

REPORT ON MACHINERY.

No. 24704

SAT. 21 JAN 1911

Port of Sunderland Received at London Office _____
 No. in Survey held at Sunderland Date, first Survey June 24, 1910 Last Survey Jan 13 1911
 Reg. Book. S.S. "Mediterraneo" (Number of Visits 25)
 on the S.S. "Mediterraneo" Tons { Gross 4539 Net 2800
 Master Carabocchia Built at Sunderland By whom built Wm Doxford & Sons Ltd No 1420 When built 1910-11
 Engines made at Sunderland By whom made Wm Doxford & Sons Ltd when made do
 Boilers made at Sunderland By whom made Wm Doxford & Sons Ltd when made do
 Registered Horse Power _____ Owners Soc. Anon. di Nav. e Rip. Lucino Port belonging to Lussimpiccola
 Nom. Horse Power as per Section 28 395 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 15" Revs. per minute 94 Dia. of Screw shaft as per rule 13 1/8" 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 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 ✓
 If two liners are fitted, is the shaft lapped or protected between the liners ✓ Length of stern bush 42"
 Dia. of Tunnel shaft as per rule 12 1/2" Dia. of Crank shaft journals as per rule 13 1/8" Dia. of Crank pin 13 1/2" Size of Crank webs 8 1/8" Dia. of thrust shaft under collars 13 1/8" Dia. of screw 16-9" Pitch of Screw 16-6" No. of Blades 4 State whether moveable no Total surface 84 sq ft
 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 10" x 10", 6" x 6", 6" x 6" No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room 4 @ 3 1/2" + 1 @ 3 1/2" special In Holds, &c. No 1 2 @ 3 1/2", No 2 2 @ 3 1/2"
 No. of Bilge Injections 1 sizes 6" Connected to condenser, or to circulating pump C.P. Is a separate Donkey Suction fitted in Engine room & size 1 @ 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 ✓
 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 Bilge suction How are they protected Wood casings
 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 13-9-10 of Stern Tube 13-9-10 Screw shaft and Propeller 19-12-10
 Is the Screw Shaft Tunnel watertight yes Is it fitted with a watertight door yes worked from Top E.R. Grating

BOILERS, &c.—(Letter for record 8) Manufacturers of Steel John Spencer & Sons Ltd
 Total Heating Surface of Boilers 4250 sq ft Is Forced Draft fitted yes No. and Description of Boilers Two Single ended
 Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 6-9-10 No. of Certificate 2860
 Can each boiler be worked separately yes Area of fire grate in each boiler 52.5 sq ft No. and Description of Safety Valves to each boiler 2 - spring loaded Area of each valve 12.566 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 1'-3" Mean dia. of boilers 13-9" Length 11-6" Material of shell plates Steel
 Thickness 1 1/8" Range of tensile strength 28-32 tons Are the shell plates welded or flanged no Descrip. of riveting: cir. seams D.R. lap
 long. seams T.R.D.B.S. Diameter of rivet holes in long. seams 13/16" Pitch of rivets 8 1/4" 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 182 lbs Size of manhole in shell 16 x 12
 Size of compensating ring flanged No. and Description of Furnaces in each boiler 3 Corr Material Steel Outside diameter 45 1/4"
 Length of plain part top 3 1/2" Thickness of plates crown 3 1/2" Description of longitudinal joint weld No. of strengthening rings none
 Working pressure of furnace by the rules 180 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 1/2" x 8 1/2" Back 9 1/2" x 8 1/2" Top 10 x 8" 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 1/2" Area supported by each stay 80 sq in Working pressure by rules 228 lbs End plates in steam space: Material Steel Thickness 1 1/8" Pitch of stays 19 3/4" x 16 1/2" How are stays secured D.N. Wash Working pressure by rules 180 Material of stays Steel
 Diameter at smallest part 2-18" Area supported by each stay 395.8 Working pressure by rules 195 Material of Front plates at bottom Steel
 Thickness 13/16" Material of Lower back plate Steel Thickness 13/16" Greatest pitch of stays 13 x Working pressure of plate by rules 185 lbs
 Diameter of tubes 2 1/2" Pitch of tubes 3 3/4" x 3 7/8" Material of tube plates Steel Thickness: Front 3/8" Back 2 1/2" Mean pitch of stays 11 1/4" x 1 1/4"
 Pitch across wide water spaces 12 1/2" Working pressures by rules 188 lbs Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 8 x 1 1/2" Length as per rule 31 9/16" Distance apart 8" Number and pitch of stays in each 2 @ 10"
 Working pressure by rules 188 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 _____

VERTICAL DONKEY BOILER— Manufacturers of Steel

No donkey Boiler fitted.

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 low rod bottom end bolts & nuts, 2 low rod top end bolts & nuts, 2 main bearing bolts & nuts, 1 set coupling bolts, 1 set feed pump valves, 1 set bilge pump valves, 1 propeller, 1 propeller shaft, 6 junk ring bolts, 6 high cover studs, Assorted bolts nuts & rivets.

WILLIAM DOXFORD & SONS, Limited

The foregoing is a correct description,

Manufacturer.

Wm Doxford Director

Dates of Survey while building	During progress of work in shops - -	1910 June 24, July 4, 25, Aug 5, 12, 16, 19, 31, Sep 5, 6, 13, 21, 28, Oct 10, 17, Dec 19, 21, 24, 28, 30
	During erection on board vessel - -	1911 Jan 5, 9, 13
	Total No. of visits	25

Is the approved plan of main boiler forwarded herewith Yes

Dates of Examination of principal parts—	Cylinders 5-8-10	Slides 16-8-10	Covers 16-8-10	Pistons 16-8-10	Rods 5-8-10
Connecting rods	16-8-10	Crank shaft 16-8-10	Thrust shaft 5-9-10	Tunnel shafts 5-9-10	Screw shaft 5-9-10
Propeller	31-8-10	Steam pipes tested 28-9-10, 24-12-10	Engine and boiler seatings 10-9-10	Engines holding down bolts 30-12-10	
Completion of pumping arrangements	28-12-10	Boilers fixed 28-12-10	Engines tried under steam 30-12-10		
Main boiler safety valves adjusted	30-12-10	Thickness of adjusting washers	Head B, P 3/32, 5/8; Star B, P 1/32, 5/8; Pist B, P 1/16, 5/8		
Material of Tunnel Crank shafts	Steel	Identification Mark on Do.	3493 P.A. 5466 KH 2351 HK 2357 HK	Material of Thrust shaft	Steel
Material of Tunnel shafts	Steel	Identification Marks on Do.	1518 AFD	Material of Screw shafts	Steel
Material of Steam Pipes	4 solid drawn Copper 5 1/2" dia x 1/2" thick	Test pressure	100 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 tested by hydraulic pressure & their safety valves adjusted under steam and the whole of the machinery was 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 with record **L.M.C. 1-11** in the Registered Book.

It is submitted that this vessel is eligible for THE RECORD, + L.M.C. 1-11. 2SB(FD) 1(Aux)SB.

J.W.D. 23/1/11 J.P.P.

The amount of Entry Fee..	£ 3 :- :-	When applied for,	17/1/11
Special	£ 39 : 15 :-	When received,	21/1/11
Donkey Boiler Fee	£		
Travelling Expenses (if any) £	✓ :		

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

Committee's Minute
 Assigned
 + hmc 1.11

TUE. 24 JAN 1911



Certificate (if required) to be sent to the Surveyors are requested not to write on or below the space for Committee's Minute.

MACHINERY CERTIFICATE WRITTEN.