

REPORT ON MACHINERY.

No. 36803

Received at London Office

WED 25 APR 1917

Date of writing Report 10-4-1917 When handed in at Local Office 14-4-1917 Port of Glasgow
 No. in Survey held at Glasgow Date, First Survey 25th Aug 1915 Last Survey 12-4-1917
 Reg. Book. on the Machinery for the S. S. "SMERDIS"
 Master Carr Built at Ardrossan By whom built Ardrossan S. B. Co 267. When built 1914.
 Engines made at Coatbridge By whom made Wm Beardmore & Co No 440 when made 1914.
 Boilers made at Paisley By whom made Messrs A. & Craig & Co No 53/4 when made 1914.
 Registered Horse Power Owners J. & P. Hutchison Port belonging to Glasgow
 Nom. Horse Power as per Section 28 149 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted yes

ENGINES, &c.—Description of Engines Triple Expansion No. of Cylinders 3 No. of Cranks 3
 Dia. of Cylinders 16", 26", 44" Length of Stroke 33" Revs. per minute 85" Dia. of Screw shaft 9 3/4" 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
 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 3'-6"
 Dia. of Tunnel shaft 9 1/4" Dia. of Crank shaft journals 9" Dia. of Crank pin 9" Size of Crank webs 16 1/2" Dia. of thrust shaft under
 flanges 9 1/4" Dia. of screw 11-8" Pitch of Screw 14-9" No. of Blades 4 State whether moveable No Total surface 500 sq ft
 No. of Feed pumps 2 Diameter of ditto 3" Stroke 16 1/2" Can one be overhauled while the other is at work yes
 No. of Bilge pumps 2 Diameter of ditto 3" Stroke 16 1/2" Can one be overhauled while the other is at work yes
 No. of Donkey Engines 3 Sizes of Pumps 1-6" centrifugal, 1-4 1/2" x 5" x 10" Duplex, 1-9" x 8" x 10" Duplex. No. and size of Suctions connected to both Bilge and Donkey pumps
 Engine Room 3-2 1/4" Eng Room aft 1-9" x 8" x 10" Duplex. Holds, &c. 2-2 1/2" Port & starboard.
 No. of Bilge Injections 1 sizes 4" Connected to condenser, or to circulating pump C. 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 yes
 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
 That 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 26-9-16 of Stern Tube 26-9-16 Screw shaft and Propeller 26-9-16.

Is the Screw Shaft Tunnel watertight none Is it fitted with a watertight door — worked from —
 BOILERS, &c.—(Letter for record S.) Manufacturers of Steel D. Colville & Sons & other well
 Total Heating Surface of Boilers 2412 sq ft Forced Draft fitted No. and Description of Boilers 2 English Patent Marine
 Working Pressure 180 Tested by hydraulic pressure to 360 Date of test 16.6.16 No. of Certificate 13453
 Can each boiler be worked separately yes Area of fire grate in each boiler 31.5 sq ft No. and Description of Safety Valves to
 boiler 1 Double Spring loaded Area of each valve 3.940 Pressure to which they are adjusted 180 lbs Are they fitted with easing gear yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 12" Minimum Mean dia. of boilers Length Material of shell plates
 Thickness Range of tensile strength Are the shell plates welded or flanged Descrip. of riveting or seams
 Diameters of rivet holes in long. seams Pitch of rivets Lap of plates or width of butt straps
 Percentages of strength of longitudinal joint rivets Working pressure of shell by rules Size of manhole in shell
 Descrip. of compensating ring No. and Description of Furnaces in each boiler Material Outside diameter
 of plain part Thickness of plates crown bottom Description of longitudinal joint No. of strengthening rings
 Working pressure of furnace by the rules Combustion chamber plates Material Thickness Sides Back Top Bottom
 Stays to ditto: Sides Back Top If stays are fitted with nuts or rivet heads Working pressure by rules End plates in steam space:
 of stays Diameter at smallest part Area supported by each stay Working pressure by rules Material of stays
 Thickness Pitch of stays How are stays secured Working pressure by rules Material of front plates at bottom
 at smallest part Area supported by each stay Working pressure by rules Working pressure of plate by rules
 Material of Lower back plate Thickness Greatest pitch of stay Working pressure of plate by rules
 of tubes 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
 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
 Pitch of rivets Working pressure of shell by rules Diameter of flue Material of flue plates Thickness
 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
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
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 4m Rod lifts + 2 4m Rod bottoms and bolts + nuts, 2 main bearing bolts + nuts, 1 set of coupling bolts, 1 set of feed + Bilge pump valves, 1 propeller. A quantity of assorted bolts + nuts. 5m 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 Aug 25 Sept 18 21 28 Oct 8 14 Nov 14 26 29 Dec 15 1916 Jan 13 18 26 31 Feb 9 18 Mar 8 Apr 4 12 May 3 17 25 June 8
 During erection on board vessel: July 13 20 Aug 15 22 Sept 6 26 29 Oct 4 11 Nov 2 Dec 20 1917 Jan 10 15 18 24 Feb 2 14 27 Mar 6 15 31 Apr 3 7 8 9
 Total No. of visits 53

