

REPORT ON MACHINERY.

No. 8651.

Received at London Office

Date of writing Report 18.7.1914. When handed in at Local Office 20.7.1914. Port of MIDDLESBRO' FRI. JUL. 24. 1914
No. in Survey held at Stockton-on-Tees Date, First Survey March 17th. Last Survey July 13th 1914.
Reg. Book. on the Steel screw steamer Anglesea (S.S. N° 640) (Number of Visits 43)
Master Built at Thornaby By whom built Richardson Duck & Co Tons Gross 43 Net 1914
Engines made at Stockton By whom made Messrs Blair & Co Ltd (No 1796) when made 1914
Boilers made at Stockton By whom made Messrs Blair & Co Ltd when made 1914
Registered Horse Power Owners Messrs Jenkins Bros Port belonging to Cardiff
Nom. Horse Power as per Section 28 391 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

ENGINES, &c.—Description of Engines Tri-compound No. of Cylinders 3 No. of Cranks 3
Dia. of Cylinders 26-43-71 Length of Stroke 48 Revs. per minute 63 Dia. of Screw shaft as per rule 14.69 Material of iron as fitted 15.2 screw shaft
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'-4"
Dia. of Tunnel shaft as per rule 13.04 Dia. of Crank shaft journals as per rule 13.69 Dia. of Crank pin 14.2 Size of Crank webs 28.4 x 9.5 Dia. of thrust shaft under collars 14.2 Dia. of screw 18'-0" Pitch of Screw 17'-6" No. of Blades 4 State whether moveable no Total surface 100 ft
No. of Feed pumps 2 Diameter of ditto 4" Stroke 34" Can one be overhauled while the other is at work yes
No. of Bilge pumps 2 Diameter of ditto 5" Stroke 34" Can one be overhauled while the other is at work yes
No. of Donkey Engines 2 Sizes of Pumps Ballast 11.5 x 11; feed 4 x 8 No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room 3 @ 3.5 In Holds, &c. 2 @ 3.5 in No 1, 2 + 3 holds: one @ 3.5 & 2 @ 3 in No 4 hold: Funnel with one @ 2.5
No. of Bilge Injections 1 sizes 7" 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 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 Suctions to forward holds How are they protected wood
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 22.5.14 of Stern Tube 22.5.14 Screw shaft and Propeller 15.6.14
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 (R)) Manufacturers of Steel Messrs John Spencer & Sons Ltd.
Total Heating Surface of Boilers 6193 Is Forced Draft fitted no No. and Description of Boilers 3 Single ended
Working Pressure 180 Tested by hydraulic pressure to 360 Date of test 28.5.14 No. of Certificate 5311
Can each boiler be worked separately yes Area of fire grate in each boiler 63.3 ft No. and Description of Safety Valves to each boiler 2 direct spring Area of each valve 7.07 sq ft Pressure to which they are adjusted 185 lb Are they fitted with easing gear yes
Smallest distance between boilers or uptakes and bunkers or woodwork 3'-0" Internal Mean dia. of boilers 15'-0" Length 11'-3" Material of shell plates steel
Thickness 1.5 Range of tensile strength 28-32 Are the shell plates welded or flanged no Descrip. of riveting: cir. seams 2 R. lap long. seams 2 R-3 Riv Diameter of rivet holes in long. seams 1.5 Pitch of rivets 9" Lap of plates on width of butt straps 19.5 x 1.5
Per centages of strength of longitudinal joint rivets 91.3 plate 85.44 Working pressure of shell by rules 186 Size of manhole in shell 16" x 12"
Size of compensating ring 7.5 x 1.5 No. and Description of Furnaces in each boiler 3 Dighton Material steel Outside diameter 45.5
Length of plain part top Thickness of plates crown 9" Description of longitudinal joint weld No. of strengthening rings bottom 7.5
Working pressure of furnace by the rules 192 Combustion chamber plates: Material steel Thickness: Sides 1/2" Back 1/2" Top 1/2" Bottom 3/32
Pitch of stays to ditto: Sides 8 x 10.5 Back 9.5 x 9 Top 9.5 x 9 If stays are fitted with nuts or riveted heads nuts Working pressure by rules 187
Material of stays iron Diameter at smallest part 2.31 Area supported by each stay 85.5 Working pressure by rules 202 End plates in steam space: Material steel Thickness 1.5 Pitch of stays 20 x 17 How are stays secured nuts Working pressure by rules 200 Material of stays steel
Diameter at smallest part 7.24 Area supported by each stay 356 Working pressure by rules 211 Material of Front plates at bottom steel
Thickness 1.5 Material of Lower back plate steel Thickness 1.5 Greatest pitch of stays 16 x 9 Working pressure of plate by rules 218
Diameter of tubes 3.5 Pitch of tubes 4.5 x 4.5 Material of tube plates steel Thickness: Front 1.5 Back 1.5 Mean pitch of stays 11.5
Pitch across wide water spaces 14.5 Working pressures by rules 193 Girders to Chamber tops: Material steel Depth and thickness of girder at centre 8.5 x 13 Length as per rule 32 Distance apart 9.5 Number and pitch of stays in each 2 @ 9
Working pressure by rules 190 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

