

REPORT ON MACHINERY.

No. 26070
THU. FEB. 19, 1914

Date of writing Report 11-2-1914 When handed in at Local Office 14-2-1914 Port of **SUNDERLAND**
No. in Survey held at **SUNDERLAND** Date, First Survey 15 Oct. 12 Last Survey 10-2-1914
Reg. Book. (Number of Visits) 55
Supp 98 on the new steel S/S **SAN JERONIMO** Tons Gross 10.067 Net 6.200
Master **H. M. Young** Built at **Sunderland** By whom built **W. Doxford & Sons Ltd (No 457)** When built 1914
Engines made at **Sunderland** By whom made **W. Doxford & Sons Ltd (No 457)** when made 1914
Boilers made at **Sunderland** By whom made **W. Doxford & Sons Ltd (No 457)** when made 1914
Registered Horse Power **795** Owners **The Eagle Oil Transport Co. Ltd** Port belonging to **London**
Nom. Horse Power as per Section 28 **795** Is Refrigerating Machinery fitted for cargo purposes **no** Is Electric Light fitted **yes**

ENGINES, &c.—Description of Engines Quadruple No. of Cylinders **4** No. of Cranks **4**
Dia. of Cylinders **28½ 41 58 84** Length of Stroke **54** Revs. per minute **68** Dia. of Screw shaft as per rule **17** 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 **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 **6-3½**
Dia. of Tumbler shaft as per rule **15-26** Dia. of Crank shaft journals as per rule **16** Dia. of Crank pin **16½** Size of Crank webs **24x11½** Dia. of thrust shaft under collars **16½** Dia. of screw **20-3** Pitch of Screw **18-9** No. of Blades **4** State whether moveable **yes** Total surface **130**
No. of Feed pumps **2** Diameter of ditto **5¾** Stroke **28** Can one be overhauled while the other is at work **yes**
No. of Bilge pumps **2** Diameter of ditto **5¾** Stroke **28** Can one be overhauled while the other is at work **yes**
No. of Donkey Engines **5** Sizes of Pumps **2 GAL-12 & 14 & 15 SEN-9 & 6 & 10 DISTILLER 7 & 7½** No. and size of Suctions connected to both Bilge and Donkey pumps
In Engine Room **Four @ 3½** In Holds, &c. **Three @ 2½ in cargo hold and two @ 2½ in fore peak flat** all connected to forward ballast pumps only.
No. of Bilge Injections **1** sizes **15** Connected to condenser, or to circulating pump **C.P.** Is a separate Donkey Suction fitted in Engine room & size **yes 11"**
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 **oil fuel pipes** How are they protected **not protected (not fitted forward)**
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 **13-12-13** of Stern Tube **8-12-13** Screw shaft and Propeller **17-12-13**
Is the Screw Shaft Tunnel watertight **none** Is it fitted with a watertight door **machinery worked from**

BOILERS, &c.—(Letter for record (R)) Manufacturers of Steel John Spencer & Sons Ltd. (Samuel Tyack & Co. Ltd. 3rd bar)
Total Heating Surface of Boilers **11433** Is Forced Draft fitted **yes** No. and Description of Boilers **Four single ended marine**
Working Pressure **220** Tested by hydraulic pressure to **440** Date of test **16-10-13** No. of Certificate **3159**
Can each boiler be worked separately **yes** Area of fire grate in each boiler **improving grate** No. and Description of Safety Valves to each boiler **two direct spring** Area of each valve **9.6 sq"** Pressure to which they are adjusted **225** Are they fitted with easing gear **yes**
Smallest distance between boilers or uptakes and bunkers or woodwork **5'-0"** Mean dia. of boilers **16-3** Length **12-0** Material of shell plates **steel**
Thickness **15/8** Range of tensile strength **31½ to 35 tons** Are the shell plates welded or flanged **no** Descrip. of riveting: cir. seams **ENDS-DR.** long. seams **DBSTR** Diameter of rivet holes in long. seams **15/8** Pitch of rivets **10½** Lap of plates or width of butt straps **1-11¼**
Per centages of strength of longitudinal joint rivets **92.6** Working pressure of shell by rules **258** Size of manhole in shell **16x12**
Size of compensating ring **32½x28½x1½** No. and Description of Furnaces in each boiler **4 Brighton bar** Material **steel** Outside diameter **3-9¼**
Length of plain part **top** Thickness of plates **bottom** **43** Description of longitudinal joint **welded** No. of strengthening rings **yes**
Working pressure of furnace by the rules **242** Combustion chamber plates: Material **steel** Thickness: Sides **11/16** Back **11/16** Top **11/16** Bottom **1"**
Pitch of stays to ditto: Sides **7/8x7/8** Back **7/8x7/8** Top **7/8x7/8** If stays are fitted with nuts or riveted heads **nuts** Working pressure by rules **292**
Material of stays **iron** Diameter at smallest part **2.03 sq"** Area supported by each stay **61 sq"** Working pressure by rules **250** End plates in steam space: Material **steel** Thickness **15/32** Pitch of stays **16½x17** How are stays secured **DNH wash** Working pressure by rules **280** Material of stays **steel**
Diameter at smallest part **8.48 sq"** Area supported by each stay **287 sq"** Working pressure by rules **307** Material of Front plates at bottom **steel**
Thickness **7/8** Material of Lower back plate **steel** Thickness **3/8** Greatest pitch of stays **14x7/8** Working pressure of plate by rules **220**
Diameter of tubes **2½** Pitch of tubes **3¾x3½** Material of tube plates **steel** Thickness: Front **15/32** Back **3/4** Mean pitch of stays **8**
Pitch across wide water spaces **13½** Working pressures by rules **280** Girders to Chamber tops: Material **steel** Depth and thickness of girder at centre **20x9¾x¾** Length as per rule **33¾** Distance apart **77/8** Number and pitch of stays in each **30x77/8**
Working pressure by rules **221** 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

