

Rpt. 4. **REPORT ON MACHINERY.** No. 44503.

Received at London Office 18 MAR 1925

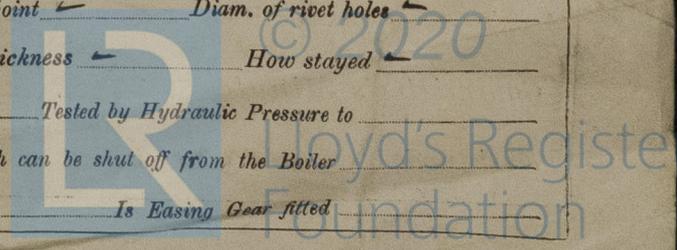
Date of writing Report 14th March 25 When handed in at Local Office 14. 3. 1925 Port of Glasgow
 No. in Survey held at Glasgow Date, First Survey 12-11-24 Last Survey 12-3-1925
 Reg. Book 91264 on the Steel S.S. "WILLIAM MESSINA" (Number of Visits 29) Tons Gross 120-15 Net 39-20
 Master Built at Leith By whom built H. Robb Ltd. (No 21) When built 1925
 Engines made at Glasgow By whom made Ross and Duncan (No 1143) when made 1925
 Boilers made at Glasgow By whom made Ross and Duncan (No 1713) when made 1925
 Registered Horse Power Owners The Union-Castle Mail Steamship Co Ltd belonging to London
 Nom. Horse Power as per Section 28 57 Is Refrigerating Machinery fitted for cargo purposes - Is Electric Light fitted -

ENGINES, &c.—Description of Engines Compound No. of Cylinders 2 No. of Cranks 2
 Dia. of Cylinders 15" - 32" Length of Stroke 21" Revs. per minute 130 Dia. of Screw shaft as per rule 6.83 as fitted 7" Material of screw shaft S7S
 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 into 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 - If two liners are fitted, is the shaft lapped or protected between the liners - Length of stern bush 30"
 Dia. of Tunnel shaft as per rule 6.23 as fitted 6 1/2 Dia. of Crank shaft journals as per rule 6.52 as fitted 6 3/4 Dia. of Crank pin 6 7/8 Size of Crank webs 28x4 Dia. of thrust shaft under collars 6 3/4 Dia. of screw 7-1 Pitch of Screw 9-6 No. of Blades 4 State whether moveable No Total surface 21.3 #
 No. of Feed pumps 1 Diameter of ditto 2 1/2 Stroke 10 1/2 Can one be overhauled while the other is at work -
 No. of Bilge pumps 1 Diameter of ditto 2 1/2 Stroke 10 1/2 Can one be overhauled while the other is at work -
 No. of Donkey Engines 2 Sizes of Pumps 7x4 1/2 x 9 5 1/2 x 3 x 6 No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room 1-4" special 3-2" lifted well In Holds, &c. Ford well 1-2"
 No. of Bilge Injections 1 sizes 4" Connected to condenser, or to circulating pump pump Is a separate Donkey Suction fitted in Engine room & size Yes - 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 -
 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 - 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 S) Manufacturers of Steel David Colville and Sons, Ltd
 Total Heating Surface of Boilers 1082 # Is Forced Draft fitted No No. and Description of Boilers One Cyl Single End
 Working Pressure 140 # Tested by hydraulic pressure to 280 # Date of test 5-3-25 No. of Certificate 16744
 Can each boiler be worked separately - Area of fire grate in each boiler 35 # No. and Description of Safety Valves to each boiler Two spring loaded Area of each valve 4.9 # Pressure to which they are adjusted 142 lbs Are they fitted with easing gear yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 10" Mean dia. of boilers 11-6 Length 0-0 Material of shell plates S
 Thickness 28/32 Range of tensile strength 28/32 T Are the shell plates welded or flanged No Descrip. of riveting: cir. seams LDR long. seams DBS/TR Diameter of rivet holes in long. seams 15/16 Pitch of rivets 57/8 Lap of plates or width of butt straps 15
 Per centages of strength of longitudinal joint rivets 92.6 plate 84 Working pressure of shell by rules 142 # Size of manhole in shell 18x14, 16x12
 Size of compensating ring 17 1/2 x 28 No. and Description of Furnaces in each boiler 2 Morrison Material S Outside diameter 41 7/8
 Length of plain part top Thickness of plates crown 7/16 Description of longitudinal joint Weld No. of strengthening rings - bottom
 Working pressure of furnace by the rules 149 # Combustion chamber plates: Material S Thickness: Sides 19/32 Back 19/32 Top 19/32 Bottom 19/32
 Pitch of stays to ditto: Sides 10 x 8 1/2 Back 9 1/4 x 9 Top 10 x 8 1/2 If stays are fitted with nuts or riveted heads Nut Working pressure by rules 147 1/4
 Material of stays S Area at smallest part 1 1/32 Area supported by each stay 85 # Working pressure by rules 147 1/4 End plates in steam space: Material S Thickness 29/32 Pitch of stays 16 x 14 How are stays secured Nut Working pressure by rules 149 # Material of stays S
 Area at smallest part 3.15 # Area supported by each stay 224 # Working pressure by rules 54 # Material of Front plates at bottom S
 Thickness 3/4 Material of Lower back plate S Thickness 1/16 Greatest pitch of stays 13 1/2 x 9 Working pressure of plate by rules 87 1/4
 Diameter of tubes 3 Pitch of tubes 4 3/16 x 4 5/8 Material of tube plates S Thickness: Front 3/4 Back 2/32 Mean pitch of stays 12 9/16 x 8 1/2
 Pitch across wide water spaces 13 1/2 Working pressures by rules 147 # Girders to Chamber tops: Material S Depth and thickness of girder at centre 7 x 1 1/2 Length as per rule 3 3/4 Distance apart 8 1/2 Number and pitch of stays in each 2 @ 10
 Working pressure by rules 148 # Steam dome: description of joint to shell none % 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 -

