

# REPORT ON MACHINERY.

No. 38837  
WED. 18 JUN. 1919

Received at London Office

Date of writing Report

19 When handed in at Local Office

16-6-19 Port of Glasgow

No. in Survey held at Reg. Book.

GLASGOW

Date, First Survey

3-3-16 Last Survey 10th June 1919

(Number of Visits 84)

Gross 7261  
Net 4454  
Tons

Master

Built at Glasgow

By whom built

Barclay Curle & Co Ltd

When built 1919

Engines made at

Glasgow

By whom made

Barclay Curle & Co Ltd 20516 when made 1919

Boilers made at

do

By whom made

do

20516 when made 1919

Registered Horse Power

Owners British India Steam Navigation Co

Port belonging to Glasgow

Nom. Horse Power as per Section 28

990 830

Is Refrigerating Machinery fitted for cargo purposes

no

Is Electric Light fitted

yes

## ENGINES, &c.—Description of Engines

Twin Triple Expansion

No. of Cylinders 6

No. of Cranks 6

Dia. of Cylinders 21"-35 1/2"-61"

Length of Stroke 45"

Revs. per minute 84

Dia. of Screw shaft

as per rule 13.29  
as fitted 13 3/4  
Material of screw shaft Steel

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

fitted whole length two liners are fitted, is the shaft lapped or protected between the liners

Length of stern bush 4-8

Dia. of Tunnel shaft

as per rule 11.8  
as fitted 12 1/2

Dia. of Crank shaft journals

as per rule 12.4  
as fitted 12 1/2

Dia. of Crank pin 12 5/8

Size of Crank webs 8 1/2 x 18

Collars 12 5/8

Dia. of screw 16-3

Pitch of Screw 18.9

No. of Blades 3

State whether moveable

yes

Total surface 6874

No. of Feed pumps 4

Diameter of ditto 4 1/4

Stroke 22 1/2

Can one be overhauled while the other is at work

yes

No. of Bilge pumps 4

Diameter of ditto 4 1/4

Stroke 22 1/2

Can one be overhauled while the other is at work

yes

No. of Donkey Engines 3

Sizes of Pumps 5x12-11x10-6 1/2 x 10

No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room (4) 3 1/2" (1) 4" (2) 3 1/2"

In Holds, &c. no 1-2-3-4-5-6-7 two in each

3 1/2" Tunnel well (1) 2 1/2"

No. of Bilge Injections 2 sizes 8"

Connected to condenser, or to circulating pump

Are all the bilge suction pipes fitted with roses

Are all connections with the sea direct on the skin of the ship

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel

What pipes are carried through the bunkers

Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times

Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges

Dates of examination of completion of fitting of Sea Connections 25.3.19 of Stern Tube 25.3.19 Screw shaft and Propeller 25.3.19

Is the Screw Shaft Tunnel watertight

## BOILERS, &c.—(Letter for record)

Total Heating Surface of Boilers 12628 sq ft Is Forced Draft fitted

Working Pressure 215 lb Tested by hydraulic pressure to 430 lb

Can each boiler be worked separately

Smallest distance between boilers or uptakes and bunkers or woodwork 15"

Thickenss 4 1/4 Range of tensile strength 31-35 lb

Per centages of strength of longitudinal joint

Size of compensating ring 10 1/2 x 1 1/4

Length of plain part

Working pressure of furnace by the rules 236

Pitch of stays to ditto: Sides 7 3/4 x 8 1/4

Material of stays Steel

Material of stays Steel

Thickenss 27

Diameter of tubes 2 1/2

Pitch across wide water spaces 13 1/2

Working pressure by rules 215

separately

holes

If stiffened with rings

Working pressure of end plates

Area of safety valves to superheater

Are they fitted with easing gear

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

Pitch of rivets

Working pressure of shell by rules

Diameter of flue

Material of flue plates

Thickness

End plates: Thickness

How stayed

Are they fitted with easing gear



002094-002100-04210

**VERTICAL DONKEY BOILER—** Manufacturers of Steel

No. None Description None

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 casing 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 top end bolts and nuts, two bottom end bolts and nuts, 1 set of Coupling bolts and nuts 2 main bearing bolts and nuts feed and a helge Pump Valves, Iron, bolts and nuts of various sizes

The foregoing is a correct description,  
**FOR BARON & SURLY & CO., LTD.**  
*A Benjamin Lewis* Manufacturer.

Dates of Survey while building	During progress of work in shops --	Assistant Manager	1916. Feb 3. July 20 Sept 6. Oct 4. Nov 2. 7. 9. 13. 20. Dec. 6.
	During erection on board vessel --		1917. Jan 26. Apr 4. Sept 18. Oct 4. 1918. Apr 5. July 24. Aug 18. Sept 4. 20. 26. 27. 1919. Jan 8. 10. 20. 29. Feb. 11. 12. 17.
	Total No. of visits		84.

Dates of Examination of principal parts—	Cylinders	6.10.19	Slides	10.1.19	Covers	1.10.19	Pistons	10.1.19	Rods	10.1.19	
Connecting rods	10.1.19	Crank shaft	3.4.19	Thrust shaft	27.12.18	Tunnel shafts	5.12.18	Screw shaft	27.12.18	Propeller	1.4.19
Stern tube	25.3.19	Steam pipes tested	30.11.16 & 20.5.19	Engine and boiler seatings	25.3.19	Engines holding down bolts	14.4.19				
Completion of pumping arrangements	6.6.19	Boilers fixed	3.6.19	Engines tried under steam	23.5.19 - 10.6.19						
Main boiler safety valves adjusted	23.5.19	Thickness of adjusting washers	P <sub>2</sub> 5/16 P <sub>7</sub> 5/16 P <sub>13</sub> 5/16 P <sub>22</sub> 5/16 P <sub>32</sub> 5/16 P <sub>34</sub> 5/16 P <sub>76</sub> 5/16	Soft cast part P <sub>2</sub> of Staff (auxiliary)							
Material of Crank shafts	Steel	Identification Mark on Do.	34.19	Material of Thrust shafts	Steel	Identification Mark on Do.	27.12.18				
Material of Tunnel shafts	Steel	Identification Marks on Do.	9368 J.D.	Material of Screw shafts	Steel	Identification Marks on Do.	Share 516. 27.12.18				
Material of Steam Pipes	Iron	Test pressure	645 lb								

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

The machinery of this vessel has been constructed under special survey in accordance with the Rules and approved Plans and has been seen satisfactorily working under steam, materials and workmanship are good.

Installation for burning oil fuel fitted, requirements of Sec 49 have been complied with

The machinery is eligible in our opinion to be classed + LMC-6-19 & to have record of Fitted for oil fuel 6.19 FP above 150° F. F.D.

It is submitted that this vessel is eligible for **THE RECORD.** + LMC 6.19 F.D. Fitted for oil fuel 6.19 FP above 150° F. Bell.

The amount of Entry Fee	.. £	3	When applied for,	16.6.19
Special	.. .. £	65		
Donkey Boiler Fee	.. .. £		When received,	29 Feb 19
Travelling Expenses (if any)	£			

Committee's Minute **GLASGOW** 17 JUN. 1919

Assigned + L.M.C. 6.19

Fitted for oil fuel 6.19 F.D. above 150° F.

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



Glasgow

J.C. 16.6.19

Certificate (if registered) to be sent to or below the space for Committee's Minute.

The Surveyors are requested not to write on or below the space for Committee's Minute.