

16 OCT 1906

Rpt. 4.

REPORT ON MACHINERY.

No. 51749.

Port of Newcastle-on-Tyne
No. in Survey held at South Shields Date, first Survey Apr 26 Last Survey 8th October 1906
Reg. Book. 178 on the S.S. MARION (Number of Visits 2)
Master Goolle Built at Goolle By whom built Goolle S.B. Co. Ltd Tons { Gross 250
Engines made at South Shields By whom made G. Y. Grey Net 1906
Boilers made at South Shields By whom made J. Y. Eltringham & Co. when made 1906
Registered Horse Power 69 Owners L. Cohen when made 1906
Nom. Horse Power as per Section 28 69 Is Refrigerating Machinery fitted for cargo purposes ✓ Is Electric Light fitted ✓

ENGINES, &c.—Description of Engines Tri-compound No. of Cylinders 3 No. of Cranks 3
Dia. of Cylinders 12-21-33 Length of Stroke 24 Revs. per minute 7.085 Dia. of Screw shaft as per rule 7.085 Material of screw shaft 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 1 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 Fitting If two liners are fitted, is the shaft lapped or protected between the liners ✓ Length of stern bush 2.6
Dia. of Funnel shaft as per rule 6.254 Dia. of Crank shaft journals as per rule 6.56 Dia. of Crank pin 6.56 Size of Crank webs 12.5 x 4.5 Dia. of thrust shaft under collars 6.5/8 Dia. of screw 8-9 Pitch of Screw 10-9 No. of Blades 4 State whether moveable No Total surface 29 sq
No. of Feed pumps 1 Diameter of ditto 2 1/4 Stroke 13 1/2 Can one be overhauled while the other is at work ✓
No. of Bilge pumps 1 Diameter of ditto 2 3/4 Stroke 13 1/2 Can one be overhauled while the other is at work ✓
No. of Donkey Engines 2 Sizes of Pumps (5 1/4 x 3 1/2 x 5) (6 x 6 x 6) No. and size of Suctions connected to both Bilge and Donkey pumps one of 2" diam
In Engine Room one of 2" diam In Holds, &c. Fish hold 1 of 2 1/2"
To. of Bilge Injections 1 sizes 2 3/4 Connected to condenser, or to circulating pump Yes 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 ✓
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 Fitted & sealed
Are all pipes carried through the bunkers None How are they protected ✓ Yes see later dated 27.10.06
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
Is examination of completion of fitting of Sea Connections Fitted Goolle of Stern Tube 7.9.10 22/6/06 Fitted Goolle Screw shaft and Propeller Fitted Goolle
Is Screw Shaft Tunnel watertight ✓ Is it fitted with a watertight door ✓ worked from See later dated 27.10.06

MANUFACTURERS, &c.—(Letter for record) Manufacturers of Steel
Heating Surface of Boilers Is Forced Draft fitted No. and Description of Boilers
Working Pressure Tested by hydraulic pressure to 70 lb Date of test 7.9.10 No. of Certificate
Can each boiler be worked separately See attached No. and Description of Safety Valves to boiler
Area of each valve Pressure to which they are adjusted Are they fitted with easing gear
Least distance between boilers or uptakes and bunkers or woodwork Mean dia. of boilers Length Material of shell plates
Range of tensile strength Are the shell plates welded or flanged Descrip. of riveting: cir. seams
Diameter of rivet holes in long. seams Pitch of rivets Lap of plates or width of butt straps
Advantages of strength of longitudinal joint rivets Working pressure of shell by rules Size of manhole in shell
Compensating ring No. and Description of Furnaces in each boiler Material Outside diameter
of plain part top Thickness of plates crown Description of longitudinal joint No. of strengthening rings
bottom Thickness of plates bottom
Working pressure of furnace by the rules Combustion chamber plates: Material Thickness: Sides Back Top Bottom
of stays to ditto: Sides Back Top If stays are fitted with nuts or riveted heads Working pressure by rules
Diameter at smallest part Area supported by each stay Working pressure by rules End plates in steam space:
Thickness Pitch of stays How are stays secured Working pressure by rules Material of stays
Area supported by each stay Working pressure by rules Material of Front plates at bottom
Material of Lower back plate Thickness Greatest pitch of stays Working pressure of plate by rules
Pitch of tubes Material of tube plates Thickness: Front Back Mean pitch of stays
Cross wide water spaces Working pressures by rules Girders to Chamber tops: Material Depth and
of girder at centre Length as per rule Distance apart Number and pitch of stays in each
pressure by rules Superheater or Steam chest; how connected to boiler Can the superheater be shut off and the boiler worked
Diameter Length Thickness of shell plates Material Description of longitudinal joint Diam. of rivet
Pitch of rivets Working pressure of shell by rules Diameter of flue Material of flue plates Thickness
with rings Distance between rings Working pressure by rules End plates: Thickness How stayed
pressure of end plates Area of safety valves to superheater Are they fitted with easing gear

