

# REPORT ON MACHINERY.

No. 61264

Date of writing Report Oct. 28<sup>th</sup> 1911 When lodged in at Local Office Oct. 30<sup>th</sup> 1911 Port of NEWCASTLE ON TYNE. Received at London Office WED. NOV. - 1. 1911

No. in Survey held at North Shields Date, First Survey 14<sup>th</sup> Jan. Last Survey 25<sup>th</sup> Oct 1911  
Reg. Book. Supp on the Machinery of the Ss Overton (Number of Visits 24)

Master Overton S.S. Co. Ltd Built at South Shields By whom built J. T. Wringham & Co. Ltd Tons Gross 426  
Net 185 When built 1911-10

Engines made at North Shields By whom made W. Baird Bros. when made 1911-10.

Boilers made at South Shields By whom made J. T. Wringham & Co. Ltd when made 1911-10

Registered Horse Power \_\_\_\_\_ Owners Overton S.S. Co. Ltd Port belonging to Liverpool

Nom. Horse Power as per Section 28 74 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted No

## ENGINES, &c.—Description of Engines Compound, Surface Condensing No. of Cylinders 2 No. of Cranks 2

Dia. of Cylinders 17 x 36 Length of Stroke 24 Revs. per minute 112 Dia. of Screw shaft 7.62 Material of screw shaft S. Iron  
as per rule 7.62 as fitted 8

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 2'-8 1/2"

Dia. of Tunnel shaft 6.46 Dia. of Crank shaft journals 7.31 Dia. of Crank pin 7.5/8 Size of Crank webs 4 x 5 1/4 Dia. of thrust shaft under collars 7.5/8 Dia. of screw 9-0 Pitch of Screw 9-9 No. of Blades 4 State whether moveable No Total surface 31.2 sq ft

No. of Feed pumps 1 Diameter of ditto 3" Stroke 12" Can one be overhauled while the other is at work Yes

No. of Bilge pumps 1 Diameter of ditto 3" Stroke 12" Can one be overhauled while the other is at work Yes

No. of Donkey Engines One Sizes of Pumps 6" x 4 1/2" x 6" No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room 3 - 2 1/2" diam. In Holds, &c. 1 - 2" diam.

No. of Bilge Injections One sizes 3" Connected to condenser, or to circulating pump Circulating separate Donkey Suction fitted in Engine room & size Yes, 2 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 29/9/11 of Stern Tube 29/9/11 Screw shaft and Propeller 4/10/11

Is the Screw Shaft Tunnel watertight Mech. aft Is it fitted with a watertight door worked from

## BOILERS, &c.—(Letter for record S.) Manufacturers of Steel John Spencer & Sons Ltd

Total Heating Surface of Boilers 408 sq ft Is Forced Draft fitted No No. and Description of Boilers One, Single ended

Working Pressure 130 lbs per sq in Tested by hydraulic pressure to 260 lbs Date of test 18/8/11 No. of Certificate 8181

Can each boiler be worked separately Yes Area of fire grate in each boiler 46.2 sq ft No. and Description of Safety Valves 2, Spring loaded

Area of each valve 12.56 sq in Pressure to which they are adjusted 133 lbs Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork 4'-6" dia. of boilers 12'-9" Length 10'-3" Material of shell plates Steel

Thickness 25/32 Range of tensile strength 29/33 TONS Are the shell plates welded or flanged No Descrip. of riveting: cir. seams D.R.LAP

long. seams D.R.D.B.S. Diameter of rivet holes in long. seams 7/8" Pitch of rivets 5 3/8" width of butt straps 1 3/2"

Per centages of strength of longitudinal joint rivets 85 Working pressure of shell by rules 131 lbs Size of manhole in shell 16" x 12"

Size of compensating ring See Report No. and Description of Furnaces in each boiler Attached Material \_\_\_\_\_ Outside diameter \_\_\_\_\_

Length of plain part top \_\_\_\_\_ bottom \_\_\_\_\_ Thickness of plates crown \_\_\_\_\_ bottom \_\_\_\_\_ Description of longitudinal joint \_\_\_\_\_ No. of strengthening rings \_\_\_\_\_

Working pressure of furnace by the rules \_\_\_\_\_ Combustion chamber plates: Material \_\_\_\_\_ Thickness: Sides \_\_\_\_\_ Back \_\_\_\_\_ Top \_\_\_\_\_ Bottom \_\_\_\_\_

Pitch of stays to ditto: Sides \_\_\_\_\_ Back \_\_\_\_\_ Top \_\_\_\_\_ If stays are fitted with nuts or riveted heads \_\_\_\_\_ Working pressure by rules \_\_\_\_\_

Material of stays \_\_\_\_\_ Diameter at smallest part \_\_\_\_\_ Area supported by each stay \_\_\_\_\_ Working pressure by rules \_\_\_\_\_ End plates in steam space: \_\_\_\_\_

