

# REPORT ON MACHINERY

No. 910

Received at London Office

14th OCT. 1915

Date of writing Report 11.10.15 when handed in at Local Office 11.10.15 Port of Middlesbrough  
 No. in Survey held at Stockton-on-Tees Date, First Survey March 3 Last Survey Oct. 6 1915  
 Reg. Book. on the Steel Screw Steamer MAPLEWOOD (S.S.N. 503) (Number of Visits 59) Tons } Gross  
 Master Stockton Built at Stockton By whom built Messrs Ropner & Sons When built 1915  
 Engines made at Stockton By whom made Messrs Blair & Co Ltd (N. 1828) when made 1915  
 Boilers made at Stockton By whom made Messrs Blair & Co Lim. when made 1915  
 Registered Horse Power \_\_\_\_\_ Owners \_\_\_\_\_ Port belonging to \_\_\_\_\_  
 Nom. Horse Power as per Section 28 278 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted no

**ENGINES, &c.**—Description of Engines Tri-compound No. of Cylinders 3 No. of Cranks 3  
 Dia. of Cylinders 23 1/2 - 39 - 64 Length of Stroke 42 Revs. per minute 60 Dia. of Screw shaft 13.47 Material of 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 in one 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 tight fit If two  
 liners are fitted, is the shaft lapped or protected between the liners \_\_\_\_\_ Length of stern bush 5'-1"  
 Dia. of Tunnel shaft 11.67 Dia. of Crank shaft journals 12.25 Dia. of Crank pin 13 1/4 Size of Crank webs 23 3/4 x 8 1/2 Dia. of thrust shaft under  
 collars 13 1/4 Dia. of screw 17'-0" Pitch of Screw 16'-6" No. of Blades 4 State whether moveable no Total surface 82 sq  
 No. of Feed pumps 2 Diameter of ditto 3" Stroke 30 Can one be overhauled while the other is at work yes  
 No. of Bilge pumps 2 Diameter of ditto 4 1/2" Stroke 30 Can one be overhauled while the other is at work yes  
 No. of Donkey Engines 2 Sizes of Pumps Ballant 9x10 & 4x8 No. and size of Suctions connected to both Bilge and Donkey pumps  
 In Engine Room 3 @ 3" + one @ 3 1/2" under boilers In Holds, &c. 2 @ 3" in each hold. Funnel  
will one @ 2 1/2"  
 No. of Bilge Injections 1 sizes 6 1/4" Connected to condenser, or to circulating pump yes Is a separate Donkey Suction fitted in Engine room & size yes - 4"  
 Are all the bilge suction pipes fitted with roses yes Are the roses in Engine room always accessible yes Are the sluices on Funnel recess 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 sized 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 suctions to forward holds How are they protected wood ceiling  
 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 29.7.15 of Stern Tube 4.8.15 Screw shaft and Propeller 16.9.15  
 Is the Screw Shaft Tunnel watertight see hull Rpt Is it fitted with a watertight door yes worked from top platform

**BOILERS, &c.**—(Letter for record (S)) Manufacturers of Steel Messrs John Spencer & Sons  
 Total Heating Surface of 2 Boilers 4142 Is Forced Draft fitted no No. and Description of Boilers Two single ended  
 Working Pressure 180 Tested by hydraulic pressure to 360 Date of test 15.7.15 No. of Certificate 5534  
 Can each boiler be worked separately yes Area of fire grate in each boiler 59.8 sq No. and Description of Safety Valves to  
 each boiler 2 direct spring Area of each valve 7.07 Pressure to which they are adjusted 185 lbs Are they fitted with easing gear yes  
 Smallest distance between boilers or plates and bunkers 2'-0" External Mean dia. of boilers 15'-3" Length 10'-3" Material of shell plates steel  
 Thickness 1 3/8" Range of tensile strength 29 1/2 - 33 Are the shell plates welded or flanged no Descrip. of riveting: cir. seams 2 Riv. lap  
 long. seams 2 B-3 Riv Diameter of rivet holes in long. seams 1 1/4" Pitch of rivets 8 3/8" Lap of plates or width of butt straps 18 3/4 x 1 1/8"  
5 Rivets per pitch rivets 91.9 Working pressure of shell by rules 186 Size of manhole in shell 16" x 12"  
 Per centages of strength of longitudinal joint plate 85.07  
 Size of compensating ring 7 1/2 x 1 3/8" No. and Description of Furnaces in each boiler 3 Morrison Material Steel Outside diameter 45 1/2"  
 Length of plain part top \_\_\_\_\_ bottom \_\_\_\_\_ Thickness of plates crown } 9/16" Description of longitudinal joint weld No. of strengthening rings \_\_\_\_\_  
 Working pressure of furnace by the rules 192 Combustion chamber plates: Material Steel Thickness: Sides 1/16" Back 1/16" Top 1/16" Bottom 1/8"  
 Pitch of stays to ditto: Sides 9 1/2 x 9 1/2" Back 9 1/2 x 9" Top 10 x 8 1/2" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 188  
 Material of stays Steel Diameter at smallest part 1.99 Area supported by each stay 85.5 Working pressure by rules 210 End plates in steam space \_\_\_\_\_  
 Material Steel Thickness 1 3/8" Pitch of stays 20" How are stays secured nuts & 9x1 washers Working pressure by rules 199 Material of stays Steel  
 Diameter at smallest part 7.24 Area supported by each stay 380 Working pressure by rules 198 Material of Front plates at bottom Steel  
 Thickness 1 1/2" Material of Lower back plate Steel Thickness 1 1/2" Greatest pitch of stays 16 1/2 x 9" Working pressure of plate by rules 233  
 Diameter of tubes 3 1/2" Pitch of tubes 4 3/4 x 4 3/8" Material of tube plates Steel Thickness: Front 1 1/2" Back 1 3/8" Mean pitch of stays 11 1/2"  
 Pitch across wide water spaces 14 1/2" Working pressures by rules 192 Girders to Chamber tops: Material Steel Depth and  
 thickness of girder at centre 7 1/4 x 1 3/8" Length as per rule 26 1/2" Distance apart 10" Number and pitch of stays in each 2 @ 8 1/2"  
 Working pressure by rules 191 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 \_\_\_\_\_

