

REPORT ON MACHINERY.

No. 140372

Received at London Office

SEP 22 1920

Writing Report 18.9.20 When handed in at Local Office 18.9.20. Port of Glasgow
 Survey held at Glasgow Date, First Survey 9th May 1917 Last Survey 10.9.1920
 Book. SS. LALANDE (Number of Visits 64) Tons 7458 Gross 4635 Net
 on the SS. LALANDE Built at Glasgow By whom built W. Henderson & Co. Ltd. 503 When built 1920
 Engines made at 100 By whom made 100 (No 503) when made 1920
 Boilers made at 100 By whom made 100 (No 503) when made 1920
 Registered Horse Power 675 Owners 670 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

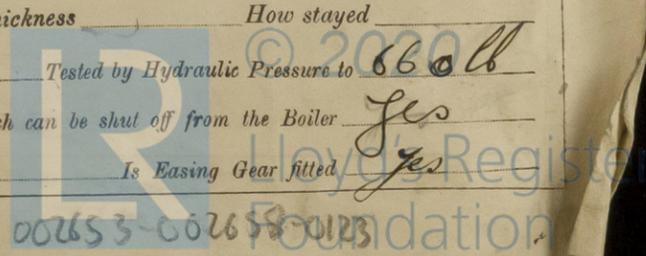
LINE, &c.—Description of Engines Quadruple Expansion No. of Cylinders 4 No. of Cranks 4
 of Cylinders 25 1/2 - 36 - 52 - 73 1/2 Length of Stroke 54 Revs. per minute 76 Dia. of Screw shaft 15 1/2 Material of screw shaft Steel
 Is the screw shaft fitted with a continuous liner the whole length of the stern tube Yes Is the after end of the liner made water tight
 Is the 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
 on the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive Yes Length of stern bush 68
 If two are fitted, is the shaft lapped or protected between the liners No
 Dia. of Tunnel shaft 14 3/4 as per rule 14 3/4 Dia. of Crank shaft journals 15 1/2 as per rule 15 1/2 Dia. of Crank pin 15 3/4 Size of Crank webs 22 x 10 1/2 Dia. of thrust shaft under
 Dia. of screw 18-6 Pitch of Screw 18-0 No. of Blades 4 State whether moveable Yes Total surface 102
 of Feed pumps 2 Diameter of ditto 4 1/2 Stroke 27 Can one be overhauled while the other is at work Yes
 of Bilge pumps 2 Diameter of ditto 4 1/2 Stroke 27 Can one be overhauled while the other is at work Yes
 of Donkey Engines 6 Sizes of Pumps 12 x 9 x 2 1/2, 9 x 10 x 10, 6 x 8 x 8, 6 x 4 x 6 No. and size of Suctions connected to both Bilge and Donkey pumps
 Engine Room (3) 3 1/2 In Holds, &c. nos 1-2-3-4-5 (2) 3 1/2

Tunnel well (1) 3 1/2
 of Bilge Injections 1 sizes 10 Connected to condenser, or to circulating pump Pump Is a separate Donkey Suction fitted in Engine room & size Yes 3 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 Both
 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
 Are all pipes carried through the bunkers 7 a Bilge Suction How are they protected Wood casing
 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 Yes Is it fitted with a watertight door Yes worked from Top platform

SEPARATE REPORT FOR AUXILIARY BOILER
 Heating Surface of Boilers 11130 Is Forced Draft fitted No No. and Description of Boilers 3 300 sub included
 Working Pressure 215 lb Tested by hydraulic pressure to 378 lb Date of test 25.5.20 No. of Certificate 15313
 Can each boiler be worked separately Yes Area of fire grate in each boiler 100 No. and Description of Safety Valves to
 boiler 2 spring loaded Area of each valve 12.560 Pressure to which they are adjusted 220 lb Are they fitted with easing gear Yes
 Greatest distance between boilers or uptakes and bunkers or woodwork 2'-0" Mean dia. of boilers 14-3" Length 18-6" Material of shell plates Steel
 Thickness 1 1/2" Range of tensile strength 29 to 33 tons Are the shell plates welded or flanged No Descrip. of riveting: cir. seams D & T
 seams DBSTR Diameter of rivet holes in long. seams 1 1/2" Pitch of rivets 9 3/8" Lap of plates or width of butt straps 1-10 1/4"
 Percentages of strength of longitudinal joint
 rivets 88.7 Working pressure of shell by rules 217 Size of manhole in shell 16 x 12"
 plate 84.8
 of compensating ring 35 x 31" No. and Description of Furnaces in each boiler 6 corrugated Material Steel Outside diameter 3-8 7/8"
 Thickness of plates 5 1/2" crown 5 1/2" Description of longitudinal joint weld No. of strengthening rings -
 bottom 8 1/32" Thickness: Sides 3/32" Back - Top 3/32" Bottom 7/8"
 Working pressure of furnace by the rules 237 Combustion chamber plates: Material Steel Thickness: Sides 3/32" Back - Top 3/32" Bottom 7/8"
 of stays to ditto: Sides 8 1/2 x 7 3/8" Back - Top 8 1/2 x 7 3/8" If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 290