Material \_\_\_\_\_ Thickness \_\_\_\_\_ Pitch of stays \_\_\_\_\_ How are stays secured \_\_\_\_\_ Working pressure by rules \_\_\_\_\_ Material of stays \_\_\_\_\_

Diameter at smallest part \_\_\_\_\_ Area supported by each stay \_\_\_\_\_ Working pressure by rules \_\_\_\_\_ Material of Front plates at bottom \_\_\_\_\_

Thickness \_\_\_\_\_ Material of Lower back plate \_\_\_\_\_ Thickness \_\_\_\_\_ Greatest pitch of stays \_\_\_\_\_ Working pressure of plate by rules \_\_\_\_\_

Diameter of tubes \_\_\_\_\_ Pitch of tubes \_\_\_\_\_ Material of tube plates \_\_\_\_\_ Thickness: Front \_\_\_\_\_ Back \_\_\_\_\_ Mean pitch of stays \_\_\_\_\_

Pitch across wide water spaces \_\_\_\_\_ Working pressures by rules \_\_\_\_\_ Girders to Chamber tops: Material \_\_\_\_\_ Depth and thickness of girder at centre \_\_\_\_\_ Length as per rule \_\_\_\_\_ Distance apart \_\_\_\_\_ Number and pitch of stays in each \_\_\_\_\_

Working pressure by rules \_\_\_\_\_ 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 \_\_\_\_\_

**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 \_\_\_\_\_ 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:— *One propeller, two top end bolts and nuts, two bottom end bolts and nuts, two main bearing bolts & nuts, one set of coupling bolts, one set of feed and bilge pump valves, a quantity of assorted bolts and nuts, bar and sheet iron of various sizes.*

The foregoing is a correct description,

*David B. ...*  
Manufacturer.

Dates of Survey of building: During progress of work in shops - *1911* (Jan. 14, Feb. 7, 31, Aug. 21, 22, 23, 24, 29, Sep. 1, 4, 7, 12, 19, 21, 25, 26, 28, Oct. 4, 11, 12, 16, 20, 21, 27)

During erection on board vessel - \_\_\_\_\_

Total No. of visits: *24*

Is the approved plan of main boiler forwarded herewith *Yes*

Dates of Examination of principal parts—Cylinders *22/8/11* Slides *19/9/11* Covers *4/10/11* Pistons *25/9/11* Rods *7/9/11*

Connecting rods *7/9/11* Crank shaft *4/8/11* Thrust shaft *25/9/11* Tunnel shafts *No shaft* Screw shaft *4/9/11* Propeller *2/9/11*

Stern tube *26/9/11* Steam pipes tested *10/10/11* Engine and boiler seatings *26/9/11* Engines holding down bolts *4/10/11*

Completion of pumping arrangements *2/10/11* Boilers fixed *2/10/11* Engines tried under steam *29/10/11*

Main boiler safety valves adjusted *2/10/11* Thickness of adjusting washers *Port Valve 1/4" Star Valve 7/16"*

Material of Crank shaft *S. Iron* Identification Mark on Do. *2816* Material of Thrust shaft *S. Iron* Identification Mark on Do. *8446*

Material of Tunnel shafts *S. Iron* Identification Marks on Do. *✓* Material of Screw shafts *S. Iron* Identification Marks on Do. *817D*

Material of Steam Pipes *Solid drawn Copper* Test pressure *260 lbs per sq. in.*

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

*The Boiler and Machinery of this Vessel has been constructed under Special Survey and placed on board in accordance with the Society's Rules. They are now in our opinion in safe working condition, and the case is respectfully submitted for the notation **L.M.C. 10-11** in the Register Book.*

*It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 10. 11.*

The amount of Entry Fee .. £ 1 : 0 : 9 When applied for, **OCT 31 1911**

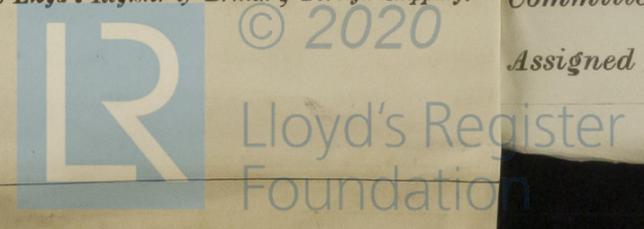
Special .. £ 11 : 2

Donkey Boiler Fee .. £ : : When received, *2-11-19*

Travelling Expenses (if any) £ : : *1/3*

Committee's Minute *FRI. NOV. 3 - 1911*  
*+ L.M.C. 10-11*  
Assigned

*C. Hudson & Wm. Cairns*  
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.



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Second Stringer  
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boiler 3, 2  
Description of  
plates: Mater  
Top 11" x 9  
smallest part  
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