Is the approved plan of main boiler forwarded herewith

Dates of Examination of principal parts—Cylinders 20-4-16 Slides 20-4-16 Covers 20-4-16 Pistons 6-9-16 Rods 6-9-16
 Connecting rods 6-9-16 Crank shaft 22-8-16 Thrust shaft 6-9-16 Tunnel shafts 7-11-16 Screw shaft 12-8-16 Propeller 18-5-16
 Stern tube 12-5-16 Steam pipes tested 21-2-14. Engine and boiler seatings 18-1-14 Engines holding down bolts 24-1-14
 Completion of pumping arrangements 9-4-14 Boilers fixed 14-2-14 Engines tried under steam 9-4-14
 Main boiler safety valves adjusted 6-3-14. Thickness of adjusting washers Port 1/4 = 9/32. Starboard 9/32 = 1/4
 Material of Crank shaft S Identification Mark on Do. 22-8-16 Material of Thrust shaft S Identification Mark on Do. 7-11-16
 Material of Tunnel shafts 7-11-16 Identification Marks on Do. Material of Screw shafts W. S. Identification Marks on Do. 6-14-16
 Material of Steam Pipes Copper Test pressure 360 lbs per sq. in. 12-5-16

General Remarks (State quality of workmanship, opinions as to class, &c. The engines have been built under special survey in accordance with the Rules of the Society. They have been securely fitted on board + tried under steam. The workmanship + materials are of good quality throughout. The centrifugal circulating pump was found on trial to be too small + not satisfactory. In order to enable the vessel, which was already loaded, to make her voyage to Nantes + back a temporary connection was made with the large Ballast pump for circulating the water through the condensers, this on being tested was found to give a vacuum of 22 inches + is, in my opinion, satisfactory as a temporary measure for the purpose intended.

It was also arranged for a satisfactory centrifugal circulating pump to be fitted + tested on the vessel's return from Nantes

The Machinery is in safe working order + eligible, in my opinion, for classification + to have the Record F.L.M.C 4-14. when a satisfactory centrifugal circulating pump has been fitted + tested

The amount of Entry Fee .. £ 2 : 0 : 0 When applied for,

Special SUNDAY .. £ 14 : 6 : 0 24th 11th 1917

Donkey Boiler Fee .. £ 2 : 2 : 0 When received,

Travelling Expenses (if any) £ 2 : 3 : 0 4/6/17 8/6/17

Fred. A. Ferguson.

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

Committee's Minute GLASGOW. 24 APR 1917.

Assigned Deferred for compl.



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Certificate (if required) to be sent to the Registrar of Shipping, or below the space for Committee's Minute.

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16/4/17