IS A DONKEY BOILER FITTED? *yes*

If so, is a report now forwarded? *yes - Indb N° 9063*

SPARE GEAR. State the articles supplied: → *Two each of con. rod top end and bottom end bolts and nuts; 2 main bearing bolts & nuts; one set of coupling bolts and nuts; one set of feed and bilge pump valves; assorted bolts and nuts; iron of various sizes; one propeller; one tail end shaft; one set each of H.P. & M.P. ramscotton piston rings and minor gear.*

The foregoing is a correct description,  
FOR BLAIR & Co., LIMITED.

*S. H. Pitts*

Manufacturer.

SECRETARY.

Dates of Survey while building { During progress of work in shops - - } *1915 Mar. 3. 25. 26. Apr. 1. 7. 9. 12. 14. 19. 21. 23. 26. 29. May 3. 5. 7. 10. 13. 18. 20. 21. 27. 31. Jun 2. 4. 7. 10. 14. 17. 21. 23.*  
{ During erection on board vessel - - - } *25. 28. 30. Jul. 2. 5. 8. 9. 12. 15. 19. 23. 27. 29. 30. Aug 4. 5. 6. 9. 11. 12. Sep 15. 20. 21. 23. 28. Oct 1. 5. 6.*  
Total No. of visits *59*

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

" " " donkey " " " *yes*

Dates of Examination of principal parts—Cylinders *13.5.15* Slides *18.5.15* Covers *18.5.15* Pistons *18.5.15* Rods *20.5.15*  
Connecting rods *20.5.15* Crank shaft *27.5.15* Thrust shaft *23.4.15* Tunnel shafts *May 5. 20. 21. 23/4/15* Screw shaft *12.8.15* Propeller *11.8.15*  
Stern tube *30.7.15* Steam pipes tested *23.9.15* Engine and boiler seatings *4.8.15* Engines holding down bolts *21.9.15*  
Completion of pumping arrangements *1.10.15* Boilers fixed *1.10.15* Engines tried under steam *1.10.15*  
Main boiler safety valves adjusted *1.10.15* Thickness of adjusting washers *Port Boiler 5 = 3/8; Star Bkr 5 = 3/8*  
Material of Crank shaft *Ing Steel* Identification Mark on Do. *6968* Material of Thrust shaft *Ing Steel* Identification Mark on Do. *1265-N*  
Material of Tunnel shafts *Ing Steel* Identification Marks on Do. *1205-N* Material of Screw shafts *iron* Identification Marks on Do. *6968*  
Material of Steam Pipes *solid drawn copper (6 1/2 x 5/8 & 5 1/4 x 1/2)* Test pressure *400 lbs.*

Is an installation fitted for burning oil fuel *no* Is the flash point of the oil to be used over 150°F. *✓*

Have the requirements of Section 49 of the Rules been complied with *✓*

Is this machinery duplicate of a previous case *no* If so, state name of vessel *✓*

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 sound and good. The boilers and main steam pipes were tested by hydraulic pressure and the engines and boilers examined under steam and all found satisfactory.*

*The machinery of this vessel is now in a good and safe working condition and eligible in my opinion to have the notation of  $\frac{1}{2}$  L.M.C - 10-15 in the Register Book*

It is submitted that  
this vessel is eligible for  
THE RECORD + L.M.C 10.15.

*J.W.D.*

*J.P.R.*

*20/10/15*

The amount of Entry Fee ... £ *2-0-0* When applied for, *13/10/15*  
Special ... £ *33-18-0*  
Donkey Boiler Fee ... £ *✓*  
Travelling Expenses (if any) £ *✓* When received, *15/10/15*

*Wm Morrison*  
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute *FRI. 22 OCT, 1915*

Assigned *+ L.M.C 1015*



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Foundation

Middlesbrough

Certificate (if required) to be sent to the Registrar of Shipping (if required) to be sent to the Registrar of Shipping (if required)

WARRANTED  
WRITTEN