

REPORT ON MACHINERY.

No. 3943W
WED. 17 MAR. 1920

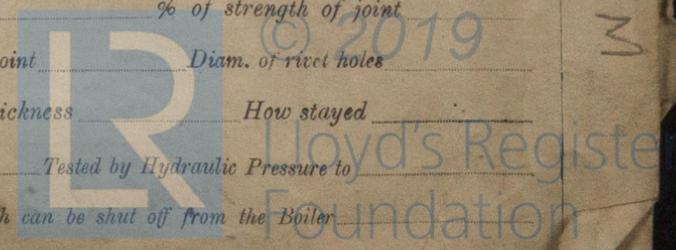
Received at London Office

Date of writing Report 21st Feb 1920 When handed in at Local Office 8-3-20 Port of Glasgow
 No. in Survey held at Glasgow Date, First Survey 25/11/19 Last Survey 1st March 1920
 Reg. Book. on the S.S. "Luciada" (Number of Visits 18)
 Master Hooper Built at Glasgow By whom built Kapier & Miller, Ltd No 225 When built 1920
 Engines made at Glasgow By whom made Dunsmuir & Jackson, Ings No 503 when made 1920
 Boilers made at Glasgow By whom made Dunsmuir & Jackson, Blos No 502 when made 1920
 Registered Horse Power _____ Owners (Ings Blue Star Line) Port belonging to Rio de Janeiro
 Nom. Horse Power as per Section 28 517 Is Refrigerating Machinery fitted for cargo purposes Not complete Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Triple Expansion No. of Cylinders 3 No. of Cranks 3
 Dia. of Cylinders 27" x 44" x 73" Length of Stroke 48 Revs. per minute 65 Dia. of Screw shaft as per rule 14-7/8 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 in the propeller boss Yes If the liner is in more than one length are the joints burned Yes 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 Yes Length of stern bush 10 1/2"
 Dia. of Tunnel shaft as per rule 13-3/4 Dia. of Crank shaft journals as per rule 13-9/16 Dia. of Crank pin 14 1/2" Size of Crank webs 28" x 9" Dia. of thrust shaft under collars 14 3/4" Dia. of screw 17-6" Pitch of Screw 18-6" No. of Blades 4 State whether moveable Yes Total surface 102 sq ft
 No. of Feed pumps 2 Diameter of ditto 4" Stroke 24" Can one be overhauled while the other is at work Yes
 No. of Bilge pumps 2 Diameter of ditto 4" Stroke 24" Can one be overhauled while the other is at work Yes
 No. of Donkey Engines 4 Sizes of Pumps 1. BALLAST 10 1/2" x 14" x 24" No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room 2 @ 3 1/2": Strokehold 2 @ 3 1/2": 4 @ 3 1/2" in way of Oil Fuel Plant & Cofferdam In Holds, &c. no 1-2 @ 3 1/2": no 2-2 @ 3 1/2": no 3-2 @ 3 1/2": no 4-2 @ 3 1/2": no 5-3 @ 3 1/2": Tunnel well - 1 @ 3"
 No. of Bilge Injections 1 sizes 12" Connected to condenser, or to circulating pump C.P. 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 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 Forward Bilge Suctions 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 Upper deck

BOILERS, &c.—(Letter for record _____) Manufacturers of Steel _____
 Total Heating Surface of Boilers 7668 Is Forced Draft fitted Yes No. and Description of Boilers Three Single ended Multitubular 3.S.B.
 Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 6-14-27/10/19 No. of Certificate 14903/14927/14952
 Can each boiler be worked separately Yes Area of fire grate in each boiler 63.3 sq ft No. and Description of Safety Valves to each boiler Two Spring loaded Area of each valve 9.62 sq ft 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 18" Mean dia. of boilers _____ Length _____ Material of shell plates _____
 Thickness _____ Range of tensile strength _____ Are the shell plates welded or flanged _____ Descrip. of riveting: cir. seams _____
 long. seams _____ Diameter of rivet holes in long. seams _____ Pitch of rivets _____ Lap of plates or width of butt straps _____
 Per centages of strength of longitudinal joint _____ Working pressure of shell by rules 87 Size of manhole in shell _____
 Size of compensating ring _____ No. and Description of Furnaces in each boiler _____ Material _____ Outside diameter _____
 Length of plain part _____ Thickness of plates _____ Description of longitudinal joint _____ No. of strengthening rings _____
 Working pressure of furnace by the rules _____ Combustion chamber plates _____ Material _____ Thickness: Sides _____ Back _____ Top _____ Bottom _____
 Pitch of stays to ditto: Sides _____ Back _____ Top _____ If stays are fitted with nuts or riveted heads _____ Working pressure by rules _____
 Material of stays _____ Area at smallest part _____ Area supported by each stay _____ Working pressure by rules _____ End plates in steam space: _____
 Material _____ Thickness _____ Pitch of stays _____ How are stays secured _____ Working pressure by rules _____ Material of stays _____
 Area at smallest part _____ Area supported by each stay _____ Working pressure by rules _____ Material of Front plates at bottom _____
 Thickness _____ Material of Lower back plate _____ Thickness _____ Greatest pitch of stays _____ Working pressure of plate by rules _____
 Diameter of tubes _____ Pitch of tubes _____ Material of tube plates _____ Thickness: Front _____ Back _____ Mean pitch of stays _____
 Pitch across 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 _____ Steam dome: description of joint to shell _____ % of strength of joint _____
 Diameter _____ Thickness of shell plates _____ Material _____ Description of longitudinal joint _____ Diam. of rivet holes _____
 Pitch of rivets _____ Working pressure of shell by rules _____ Crown plates _____ Thickness _____ How stayed _____
UPERHEATER. Type _____ Date of Approval of Plan _____ Tested by Hydraulic Pressure to _____
 Date of Test _____ Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler _____
 Diameter of Safety Valve _____ Pressure to which each is adjusted _____ Is Easing Gear fitted _____