VERTICAL DONKEY BOILER— Manufacturers of Steel

No.	Description	When made	Where fixed	No. in g. Book.
Made at	By whom made	No. of Certificate	Fire grate area	Description of Safety
Working pressure	tested by hydraulic pressure to	Date of test	Date of adjustment	
Valves	No. of Safety Valves	Area of each	Pressure to which they are adjusted	
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
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	Dates of survey	
Diameter of uptake	Thickness of uptake plates	Thickness of water tubes		

SPARE GEAR. State the articles supplied:— 2 Top end, 2 bottom end, 2 main bearing bolts
1 set coupling bolts & nuts, 1 set Piston bolts, 1 set air line, 7 end + bilge pump valves
1 propeller, 1 main + 1 donkey fixed chuck Valve 2 Safety Valve springs
2 escape valve springs

The foregoing is a correct description,

Wm. H. M. C. Manufacturer. of Engines

Dates of Survey while building	During progress of work in shops—	1906. Apr. 26 May 18. 24. 28 June 2. 7. 12. 22. 30 July 5. 11. 26 Aug. 29. Sep. 4. 11. 28 Oct. 1. 3. 4. 5. 8
	During erection on board vessel—	
	Total No. of visits	21

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

Dates of Examination of principal parts—	Cylinders	June July 1906	Slides	June July 1906	Covers	June July 1906	Pistons	June 1906	Rods	June 1906	Propeller	May 1906
Connecting rods	June 1906	Crank shaft	May June 1906	Thrust shaft	May June 1906	Tunnel shafts	—	Screw shaft	May June 1906	Engines holding down bolts	4-11 part	
Stern tube	June 1906	Steam pipes tested	5-10-06	Engine and boiler seatings	28-9-06	Engines tried under steam	8-10-06	Of stays	—			
Completion of pumping arrangements	8-10-06	Boilers fixed	4-10-06	Engines holding down bolts	4-11 part							
Main boiler safety valves adjusted	8-10-06	Thickness of adjusting washers	P 1 3/4 S 3/4									
Material of Crank shaft	Identified steel	Identification Mark on Do.	LLOYD'S 1719	Material of Thrust shaft	Identified	Identification Mark on Do.						
Material of Tunnel shafts	—	Identification Marks on Do.	A.T.G.	Material of Screw shafts	Identified	Identification Marks on Do.						
Material of Steam Pipes	Copper	Test pressure	360 lbs									

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

This vessels machinery has been built under Special Survey & in my opinion is eligible for record
H.L.M.C. 10-06

It is submitted that this vessel is eligible for THE RECORD H.L.M.C. 10-06.

Wm. H. M. C.
26.10.06

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

The amount of Entry Fee..	£ 1 : : : : : When applied for, 1.6.OCT.1906
Special	£ 10 : 7 : : : : When received, 27.10.06
Donkey Boiler Fee	£ : : : : : 27.10.06
Travelling Expenses (if any) £	: : : : : 27.10.06

Committee's Minute

Assigned

TUES. 30 OCT 1906

H.M.C. 10-06

G. A. Dryden Yorke
Engineer Surveyor to Lloyd's Register of British & Foreign



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MACHINERY CERTIFICATE WRITTEN.