

REPORT ON MACHINERY.

Received at London Office 1918

Date of writing Report 1918 When handed in at Local Office 10 Port of Glasgow
 No. in Survey held at Glasgow Date, First Survey 5/9/17 Last Survey 24/6/1918
 Reg. Book. on the 45 War Clarion (Number of Visits 27)

Master Built at By whom built The North S.P.T.E. Co. Ltd (36) Tons { Gross Net } When built 1918
 Engines made at Glasgow By whom made D. Rowan & Co. Ltd (691) when made 1918
 Boilers made at Glasgow By whom made D. Rowan & Co. Ltd (691) when made 1918
 Registered Horse Power Owners Controller of Shipping (R. Mackie) Port belonging to
 Nom. Horse Power as per Section 28 410 411 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 25" 41" 68" Length of Stroke 45" Revs. per minute Dia. of Screw shaft as per rule 13.4 as fitted 14.5 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 If the liner is in more than one length are the joints burned 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 Yes If two
 liners are fitted, is the shaft lapped or protected between the liners Length of stern bush 5-0"

Dia. of Tunnel shaft as per rule 13.4 as fitted 12.5 Dia. of Crank shaft journals as per rule 13.03 as fitted 13.4 Dia. of Crank pin 13.4 Size of Crank webs 8 3/16 Dia. of thrust shaft under
 collars 13 1/4 Dia. of screw 15-6 Pitch of Screw 17.0 No. of Blades 4 State whether moceable 220 Total surface 75 ft²
 No. of Feed pumps 2 Diameter of ditto 3 1/2 Stroke 24 Can one be overhauled while the other is at work Yes
 No. of Bilge pumps 2 Diameter of ditto 3 1/2 Stroke 24 Can one be overhauled while the other is at work Yes
 No. of Donkey Engines one Sizes of Pumps 9 1/2 x 7 1/2 x 18 No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room 2-3 bore In Holds, &c. one 2 1/2 tunnel well 1-3 after hold, 2-3
 all other holds

No. of Bilge Injections 1 sizes 8 Connected to condenser, or to circulating pump pump Is a separate Donkey Suction fitted in Engine room & size Yes 3"
 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 None
 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 Below
 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 28/6/18 of Stern Tube 28/6/18 Screw shaft and Propeller 28/6/18
 Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door No worked from

OILERS, &c.—(Letter for record S.) Manufacturers of Steel Wm Beardmore & Co

Total Heating Surface of Boilers 5882 ft² Is Forced Draft fitted Yes No. and Description of Boilers 2 Single ended
 Working Pressure 180 lbs Tested by hydraulic pressure to 360 Date of test 7/6/18 No. of Certificate 14332.

Can each boiler be worked separately Yes Area of fire grate in each boiler 74 ft² No. and Description of Safety Valves to
 each boiler 1 pair direct spring Area of each valve 12.56 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 46 Mean dia. of boilers 16-6 Length 11-9 Material of shell plates Steel
 Thickness 1/32 Range of tensile strength 28 3/4 - 33 lbs Are the shell plates welded or flanged No Descrip. of riveting: cir. seams Cup double
 long. seams both ends Diameter of rivet holes in long. seams 1 3/8 Pitch of rivets 9 5/8 Lap of plates or width of butt straps 20 5/8

Per centages of strength of longitudinal joint rivets 90 plate 80 Working pressure of shell by rules 188 Size of manhole in shell 16" x 12"
 Size of compensating ring flanged No. and Description of Furnaces in each boiler 4 Deighton Material Steel Outside diameter 44 1/2"

Length of plain part top bottom Thickness of plates crown 9/16 bottom 7/16 Description of longitudinal joint Welded No. of strengthening rings
 Working pressure of furnace by the rules 198 Combustion chamber plates: Material Steel Thickness: Sides 23/32 Back 11/16 Top 23/32 Bottom 23/32

Pitch of stays to ditto: Sides 9 3/8 x 8 3/4 Back 8 5/8 x 10 Top 7 5/8 x 4 1/2 If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 200
 Material of stays Steel Diameter at smallest part 1.07 Area supported by each stay 89 Working pressure by rules 210 End plates in steam space