4100-568500-598500



IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:— Two top end bolts and nuts, two bottom end ditto. Two main bearing ditto, set of coupling bolts, one out each of fore and aft air pump rotors, one pair of crosshead bushes, one pair of bottom end bushes, one propeller.

The foregoing is a correct description,

Ross & Duncan Manufacturer.

Dates of Survey while building: During progress of work in shops -- 1924 Nov. 13, 17, 20, 24, 27. Dec. 3, 9, 15, 19, 24, 29. 1925 Jan. 5, 12, 15, 20, 23, 27, 29. Feb. 2, 4, 10, 13, 17, 20, 24, 25. Mar 5, 9, 12. Leth 21-2, 10, 13, 11, 9, 24, 28, 30. Mar 8 visits. Total No. of visits 29. Is the approved plan of main boiler forwarded herewith " " " donkey " " "

Dates of Examination of principal parts—Cylinders 2-2-25 Slides 24-2-25 Covers 2-2-25 Pistons 20-2-25 Rods 20-2-25 Connecting rods 7-2-25 Crank shaft 4-2-25 Thrust shaft 24-2-25 Tunnel shafts 24-2-25 Screw shaft 24-2-25 Propeller 20-2-25 Stern tube 24-2-25 Steam pipes tested 24-3-25 Engine and boiler seatings 10-3-25 Engines holding down bolts 14-3-25 Completion of pumping arrangements 24-3-25 Boilers fixed 13-3-25 Engines tried under steam 30-3-25 Completion of fitting sea connections 11-3-25 Stern tube 9-3-25 Screw shaft and propeller 11-3-25 Main boiler safety valves adjusted 28-3-25 Thickness of adjusting washers P 7/8 S 7/8 Material of Crank shaft 575 Identification Mark on Do. 14375 Material of Thrust shaft 575 Identification Mark on Do. 1054 ATT Material of Tunnel shafts 575 Identification Marks on Do. 1053 ATT Material of Screw shafts 575 Identification Marks on Do. 1053 ATT Material of Steam Pipes Copper (Solid drawn) Test pressure 280 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 No If so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, &c. These engines and boiler have been constructed under special survey in accordance with the Rules and approved plans. The materials and workmanship employed in their manufacture are sound and good. They will be shipped to Leth to be fitted on board.

The vessel for which they are intended will be eligible in my opinion for record + L.C. with note on the above machinery being entirely fitted on board and tried under steam.

The machinery of this vessel has been securely fitted on board. Safety valves of main boiler adjusted under steam to the above pressure. Spare gear checked & found in order. The machinery tried under steam & found satisfactory.

The machinery of this vessel is in good order & eligible in my opinion to have record of L.M.C.H. 25 in the Register Book.

The amount of Entry Fee ... £ 2 : 0 : 0 When applied for, 4/5 Special ... £ 11 : 8 : 0 1/5 Leth Donkey Boiler Fee ... £ 3-14-0 Travelling Expenses (if any) £ - : - : - When received, 1/8 1925 22/4 25

M. Lane & R. J. Baillie Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 17 MAR 1925

Assigned Defered.

TUES. 21 APR 1925



Vertical text on the left margin: Certificate (if required) to be sent to the Surveyors are requested not to write on or below the space for Committee's Minute.