

# REPORT ON MACHINERY.

No. 3906H

Received at London Office

Writing Report 10 When handed in at Local Office 30/8 1919. Port of GLASGOW Date, First Survey 9/11/1917 Last Survey 21st Aug 1919

Survey held at GLASGOW on the S.S. WAR DIYAN (Standard Z) Tons Gross 5543 Net 3446

Built at GLASGOW By whom built Lithgows Sta no 718 When built 1919

Made at GLASGOW By whom made Do Rowan & Co Ltd (no 708) when made 1919

Made at Do By whom made Do (no 721) when made 1919

Red Horse Power 517 Owners The Shipping Controller Port belonging to London

Horse Power as per Section 28 517 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

Engines Triple Expansion No. of Cylinders 3 No. of Cranks 3

Cylinders 27-44-73 Length of Stroke 48 Revs. per minute 80 Dia. of Screw shaft 14.7 Material of screw shaft Iron

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 Yes

propeller boss Yes If the liner is in more than one length are the joints burned No If the liner does not fit tightly at the part Yes

the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive Yes If two Yes

are fitted, is the shaft lapped or protected between the liners Yes Length of stern bush 60 1/2

Tunnel shaft 13.33 Dia. of Crank shaft journals 14 Dia. of Crank pin 14 1/2 Size of Crank webs 28 x 9 Dia. of thrust shaft under 14 1/4

Dia. of screw 17-6 Pitch of Screw 16-6 No. of Blades 4 State whether moveable No Total surface 98.24

Feed pumps 2 Diameter of ditto 4 Stroke 24 Can one be overhauled while the other is at work Yes

Bilge pumps 2 Diameter of ditto 4 Stroke 24 Can one be overhauled while the other is at work Yes

Donkey Engines 3 Sizes of Pumps Ballast 10 1/2 x 14 x 24 No. and size of Suctions connected to both Bilge and Donkey pumps 1 Feed 9 1/2 x 17 x 18

Engine Room 3-3 1/2 Stokehold 2-3 1/2 In Holds, &c. Fore hold 2-3 1/2, Bunker 1-3 1/2,

ft hold 2-3 1/2, Tunnel 1-2 1/2, Bilge Injections 1 sizes 12 Connected to condenser, or to circulating pump Yes Is a separate Donkey Suction fitted in Engine room & size Yes 3 1/2

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

connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks Both

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 Below

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

pipes are carried through the bunkers Forward Suctions How are they protected Iron casings

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

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

of examination of completion of fitting of Sea Connections 20.6.19 of Stern Tube 20.6.19 of Screw shaft and Propeller 20.6.19 GRK

Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door No worked from Trunkway escape fittings

ERS, &c. (Letter for record S) Manufacturers of Steel Steel 60 of Scotland Sta

Heating Surface of Boilers 7668 Is Forced Draft fitted Yes No. and Description of Boilers 3 Single ended

Working Pressure 180 lb Tested by hydraulic pressure to 360 lb Date of test 13.6.19 No. of Certificate 14781

each boiler be worked separately Yes Area of fire grate in each boiler 63.33 No. and Description of Safety Valves to Are they fitted with easing gear Yes

boiler 2 Spring loaded Area of each valve 9.6 Pressure to which they are adjusted 185 lb Are they fitted with easing gear Yes

least distance between boilers or uptakes and bunkers or woodwork 1-6 Mean dia. of boilers 15-6 Length 11-6 Material of shell plates Steel

seams TRDBS Range of tensile strength 28.5 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams Do Lap

seams TRDBS Diameter of rivet holes in long. seams 1 1/2 Pitch of rivets 9 1/8 Lap of plates or width of butt straps 19 1/2

percentages of strength of longitudinal joint 88.3 Working pressure of shell by rules 183 Size of manhole in shell 16 x 12

of compensating ring and flanged No. and Description of Furnaces in each boiler 3 Cornucopia Material Steel Outside diameter 50 1/16

th of plain part top Thickness of plates 19 Description of longitudinal joint weld No. of strengthening rings -

working pressure of furnace by the rules 188 Combustion chamber plates: Material Steel Thickness: Sides 3/32 Back 1/16 Top 3/32 Bottom 3/32