5020-822M



IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:— 1 set each of top & bottom end, main bearing and coupling bolts and nuts, 1 set each of feed and Bilge pump suction and delivery valves, 3 main & 3 donkey feed check valves, 6 cylinder + 6 steam chest cover studs & nuts, 12 junk ring studs & nuts, 6 air pump valves, 112 Condenser tubes & 60 ferrules, 2. Cast iron propeller blades, 12 boiler tubes (plain) assorted diameter, bolts & nuts

The foregoing is a correct description,

DUNSMUIR & JACKSON, Limited.

James Dunsmuir, Manufacturer.

1919 Nov 25 Dec 1 2 8 15 18 22 30. 1920 Jan 12 13 16 22 28. Feb 10 11 12 16. Mar 1.

Dates of Survey while building: During progress of work in shops - - - 1919 Nov 25 Dec 1 2 8 15 18 22 30. 1920 Jan 12 13 16 22 28. Feb 10 11 12 16. Mar 1. During erection on board vessel - - - 18. Total No. of visits 18.

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

Dates of Examination of principal parts: Cylinders Slides Covers Pistons Rods Connecting rods Crank shaft Thrust shaft Tunnel shafts Screw shaft Propeller Engines holding down bolts 15-12-19 Stern tube Steam pipes tested Engine and boiler seatings Engines tried under steam 11-2-20 Completion of pumping arrangements 16-2-20 Boilers fixed 15-12-19 Screw shaft and propeller Completion of fitting sea connections Stern tube Thickness of adjusting washers P. P.V. 5/16 S.Y. 5/16 C P.V. 3/8 S.Y. 5/32 S. P.V. 5/32 S.Y. 5/32 Material of Crank shaft Identification Mark on Do. Material of Thrust shaft Identification Mark on Do. Material of Tunnel shafts Identification Marks on Do. Material of Screw shafts Identification Marks on Do. Material of Steam Pipes Test pressure 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 Yes If so, state name of vessel M. Silarus. Rept No 39311.

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

These engines (see Standard) have been constructed, erected in the shops and fitted on board under British Corporation Survey. The boilers have been made under Special Survey of this Society. The engines & boilers have been fitted on board under Special Survey of this Society's Surveyors, in efficient manner, tried under working conditions and found satisfactory and are eligible in my opinion to be classed with record of L.M.C. 3-20. (See Sec^{rs} letter 6/1/20) with regard to the Oil Fuel Burning Installation, the Rule requirements of section 49, have been carried out with the exception that pipes marked in red on plans, have been fitted of copper owing to a Labour dispute: it has been arranged with the Owners Superintendent that these pipes shall be replaced, iron pipes within 12 months. (See letter attached) The installation is eligible in my opinion for record of "Fitted for Oil Fuel, F.P. above 150°F, subject to the pipes mentioned above being replaced by iron pipes within 12 months.

GLASGOW

The amount of Entry Fee ... £	50 : 0	When applied for,
Special ... Res. M. £	17 : 6	19
Donkey Boiler Fee ... £	32 : 14	When received,
Travelling Expenses (if any) £		30/3/19 20

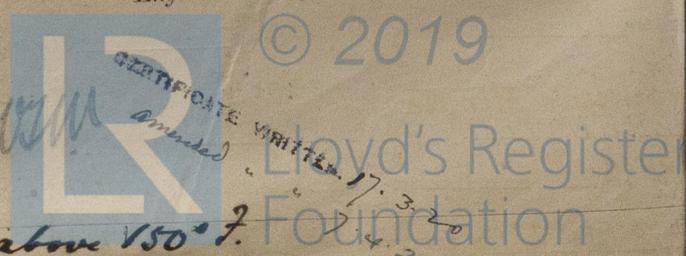
Committee's Minute

Assigned

L.M.C. 3 20 subject to

Fitted for oil fuel 3,20 F.P. above 150°F.

Engineer Surveyor to Lloyd's Register of Shipping



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