

pt. 4.

REPORT ON MACHINERY.

No. 45641

Received at London Office

Date of writing Report 19 3.5.26 When handed in at Local Office Port of Glasgow 13 MAY 1926
 Date, First Survey 5/10/25 Last Survey 30 April 1926
 (Number of Visits 48)

Survey held at Glasgow on the new steel S/S "DALRIADA"
 Master Built at Port Glasgow By whom built R. Duncan & Co S/S No 371 Tons Gross 758 Net 298
 Engines made at Glasgow By whom made D. Rowan & Co Ltd (No 829) When built 1926
 Boilers made at Glasgow By whom made D. Rowan & Co Ltd (No 829) when made 1926
 Registered Horse Power 2500 Owners Campbeltown Glasgow & R. Co Port belonging to Campbeltown
 Nom. Horse Power as per Section 28 348 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

ENGINES, &c.—Description of Engines Triple expansion No. of Cylinders 4 No. of Cranks 4
 Dia. of Cylinders 22-35-40-40 Length of Stroke 33 Revs. per minute 160 Dia. of Screw shaft as per rule 10.96 Material of steel
 as fitted 11.2 screw shaft
 Is the screw shaft fitted with a continuous liner the whole length of the stern tube yes No O.G. 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 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 3-9
 Dia. of Tunnel shaft as per rule 10.09 Dia. of Crank shaft journals as per rule 10.94 Dia. of Crank pin 11.3 Size of Crank webs 18 Dia. of thrust shaft under
 as fitted 10.8 as fitted 11.8 Dia. of screw 10.6 Pitch of Screw 12-3 No. of Blades 4 State whether moveable no Total surface 42 sq ft
 No. of Feed pumps 2 Diameter of ditto 3.4 Stroke 18 Can one be overhauled while the other is at work yes
 No. of Bilge pumps 2 Diameter of ditto 3.4 Stroke 18 Can one be overhauled while the other is at work yes
 No. of Donkey Engines 4 Sizes of Pumps 10 7/8 x 21 7/8 & 8 x 8.6 & 4 x 6 No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room 4 @ 2.5 In Holds, &c. Food hold - 2 @ 2.5 store room - 1 @ 2.5
 After hold - 1 @ 2.5 Tunnel well - 1 @ 2.5
 No. of Bilge Injections 1 sizes 8 Connected to condenser, or to circulating pump b.p. Is a separate Donkey Suction fitted in Engine room & size yes, 3.4
 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 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 both
 What pipes are carried through the bunkers Bilge pipes from food hold 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 5) Manufacturers of Steel William Beardmore & Co Ltd The Lancashire Steel Co Ltd
 Total Heating Surface of Boilers 5932 sq ft Is Forced Draft fitted yes No. and Description of Boilers two, single ended
 Working Pressure 180 Tested by hydraulic pressure to 320 Date of test 14-1-26 No. of Certificate 17031
 Can each boiler be worked separately yes Area of fire grate in each boiler 75 sq ft No. and Description of Safety Valves to
 each boiler two, direct spring Area of each valve 9.6 sq in Pressure to which they are adjusted 180 lbs Are they fitted with easing gear yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 21 Mean dia. of boilers 16-3 Length 11-9 Material of shell plates steel
 Thickness 1.21 Range of tensile strength 28-32 tons Are the shell plates welded or flanged no Descrip. of riveting: cir. seams DR
 Long. seams DR STR Diameter of rivet holes in long. seams 1.3 Pitch of rivets 9.4 Lap of plates or width of butt straps 20.5
 Percentages of strength of longitudinal joint 93 Working pressure of shell by rules 180 Size of manhole in shell 19.5 x 15.5
 Size of compensating ring 3-0 x 2.8 x 1.6 No. and Description of Furnaces in each boiler 4 Heighton Material steel Outside diameter 45.16
 Length of plain part top — bottom — Thickness of plates crown 1.1 bottom 1.32 Description of longitudinal joint welded No. of strengthening rings —
 Working pressure of furnace by the rules 182 Combustion chamber plates: Material steel Thickness: Sides 3/64 Back 21/32 Top 13/64 Bottom 3/4
 Pitch of stays to ditto: Sides 9.5 x 9 Back 9.5 x 8.5 Top 9.5 x 9 If stays are fitted with nuts or riveted heads nuts Working pressure by rules 182
 Material of stays steel Area at smallest part 1.730 Area supported by each stay 83.20 Working pressure by rules 182 End plates in steam space:
 Material steel Thickness 15/16 Pitch of stay 0.1 x 22.5 How are stays secured DN Working pressure by rules 182 Material of stays steel
 Area at smallest part 7.060 Area supported by each stay 4140 Working pressure by rules 190 Material of Front plates at bottom steel
 Thickness 3/32 Material of Lower back plate steel Thickness 3/4 Greatest pitch of stays 13.8 x 8.5 Working pressure of plate by rules 182
 Diameter of tubes 3.2 Pitch of tubes 4.5 x 4.5 Material of tube plates steel Thickness: Front 31/32 Back 41/64 Mean pitch of stays 10
 Pitch across wide water spaces 13.8 Working pressures by rules 180 Girders to Chamber tops: Material steel Depth and
 thickness of girder at centre 2 @ 9.5 x 7.8 Length as per rule 36.8 Distance apart 9.5 Number and pitch of stays in each 3 @ 9
 Working pressure by rules 184 Steam dome: description of joint to shell none % of strength of joint