Area of stays Steel Area at smallest part 1.76 Area supported by each stay 61 Working pressure by rules 250 End plates in steam space:
 Material Steel Thickness 1 1/8" Pitch of stays 16 1/2 x 15" How are stays secured Draw Working pressure by rules 218 Material of stays Steel
 Area at smallest part 6.33 Area supported by each stay 245 Working pressure by rules 268 Material of Front plates at bottom Steel
 Material of Lower back plate - Thickness - Greatest pitch of stays - Working pressure of plate by rules -
 Pitch of tubes 3 1/4" Pitch of tubes 4 1/2 x 4 1/2" Material of tube plates Steel Thickness: Front 7/8" Back 1 1/8" Mean pitch of stays 9"

Working pressures by rules 217 Girders to Chamber tops: Material Steel Depth and
 Thickness of girder at centre 8 x 8 (2) Length as per rule 3.10 3/8 Distance apart 7 1/8" Number and pitch of stays in each (4) 8 1/2"
 Working pressure by rules 262 Steam dome: description of joint to shell None % of strength of joint -
 Thickness of shell plates - Material - Description of longitudinal joint - Diam. of rivet holes -
 Working pressure of shell by rules - Crown plates - Thickness - How stayed -
 SUPERHEATER. Type Schmidt Date of Approval of Plan MCH no C 1127 Tested by Hydraulic Pressure to 660 lb
 Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler Yes
 Is Easing Gear fitted Yes



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 bottom end bolts and nuts 2 main bearing bolts and nuts 6 coupling bolts and nuts set of feed and bilge Pump Valves Iron, bolts and nuts assorted and other articles

The foregoing is a correct description,

For DAVID A W HENDERSON & CO., LTD.

A. Patrick

DIRECTOR Manufacturer.

Dates of Survey while building: During progress of work in shops - (1917) May 9 (1919) Apr 8 Jun 24 July 8 Sep 12 Oct 15 Nov 20 Dec 26 24 (1920) Jan 16 19 30
 During erection on board vessel - July 1, 5, 6, 8, 9, 13, 30 Aug 2, 4, 6, 11, 26, 27, 30, Sep 3, 7, 10
 Total No. of visits 64

Is the approved plan of main boiler forwarded herewith yes
 " " " yes
 " " " yes

Dates of Examination of principal parts—Cylinders 20.11.19 Slides 24.12.19 Covers 24.12.19 Pistons 26.3.20 Rods 26.3.20
 Connecting rods 23.4.20 Crank shaft 9.2.20 Thrust shaft 9.2.20 Tunnel shafts 26.3.20 Screw shaft 17.4.20 Propeller 3.5.20
 Stern tube 30.3.20 Steam pipes tested 13/7-4/8-7/9/20 Engine and boiler seatings 29.3.20 Engines holding down bolts 9.7.20
 Completion of pumping arrangements 3.9.20 Boilers fixed 9.7.20 Engines tried under steam 3.9.20 7.9.20
 Completion of fitting sea connections 15.4.20 Stern tube 26.4.20 Screw shaft and propeller 19.5.20
 Main boiler safety valves adjusted 3.9.20 Thickness of adjusting washers Star P 3/8 S 3/8 F. Centre P 1/2 S 1/2 R P 1/2 S 3/8
 Material of Crank shaft Steel Identification Mark on Do. 2733 N Material of Thrust shaft Steel Identification Mark on Do. 4562 N
 Material of Tunnel shafts Steel Identification Marks on Do. See below Material of Screw shafts Steel Identification Marks on Do. A Subel
 Material of Steam Pipes S. S. Steel Test pressure 645 lb

Is an installation fitted for burning oil fuel yes Is the flash point of the oil to be used over 150°F. yes

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

Is this machinery duplicate of a previous case — If so, state name of vessel —

General Remarks (State quality of workmanship, opinions as to class, &c.)
 LR 4562 N LR 4562 N LR 4562 N LR 4562 N
 W.C. J.H.A. 230 W.C. X 230 W.C. X 230 W.C. X 230
 D 236 9604 9602 9605 950 G
 TM 26.3.20 TM 26.3.20 TM 26.3.20 TM 26.3.20
 A: TM 17.4.20 X 231 9607 4562 N W.C. TM 20.4.20

The materials and workmanship are good.
 The machinery has been built under Special Survey in accordance with the Rules and approved Plans, it has been seen working satisfactorily under steam and is eligible, in our opinion, to be classed + L.M.C. 9.20 with record of Fitted for oil fuel 9.20 F.P. above 150°F.

It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 9.20

Fitted for oil fuel 9.20 F.P. above 150°F.

Roll
 25/9/20 *J.P.S.*

The amount of Entry Fee ... £ 3 : 0 :
 Special ... £ 53 : 15 :
 Donkey Boiler Fee ... £ : :
 Travelling Expenses (if any) £ : :
 When applied for, 21.9.19 20.
 When received, 24/9/20

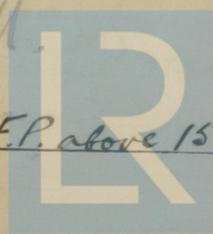
James Easthope
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 21 SEP 1920

Assigned + L.M.C. 9.20

Fitted for oil fuel 9.20 F.P. above 150°F

MACHINERY DEPT.
 WESTER.
 22/9/20



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GLASGOW

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