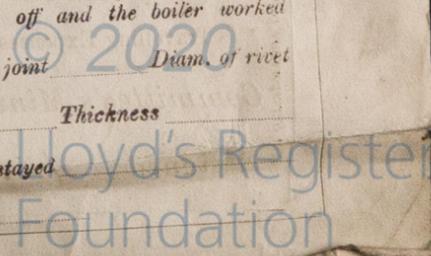
of stays to ditto: Sides 10 5/8 x 9 1/4 Back 10 1/4 x 8 3/4 Top 10 5/8 x 9 1/4 If stays are fitted with nuts or riveted heads Into Working pressure by rules 180

material of stays Steel Diameter at smallest part 2.395 Area supported by each stay 98 Working pressure by rules 219 End plates in steam space: Steel

material Steel Thickness 1 1/32 Pitch of stays 21 3/4 x 20 1/2 How are stays secured Nuts Working pressure by rules 181 Material of stays Steel

meter at smallest part 2.29 Area supported by each stay 445 Working pressure by rules 198 Material of Front plates at bottom Steel

W2269-0110



VERTICAL DONKEY BOILER— Manufacturers of Steel

No. 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
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 top end bolts & nuts 2 bottom end bolts & nuts
2 main bearing bolts & nuts & 6 coupling bolts & nuts set of feed and bilge
Pump Valves assorted Iron bolts & nuts and other spares as
required by specification

The foregoing is a correct description,

David Rowan & Co. Ltd. Manufacturer.

Dates of Survey while building
During progress of work in shops: 1917 Nov 9, 1918 April 14, Oct 4, 8, 28, Nov 4, 18, 22, Dec 11, 12, 19, 1919 Jan 8, 22, Feb 6, 10, 17, Mar 6, 14
During erection on board vessel: April 1, 6, 14, May 2, 7, 16, 22, June 3, 4, 23, 30, July 8, Aug 11, 14, 15, 18, 19, 21
Total No. of visits: 39

Is the approved plan of main boiler forwarded herewith? Yes

Dates of Examination of principal parts: Cylinders 6.2.19, Slides 11.2.19, Covers 11.2.19, Pistons 11.3.19, Rods 11.3.19
Connecting rods 11.3.19, Crank shaft 10.3.19, Thrust shaft 17.4.19, Tunnel shafts 22.5.19, Screw shaft 22.5.19, Propeller 22.5.19
Stern tube 4.6.19, Steam pipes tested 12.12.18, Engine and boiler seatings 30.6.19, Engines holding down bolts 11.8.19
Completion of pumping arrangements 19.8.19, Boilers fixed 11.8.19, Engines tried under steam 19.8.19, 21.8.19
Main boiler safety valves adjusted 19.8.19, Thickness of adjusting washers: P 2 1/2" 8 3/8", P 3 1/2" 8 1/4", P 3 1/2" 8 3/8"
Material of Crank shaft: Steel, Identification Mark on Do. 708
Material of Thrust shaft: Steel, Identification Mark on Do. 114
Material of Tunnel shafts: Iron, Identification Marks on Do. X
Material of Screw shafts: Iron, Identification Marks on Do. 272
Material of Steam Pipes: Iron, Test pressure 540 lb sq in

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 working satisfactorily under steam. Materials and workmanship are good.

The machinery is eligible in my opinion to be classed + LMC 8.19 and to have record of Fitted for oil fuel 8.19 F.P. above 150° F.

It is submitted that this vessel is eligible for THE RECORD + LMC 8.19. F.D.

Fitted for oil fuel 8.19. F.D above 150° F.

Table with columns: The amount of Entry Fee, Special, Donkey Boiler Fee, Travelling Expenses (if any), When applied for, When received.

Committee's Minute

Assigned + L.M.C 8.19 2D.

Machinery Certificate 3/9/19

as Easthope, Engineer Surveyor to Lloyd's Register of British & Foreign Shipping



Fitted for oil fuel 8.19 2D above 150° F.

Vertical text on the left margin: Certificate (if required) to be sent to...

Handwritten date: 20.8.19