DIAPHRAGM. Type none 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 —

W 1104-0352



IS A DONKEY BOILER FITTED? *no*

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:— *As per Rules and in addition, one impeller shaft for circulating pump and one propeller.*

The foregoing is a correct description,
for David Rowan & Co. Ltd

Archd. W. Grierson, Manufacturer.

Dates of Survey while building: During progress of work in shops - *1925. Oct. 5-16-22-29. Nov. 16-23-25-26. Dec. 2-4-7-14-17-21-22.*
During erection on board vessel - *1926. Jan. 11-13-14-20-22-26-27-29. Feb. 4-8-9-11-14-17-18-23-25. Mar. 4-5-8-12-15-18-19-24-25.*
Total No. of visits *48*

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

Dates of Examination of principal parts—Cylinders *21-12-25* Slides *15-2-26* Covers *20-1-26* Pistons *4-2-26* Rods *14-2-26*

Connecting rods *9-2-26* Crank shaft *8-2-26* Thrust shaft *8-2-26* Tunnel shafts *15-2-26* Screw shaft *25-2-26* Propeller *18-2-26*

Stern tube *12-3-26* Steam pipes tested *25/3/26* Engine and boiler seatings *SKR* Engines holding down bolts *24/3/26*

Completion of pumping arrangements *9-4-26* Boilers fixed *24/3/26* Engines tried under steam *30-4-26*

Completion of fitting sea connections *SKR* Stern tube *SKR* Screw shaft and propeller *SKR*

Main boiler safety valves adjusted *9-4-26* Thickness of adjusting washers *3/8" A.B. 5/8" 3/8" A.B. 5/8"*

Material of Crank shaft *Steel* Identification Mark on Do. *LLOYDS NO. 394-5 L.C.D. 22-1-26* Material of Thrust shaft *Steel* Identification Mark on Do. *LLOYDS NO. 396 L.C.D. 27-1-26*

Material of Tunnel shafts *Steel* Identification Marks on Do. *LLOYDS NO. 391-3 L.C.D. 27-1-26* Material of Screw shafts *Steel* Identification Marks on Do. *LLOYDS NO. 390 L.C.D. 27-1-26*

Material of Steam Pipes *Steel* 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 *no* If so, state name of vessel

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

This machinery has been built under Special Survey in accordance with the rules of this Society. The materials and workmanship are good. The machinery has been properly fitted on board and tried under steam. It is eligible in our opinion to have the record of L.M.C. entered in the Register Book.

It is submitted that this vessel is eligible for THE RECORD + LMC 4.26. FD. CL.

Signature
19/5/26

S. Davis & J. Nicholas
Engineer Surveyor to Lloyd's Register of Shipping.

The amount of Entry Fee ... £ 5 : - :
Special ... £ 77 : 4 :
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : :
When applied for, *10/5/26*
When received, *12/5/26*

Committee's Minute *GLASGOW 11 MAY 1926*

Assigned + LMC 4.26



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CERTIFICATE WRITTEN 11/5/26

Certificate (if required) to be sent to Glasgow

The Surveyors are requested not to write on or below the space for Committee's Minute.