

REPORT ON MACHINERY.

No. 6199

U.S. 10 MAY 1910
HUR. 14 APL 1910

Port of MIDDLESBROUGH-ON-TEES

Received at London Office

No. in Survey held at Stockton Date, first Survey 10th Jan'y. Last Survey 7th April 1910
Reg. Book. 55 Buff. on the G.C.R.-A (Number of Visits 17+6=23 May 3/10)
Master Hessle near Hull By whom built H. Scarr Tons { Gross 119
Engines made at Stockton By whom made J. T. Harker when made 1910 Net 67
Boilers made at Stockton By whom made Riley Bros Lim (Bl. No 4104) when made 1910
Registered Horse Power 15 Owners Grimsby Central Railway Port belonging to Grimsby
Nom. Horse Power as per Section 28 15 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted No
When built 1910

ENGINES, &c.—Description of Engines Compound S. condensing No. of Cylinders 2 No. of Cranks 2
Dia. of Cylinders 9" x 18" Length of Stroke 12" Revs. per minute 160 Dia. of Screw shaft 3.99 Material of iron
as per rule 3.99 as fitted 4 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 one length 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 16"
Dia. of Tunnel shaft 3.49 Dia. of Crank shaft journals 3.66 Dia. of Crank pin 4" Size of Crank webs 4 1/2" x 2" Dia. of thrust shaft under
collars 4" Dia. of screw 5'-0" Pitch of Screw 4'-9" No. of Blades 4 State whether moveable no Total surface 10 sq
No. of Feed pumps 1 Diameter of ditto 1 3/4" Stroke 6" Can one be overhauled while the other is at work —
No. of Bilge pumps 1 Diameter of ditto 2" Stroke 6" Can one be overhauled while the other is at work —
No. of Donkey Engines one Sizes of Pumps 4" x 2" x 4" Single No. and size of Suctions connected to both Bilge and Donkey pumps
In Engine Room Two 2" In Holds, &c. None

No. of Bilge Injections 1 sizes 1 1/2" Connected to condenser, or to circulating pump pump Is a separate Donkey Suction fitted in Engine room & size yes 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 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 None How are they protected —
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 9.4.1910 of Stern Tube 9.4.1910 Screw shaft and Propeller 9.4.1910
Is the Screw Shaft Tunnel watertight None Is it fitted with a watertight door None worked from —

BOILERS, &c.—(Letter for record —) Manufacturers of Steel See Report attached

Total Heating Surface of Boilers — Is Forced Draft fitted — No. and Description of Boilers One Single Ended
Working Pressure — Tested by hydraulic pressure to — Date of test — No. of Certificate —
Can each boiler be worked separately — Area of fire grate in each boiler — No. and Description of Safety Valves to
each boiler — Area of each valve — Pressure to which they are adjusted — Are they fitted with easing gear —
Smallest distance between boilers or uptakes and bunkers or woodwork — Mean dia. of boilers — Length — Material of shell plates —
Thickness — Range of tensile strength — Are the shell plates welded or flanged — Descrip. of riveting: cir. seams —
long. seams — Diameter of rivet holes in long. seams — Pitch of rivets — Lap of plates or width of butt straps —
Per centages of strength of longitudinal joint — Working pressure of shell by rules — Size of manhole in shell —
Size of compensating ring — No. and Description of Furnaces in each boiler — Material — Outside diameter —
Length of plain part — Thickness of plates — 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.	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:— Two each top and bottom end bolts and nuts, two main bearing bolts and nuts, one set coupling bolts and nuts, one set each air circulating feed and bilge pump valves and check valves, one propeller and a quantity of assorted bolts nuts etc

The foregoing is a correct description,

F. J. Harker

Manufacturer.

Dates of Survey while building	During progress of work in shops—	1910. Aug. 6. 18. 20. 24. 26. 28. 30. 1. 3. 5. 7. 9. 11. 13. 15. 17. 19. 21. 23. 25. 27. 29. 31. Apr. 4. 7.
	During erection on board vessel—	Hull: Apr. 9. 14. 16. 20. 30. May 3.
	Total No. of visits	Hull: 17. Hull: 6 = 23
		Is the approved plan of main boiler forwarded herewith <i>yes</i>
		" " " donkey " " "
Dates of Examination of principal parts— Cylinders <i>14.2.10</i> Slides <i>14.2.10</i> Covers <i>14.2.10</i> Pistons <i>17.2.10</i> Rods <i>31.1.10</i> Connecting rods <i>31.1.10</i> Crank shaft <i>17.2.10</i> Thrust shaft <i>On C. shaft</i> Tunnel shafts <i>17.3.10</i> Screw shaft <i>17.3.10</i> Propeller <i>14.3.10</i> Stern tube <i>9.3.10</i> Steam pipes tested <i>20.4.19.10</i> Engine and boiler seatings <i>9.4.10</i> Engines holding down bolts <i>30.4.10</i> Completion of pumping arrangements <i>3.5.10</i> Boilers fixed <i>30.4.10</i> Engines tried under steam <i>3.5.10</i> Main boiler safety valves adjusted <i>30.4.10</i> Thickness of adjusting washers <i>28" x 27"</i> Material of Crank shaft <i>Eng. Steel</i> Identification Mark on Do. <i>37</i> Material of Thrust shaft <i>on C. shaft</i> Identification Mark on Do. ✓ Material of Tunnel shafts <i>Iron</i> Identification Marks on Do. <i>6556</i> Material of Screw shafts <i>Iron</i> Identification Marks on Do. <i>6556</i> Material of Steam Pipes <i>Solid drawn Copper</i> Test pressure <i>240 lbs per sq inch</i> ✓		

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

To complete the survey the engines and boiler require to be satisfactorily fitted on board and examined under steam, and the spare gear supplied and examined. It is stated that this will be done at Hull.

The engines have been built under special survey. The materials and workmanship are good and render the vessel eligible, in my opinion to have the notation of *L.M.C.* with a date, when the survey has been completed. The engines and boiler have been satisfactorily fitted on board, and tried under steam, and found in order. Spare gear supplied as above. This vessel is now eligible in my opinion to be classed with the notation of *L.M.C. 5.10* in the Register Book.

James Barclay

It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 5.10.

The amount of Entry Fee..	1-0-0	When applied for,	13.4.10
Special Sur. Indt.	2-19-0	When received,	6.6.10
Donkey Boiler Fee	2-19-0		
Travelling Expenses (if any) £	✓		

Committee's Minute

Assigned

FRI. 13 MAY 1910

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



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Lloyd's Register Foundation

Certificate (if required) to be sent to the Committee's Minute.