

REPORT ON MACHINERY

No. 41517

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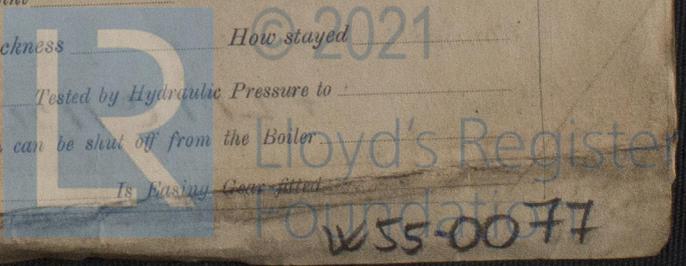
Date of writing Report 18th Nov. 1921 When handed in at Local Office 18th Nov. 1921 Port of Glasgow
 Date, First Survey 13th Feb 1928 Last Survey 17th November 1921
 in Survey held at Glasgow
 on the S.S. ESSONITE
 Built at Glasgow By whom built Jarrow S.S. Ltd (1460) When built 1921
 By whom made Jarrow S.S. Ltd (1460) when made 1921
 By whom made North Shipbuilding Coy Ltd (1428/9) when made 1921
 Owners William Robertson Port belonging to Glasgow
 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Triple No. of Cylinders 3 No. of Cranks 3
 Dia. of Cylinders 15" 25 1/2" 41" Length of Stroke 30" Revs. per minute 100 Dia. of Screw shaft 8 1/2" Material of screw shaft Steel
 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 on the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive ✓ If two
 liners are fitted, is the shaft lapped or protected between the liners ✓ Length of stern bush 3' 2 1/2"
 Dia. of Tunnel shaft 4 1/4" Dia. of Crank shaft journals 8 1/2" Dia. of Crank pin 9" Size of Crank webs 12 3/4" x 6" Dia. of thrust shaft under
 collars 8 3/4" Dia. of screw 10' 0" Pitch of Screw 11' 6" No. of Blades 4 State whether moceable No Total surface 36.240 sq. ft.
 No. of Feed pumps 2 Diameter of ditto 3" Stroke 15" Can one be overhauled while the other is at work Yes
 No. of Bilge pumps 2 Diameter of ditto 3" Stroke 15" Can one be overhauled while the other is at work Yes
 No. of Donkey Engines 2 Sizes of Pumps Feed 6" x 4 1/2" x 6" Water 4" x 8" x 8" No. and size of Suctions connected to both Bilge and Donkey pumps
 in Engine Room 2 @ 2 1/2" In Holds, &c. 2 @ 2 1/2"

No. of Bilge Injections 1 sizes 4 1/2" Connected to condenser, or to circulating pump Cir. pp. Is a separate Donkey Suction fitted in Engine room & size Yes 1 @ 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 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 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
 Is the Screw Shaft Tunnel watertight ✓ Is it fitted with a watertight door ✓ worked from ✓

BOILERS, &c.—(Letter for record 5) Manufacturers of Steel Glasgow J.T.C. Spence, Beadunnetted C. of Scotland
 Total Heating Surface of Boilers 2140 sq. ft. Is Forced Draft fitted No No. and Description of Boilers 2 Single Ended Multi-tubular
 Working Pressure 180 lbs. Tested by hydraulic pressure to 360 lbs./sq. in. Date of test 16/3/21 No. of Certificate 15748
 Can each boiler be worked separately Yes Area of fire grate in each boiler 33 1/4 sq. ft. No. and Description of Safety Valves to
 each boiler 2 Spring loaded Area of each valve 3.976 sq. in. Pressure to which they are adjusted 185 lbs./sq. in. Are they fitted with easing gear Yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 4' 0" INT. MEAS. dia. of boilers 11' 0" Length 10' 0" Material of shell plates
 Thickness 1 1/2" Range of tensile strength 45,000 lbs. Are the shell plates welded or flanged flanged Descrip. of riveting: cir. seams
 long. seams 1 1/2" Diameter of rivet holes in long. seams 1 1/4" Pitch of rivets 4" Lap of plates or width of butt straps
 Per centages of strength of longitudinal joint 85% Working pressure of shell by rules 185 lbs./sq. in. Size of manhole in shell
 Size of compensating ring 12" No. and Description of Furnaces in each boiler 1 Material Steel Outside diameter
 Length of plain part 10' 0" Thickness of plates 1 1/2" Description of longitudinal joint flanged No. of strengthening rings
 Working pressure of furnace by the rules 185 lbs./sq. in. Combustion chamber plates Material Thickness: Sides 1 1/2" Back 1 1/2" Top 1 1/2" Bottom
 Pitch of stays to ditto: Sides 4" Back 4" Top 4" If stays are fitted with nuts or riveted heads Yes Working pressure by rules
 Material of stays Steel Area at smallest part 12" Area supported by each stay 12" Working pressure by rules 185 lbs./sq. in. End plates in steam space:
 Material Steel Thickness 1 1/2" Pitch of stays 4" How are stays secured By nuts and washers Working pressure by rules 185 lbs./sq. in. Material of stays Steel
 Area at smallest part 12" Area supported by each stay 12" Working pressure by rules 185 lbs./sq. in. Material of Front plates at bottom
 Thickness 1 1/2" Material of Lower back plate Steel Thickness 1 1/2" Greatest pitch of stays 4" Working pressure of plate by rules
 Diameter of tubes 4" Pitch of tubes 12" Material of tube plates Steel Thickness: Front 1 1/2" Back 1 1/2" Mean pitch of stays
 Pitch across wide water spaces 12" Working pressures by rules 185 lbs./sq. in. Girders to Chamber tops: Material Steel Depth and
 thickness of girder at centre 12" Length as per rule 12" Distance apart 12" Number and pitch of stays in each
 Working pressure by rules 185 lbs./sq. in. Steam dome: description of joint to shell flanged % of strength of joint
 Diameter 12" Thickness of shell plates 1 1/2" Material Steel Description of longitudinal joint flanged Diam. of rivet holes
 Pitch of rivets 4" Working pressure of shell by rules 185 lbs./sq. in. Crown plates 1 1/2" Thickness 1 1/2" How stayed By nuts and washers