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VERTICAL DONKEY BOILER—

Manufacturers of Steel *See Middlesbrough Report No 8480*

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 each of iron rod top end and bottom end bolts & 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 and iron of various sizes*

The foregoing is a correct description,

For BLAIR

Geo. H. H. H. H. H.

Manufacturer.

Dates of Survey while building	During progress of work in shops --	<i>SECRETARY 1914. Mar. 17. 19. 20. 23. 26. 30. Apr. 1. 2. 6. 8. 9. 15. 17. 20. 21. 23. 27. 28. 30. May. 1. 4. 7. 11. 13. 14. 16. 19.</i>
	During erection on board vessel --	<i>21. 22. 25. 28. Jun. 3. 5. 8. 9. 11. 15. 18. 23. 26. 29. Jul. 7. 13.</i>
	Total No. of visits	<i>43.</i>

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

Dates of Examination of principal parts—Cylinders *17.4.14* Slides *17.4.14* Covers *17.4.14* Pistons *23.4.14* Rods *23.4.14*
 Connecting rods *27.4.14* Crank shaft *27.4.14* Thrust shaft *6.4.14* Tunnel shafts *17.3.14* Screw shaft *21.5.14* Propeller *21.5.14*
 Stern tube *19.5.14* Steam pipes tested *18.6.14* Engine and boiler seatings *22.5.14* Engines holding down bolts *18.6.14*
 Completion of pumping arrangements *29.6.14* Boilers fixed *26.6.14* Engines tried under steam *26.6.14*
 Main boiler safety valves adjusted *26.6.14* Thickness of adjusting washers *Port Boiler 5-7/32 6.13. 5-1/4 BB-5-7/32*
 Material of Crank shaft *By Steel* Identification Mark on Do. *6890* Material of Thrust shaft *By Steel* Identification Mark on Do. *359-N*
 Material of Tunnel shafts *By Steel* Identification Marks on Do. *359-N* Material of Screw shafts *iron* Identification Marks on Do. *6890*
 Material of Steam Pipes *Solid drawn copper (4 1/2 x 10.5 L.S.G.)* 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 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 LMC-7.14 in the Register Book

It is submitted that
 this vessel is eligible for
THE RECORD + LMC 7. 14.

W.D. 24/7/14

The amount of Entry Fee	£ 3 - 0 - 0	When applied for.
Special	£ 39 - 11 - 0	20. 7. 19. 14
Donkey Boiler Fee	£	When received,
Travelling Expenses (if any)	£	22. 7. 19. 14

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

Committee's Minute *TUE JUL 28. 1914*
 Assigned *+ L.M.C. 7.14*

MACHINERY CERTIFICATE
 WRITTEN

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Certificate (if required) to be sent to Middlesbrough-on-Sea.