W127-0188

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 & two bottom end connecting rod bolts & nuts, four main bearing bolts, one set of coupling bolts, two and bolts of various sizes. Two sets of feed and bilge pump valves, one tail shaft, two cast steel propeller blades, one slide spindle, one eccentric complete, one bottom end bearing, one air pump rod, one set of rings for each piston.

OIL FUEL PUMPS:— one brass rod with piston & bucket, 4 slide spindles slides & glands, 1 set valves, one distribution box for boiler fronts complete with all copper pipes & connections.

The foregoing is a correct description,

WILLIAM DOXFORD & SONS, Limited.

Manufacturer.

Dates of Survey while building	During progress of work in shops --	1912 Oct 15, 18, Nov 22, Jan 7, 15, 28, Feb. 20, Mar 6, 13, 21	Is the approved plan of main boiler forwarded herewith
	During erection on board vessel --	Apr. 11, 29, 30 May 1, 19, 22, 26, June 6, 12	
	Total No. of visits	23, 29 Feb. 5, 6, 10 (55)	

Dates of Examination of principal parts—	Cylinders	9-5-13	Slides	29-7-13	Covers	15-1-13	Pistons	13-3-13	Rods	19-5-13	
Connecting rods	2-7-13	Crank shaft	22-11-12	Thrust shaft	11-8-13	Tunnel shafts	18-12-13	Screw shafts	5-9-13	Propeller	27-8-13
Stern tube	26-9-13	Steam pipes tested	Shf sun	Engine and boiler seatings	26-11-13	Engines holding down bolts	19-1-14				
Completion of pumping arrangements	10-2-14	Boilers fixed	9-1-14	Engines tried under steam	10-2-14						
Main boiler safety valves adjusted	29-1-14	Thickness of adjusting washers	FP. P $\frac{11}{16}$ S $\frac{7}{16}$ FS. P $\frac{11}{16}$ S $\frac{7}{16}$ AP. P $\frac{11}{16}$ S $\frac{7}{16}$ AS. P $\frac{11}{16}$ S $\frac{13}{32}$								
Material of Crank shaft	1 Steel	Identification Mark on Do	2245 MB	Material of Thrust shaft	1 Steel	Identification Mark on Do	2388 MB				
Material of Tunnel shaft	1 Steel	Identification Marks on Do	7812 JM	Material of Screw shafts	1 Steel	Identification Marks on Do	8591 KH				
Material of Steam Pipes	Steel lapwelded 16, stamped LOR	Test pressure	660 lbs								

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

The materials and workmanship are good.

The machinery has been made under special survey and is eligible in my opinion for classification and the records LMC 2-14.

"Fitted for low flash oil fuel 2-14". "Wireless".

The boilers are fitted for burning low flash oil fuel on the Wallsend-Horden system.

The requirements of Section 49 have been adhered to as far as they are applicable.

It is submitted that
this vessel is eligible for
THE RECORD. + LMC 2. 14. F.D.

Fitted for low flash oil fuel. 2. 14.

The amount of Entry Fee	£ 3 : - : -	When applied for,	18-2-14
Special	£ 59 : 15 : -	When received,	21-2-14
Donkey Boiler Fee	£ : : -		
Travelling Expenses (if any) £	: : -		

Committee's Minute

TUE. FEB. 24. 1914

Assigned

+ L.M.C. 2. 14.
Fitted for low flash oil fuel 2 14.



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