

REPORT ON MACHINERY.

No. 36026

Received at London Office

Date of writing Report 20-5-1916, When handed in at Local Office

Port of Glasgow 31 MAY 1916

No. in Survey held at Glasgow

Date, First Survey 14/10/15

Last Survey 23-5-1916

Reg. Book.

on the Machinery for the single screw S.S. "CLIBURN"

(Number of Vents 24)

Tons { Gross
Net

Master J. C. Murray Built at Workington By whom built R. Williamson & Son 7226 When built 1916.

Engines made at Boatbridge By whom made W. Beardmore & Co 72442 when made 1916.

Boilers made at Glasgow By whom made A. W. Dalziel & Co 72640 when made 1916.

Registered Horse Power Owners Stainburn S. S. Co. Ltd Port belonging to Workington

Nom. Horse Power as per Section 28 83.25 Is Refrigerating Machinery fitted for cargo purposes 70 Is Electric Light fitted 70

ENGINES, &c.—Description of Engines Triple expansion No. of Cylinders 3 No. of Cranks 3

Dia. of Cylinders 12", 21", 34" Length of Stroke 24" Revs. per minute 96 Dia. of Screw shaft as per rule 4.36 Material of screw shaft W. S. 4 1/2" as fitted 4 1/2"

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 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 Length of stern bush 2'-6"

Dia. of Tunnel shaft as per rule 6.54 Dia. of Crank shaft journals as per rule 6 3/4 Dia. of Crank pin 6 3/4 Size of Crank webs 12 3/4 x 4 1/2 Dia. of thrust shaft under collars 6 3/4 Dia. of screw 9'-6" Pitch of Screw 12'-3" No. of Blades 4 State whether moveable 70 Total surface 35 square ft.

No. of Feed pumps 2 Diameter of ditto 2 1/2" Stroke 12" Can one be overhauled while the other is at work yes

No. of Bilge pumps 2 Diameter of ditto 2 1/2" Stroke 12" Can one be overhauled while the other is at work yes

No. of Donkey Engines 2 Duplex Sizes of Pumps 5 1/4 x 3 1/2 x 5 x 6 x 6 x 6 No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room 2-2" Engine Room aft + Eng Room Forward Holds, &c. 2-2" Port and Starboard Bilge.

No. of Bilge Injections 1 sizes 3" Connected to condenser, or to circulating pump B. P. Is a 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

Are all connections with the sea direct on the skin of the ship yes Are they Valves or Cocks Values and Cocks

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 and of Stern Tube and Screw shaft and Propeller 4-5-16

Is the Screw Shaft Tunnel watertight Is it fitted with a watertight door worked from { Newcastle on Tyne
Repat 7268432. }

BOILERS, &c.—(Letter for record S) Manufacturers of Steel

Total Heating Surface of Boilers 1585 sq ft **Is Forced Draft fitted** 70 **No. and Description of Boilers** 1 single ended marine

Working Pressure 180 lbs **Tested by hydraulic pressure to** 360 lbs **Date of test** 10-3-16 **No. of Certificate** 13378

Can each boiler be worked separately Area of fire grate in each boiler 44.5 sq ft No. and Description of Safety Valves to each boiler Double Spring loaded Area of each valve 4.9 sq ft Pressure to which they are adjusted 185 lbs Are they fitted with easing gear yes

Smallest distance between boilers or uptakes and bunkers or woodwork 3'-6" **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 Stays in each boiler** **Material** **Outside diameter**

Length of plain part **Thickness of plates** **Description of longitudinal joint** **No. of strengthening rings**

Working pressure of flange 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	Rivets	Plates
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	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:— 2 Ton Rod top end + 2 Ton Rod bottom end bolts + nuts, 2 main bearing bolts + nuts, 1 set of coupling bolts and nuts, 1 set of feed and 1 set of Bilge pump valves. A quantity of assorted bolts and nuts. Iron of various sizes.

The foregoing is a correct description,

WILLIAM BEARDMORE & CO., LIMITED.

Manufacturer. Per R. Sneddon

Dates of Survey while building: During progress of work in shops --- 1915 Oct 14, Nov 29, Dec 15, 27, 1916 Jan 12, 18, 26, 31, Feb 9, 18, Mar 18, 19, 28, Apr 12, 19, 26, May 1, 5, 9, 20, 23. During erection on board vessel --- Total No. of visits 24

Is the approved plan of main boiler forwarded herewith

Dates of Examination of principal parts: Cylinders 18-1-16 Slides 18-1-16 Covers 18-1-16 Pistons 1-3-16 Rods 1-3-16 Connecting rods 14-3-16 Crank shaft 9-2-16 Thrust shaft 9-2-16 Tunnel shafts 3me Screw shaft 18-1-16 Propeller 18-1-16 Stern tube 18-1-16 Steam pipes tested 5-5-16 Engine and boiler seatings 26-4-16 Engines holding down bolts 9-5-16 Completion of pumping arrangements 23-5-16 Boilers fixed 9-5-16 Engines tried under steam 23-5-16 Main boiler safety valves adjusted 20-5-16 Thickness of adjusting washers Port 1/4" Starboard 11/16" Material of Crank shaft Steel Identification Mark on Do 4145 Material of Thrust shaft Steel Identification Mark on Do 4145 Material of Tunnel shafts 3me Identification Marks on Do Material of Screw shafts W. Iron Identification Marks on Do 4145 Material of Steam Pipes Solid drawn Copper Test pressure 360 lbs per sq inch 18-1-16 4.0

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

The Machinery has been built under special survey in accordance with the Rules of the Society, securely fitted on board and tried under steam with satisfactory results.

The workmanship and materials are of good quality throughout.

The machinery is now, in my opinion, eligible to have notification of L.M.C. 5-16 in the Register Book.

It is submitted that this vessel is eligible for THE RECORD + LMC 5.16.

The amount of Entry Fee .. £ 1 : 0 : 0 When applied for, Special .. £ 12 : 9 : 0 29/5/16 Donkey Boiler Fee .. £ : : : When received, Travelling Expenses (if any) £ : : : 6/7/16

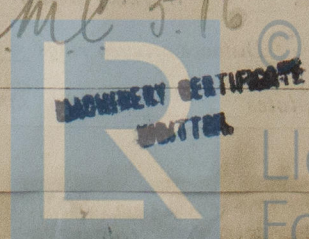
Committee's Minute GLASGOW 30 MAY. 1916

Assigned + L.M.C. 5.16

subject to classification of hull

FRI. JUN. -2. 1916

Thos. A. Ferguson, Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.



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