5 5/16, 5 3/8, 5 3/8, 5 3/8		
Material of Crank shaft	Steel	Identification Mark on Do. 1684 ATP	Material of Thrust shaft	Steel	Identification Mark on Do. 1403 ATP
Material of Tunnel shafts	Steel	Identification Marks on Do. 1422 ATP, 1423 ATP, 1424 ATP, 1426 H.S.	Material of Screw shafts	Steel	Identification Marks on Do. 1410 H.S., 1411 H.S.
Material of Steam Pipes	8 1/2 Copper pipes 4 W.C.		Test pressure	400 lbs	

General Remarks (State quality of workmanship, opinions as to class, &c.)

The Machinery of this vessel has been built under special survey the materials and workmanship are of good quality & the boilers were satisfactorily tested under hydraulic pressure. The whole of the machinery has been securely fitted on board & satisfactorily tried under steam.

The Machinery of this vessel is in good & safe working condition & eligible in my opinion to be classed & have record **L.M.C 5-11** in the Register Book.

It is submitted that this vessel is eligible for THE RECORD + L.M.C 5.11.

W.D. P.R.
19/5/11

The amount of Entry Fee..	£ 3 :-	When applied for,
Special	£ 30 3 0	16.5.1911
Donkey Boiler Fee .. .	£ :	When received,
Travelling Expenses (if any) £	:	18.5.1911

William Doxford
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute

TUES. 23 MAY 1911

Assigned

MACHINERY CERTIFICATE
GRANTED



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Lloyd's Register Foundation

Certificate (if required) to be sent to the Registrar of Shipping for the Committee's Minute.