SUPERHEATER. Type Water tube Date of Approval of Plan 16/3/21 Tested by Hydraulic Pressure to 360 lbs./sq. in.
 Date of Test 16/3/21 Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler Yes
 Diameter of Safety Valve 1 1/2" Pressure to which each is adjusted 185 lbs./sq. in. Is Easing Gear fitted Yes



W 55-0077

IS A DONKEY BOILER FITTED? No If so, is a report now forwarded? ✓

SPARE GEAR. State the articles supplied:— 2 Top end bolts and nuts, 2 main bearing bolts, 2 bottom end bolts and nuts, 1 set of coupling bolts, 1 set of feed and bilge pump valves, quantity assorted bolts and nuts, iron of various sizes.

The foregoing is a correct description,

For Iron Gunner & Co. Ld. Charles C. Cotton Manufacturer.

Dates of Survey while building: During progress of work in shops: 1920 Feb 13 Mar 8 Apr 14 22 27 May 3 5 10 11 17 24 28 Jun 3 9 14 21 Jul 13 20 Aug 4 Sep 1 16 Oct 14 Nov 3 20 Dec 16 (1921) During erection on board vessel: Jan 12 31 Feb 8 18 23 28 Mar 2 4 30 Apr 22 29 Jun 3 Jul 5 Oct 1 11 24 25 27 Nov 10 16 17 Total No. of visits: 46 Is the approved plan of main boiler forwarded herewith: No " " " donkey " " " ✓

Dates of Examination of principal parts—Cylinders 21'6" x 20 Slides 21'6" x 20 Covers 21'6" x 20 Pistons 21'6" x 20 Rods 13'4" x 20 Connecting rods 13'4" x 20 Crank shaft 30'3" x 21 Thrust shaft 4'8" x 20 Tunnel shafts None Screw shaft 4'8" x 20 Propeller 18'2" x 21 Stern tube 22'4" x 21 Steam pipes tested 25/10/21 Engine and boiler seatings 1-10-21 Engines holding down bolts 24-10-21 Completion of pumping arrangements 10-11-21 Boilers fixed 24-10-21 Engines tried under steam 16-11-21 Completion of fitting sea connections 22-9-21 Stern tube 22-9-21 Screw shaft and propeller 22-9-21 Main boiler safety valves adjusted 10-11-21 Thickness of adjusting washers 2 1/4" 1 1/2" 1 1/2" 1 1/2" Material of Crank shaft Steel Identification Mark on Do. LLOYDS 1460 Material of Thrust shaft Steel Identification Mark on Do. LLOYDS 1460 Material of Tunnel shafts None Identification Marks on Do. L Material of Screw shafts Steel Identification Marks on Do. 743R 540B3 18'6" x 20 LLOYDS 1460 Material of Steam Pipes S.D. steel Test pressure 540 lbs/sq. inch 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 No If so, state name of vessel ✓

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

The engines and boilers of this vessel have been built under special survey. The workmanship and materials are good; they have been well fitted on board, tried under steam and found to work satisfactorily.

The machinery of this vessel is eligible in our opinion for the record of L.M.C. 11.21 in the Register Book.

It is submitted that this vessel is eligible for THE RECORD. L.M.C. - 11.21. C.L.

MACHINERY CERTIFICATE WRITTEN 30.11.21 (dated 23/4/21)

The amount of Entry Fee ... £ 3 : 0 : 0 When applied for. Special ... £ 18 : 0 : 0 Donkey Boiler Fee ... £ Travelling Expenses (if any) £ 24 : 11 : 0 When received. S. J. Murray Engineer Surveyor to Lloyd's Register of Shipping. S. J. Dorey

Committee's Minute GLASGOW 22 NOV 1921

Assigned + L.M.C. 11.21.

Blaydon

Vertical text on the left margin: The Surveyors are requested not to write on or below the space for Committee's Minutes.

Vertical text on the right margin: No. in Survey held at Reg. Book. on the ... engines made at Boilers made at Registered Horse Power MULTITUBULAR Letter for record Boilers No. of Certificate Safety valves to each boiler Are they fitted with ... Smallest distance between Material of shell plates Descrip. of riveting ... rules boiler Description of longitudinal plates: Material Top smallest part Pitch of stays Area supported by Lower back plate Pitch of tubes water spaces girder at centre

Vertical text on the right margin: 2483 Port We Yarrow & Co. be Specially Surveyed We For built Horse Power above 200. than £2 2s. MEM.—I all cases wh to be defray iter No. 1728- This request is n Foreign Shipping, While the Committee erstood that neither the C ny report or certificate iss ety, or for any error of ju

Vertical text on the right margin: the Secretary, Lloyd's Register Committee Assigned