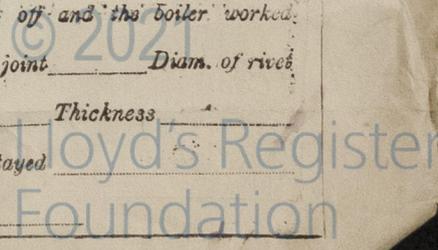
Material Steel Thickness 1/16 Pitch of stays 24 x 22 x 19 How are stays secured 2 nuts Working pressure by rules 207 Material of stays Steel
 Diameter at smallest part 9.62 Area supported by each stay 493.5 Working pressure by rules 212 Material of Front plates at bottom Steel

Thickness 15/16 Material of Lower back plate Steel Thickness 2/8 Greatest pitch of stays 13 3/4 Working pressure of plate by rules 208
 Diameter of tubes 2 3/4 Pitch of tubes 4 x 3 3/8 Material of tube plates Steel Thickness: Front 1/4 Back 3/4 Mean pitch of stays 9 3/8

Pitch across wide water spaces 13 3/4 Working pressures by rules 202 Girders to Chamber tops: Material Steel Depth and
 thickness of girder at centre 10 x 7 1/2 Length as per rule 34 9/16 Distance apart 10 5/8 Number and pitch of stays in each (3) 8 3/4

Working pressure by rules 204 Superheater or Steam chest; how connected to boiler None Can the superheater be shut off and the boiler worked
 separately Diameter Length Thickness of shell plates Material Description of longitudinal joint Diam. of rivets

Are they 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



IS A DONKEY BOILER FITTED?

no

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied: - 22 end bolts nuts 2 bottom end bolts nuts, 2 main bearing bolts nuts, 6 coupling bolts nuts, 2 ed & lge pump valves seats, iron bolts and nuts assorted, a cast iron propeller, 6 air pump valves, and assorted iron

The foregoing is a correct description,

David Rowan & Co. per Laird Manufacturer.

Dates of Survey while building: During progress of work in shops - 1917 Sept 5, Nov 23, Dec 5, 1918 Jan 17, 20, 25, Feb 1, Mar 19, 27, Apr 5, 12, 15, 17, 22, May 2, 6, 16, 18, 24, 27, 28, 31, June 6, 7, 17, 20, 24; During erection on board vessel - 1918 June 28, July 6, 11, 17, 20, Aug 19, Sep 4, 14; Total No. of visits 27

Is the approved plan of main boiler forwarded herewith

" " " donkey " " "

Dates of Examination of principal parts - Cylinders 6/5/18 Slides 6/5/18 Covers 6/5/18 Pistons 6/5/18 Rods 3/15/18 Connecting rods 3/15/18 Crank shaft 27/5/18 Thrust shaft 24/6/18 Tunnel shafts 20/6/18 Screw shaft 24/6/18 Propeller 6/4/18 Stern tube 6/4/18 Steam pipes tested 16/5/18 Engine and boiler seatings 6/2/18 Engines holding down bolts 4/9/18 Completion of pumping arrangements 14/9/18 Boilers fixed 4/9/18 Engines tried under steam 14/9/18 Main boiler safety valves adjusted 4/9/18 Thickness of adjusting washers P P 1/32 S 1/32 S P 1/32 S 1/32

Material of Crank shaft Steel Identification Mark on Do. 27/5/18 Material of Thrust shaft Steel Identification Mark on Do. 24/6/18 Material of Tunnel shafts Steel Identification Marks on Do. 20/6/18 Material of Screw shafts Iron Identification Marks on Do. 24/6/18 Material of Steam Pipes Lap-welded iron Test pressure 540 lbs

Is an installation fitted for burning oil fuel No. Is the flash point of the oil to be used over 150°F.

Have the requirements of Section 49 of the Rules been complied with

Is this machinery duplicate of a previous case Yes If so, state name of vessel, (692)

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

These engines and boilers have been built under special survey, the materials and workmanship are of good description, they have now been forwarded to Ellerman when they will be fitted on board the vessel.

These engines & boilers have been efficiently fitted on board and the vessel is eligible in my opinion for record of LMC 9.18. See light.

OK

It is submitted that this vessel is eligible for THE RECORD. + LMC 9.18 F.D.

J. G. 20-9-18

The amount of Entry Fee ... £ 38.11.6 Special 12-17-2 Donkey Boiler Fee Travelling Expenses (if any) £ 12.17.2

When applied for, 19...

When received, 25.9.18

Committee's Minute GLASGOW

Assigned Deferred for compln.

MACHINERY CERTIFICATE WRITTEN



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