

REPORT ON MACHINERY

No. 44682

27 MAY 1925

Received at London Office

Date of writing Report 19 When handed in at Local Office 22/5/25 Port of Glasgow

No. in Survey held at Glasgow Date, First Survey 16.6.24 Last Survey 19.5.1925

Reg. Book. on the new steel s/s "BENICIA" (Number of Visits 59) Gross 5060 Tons Net 3188

Master Built at Port Glasgow By whom built R. Duncan (S/SN-357) When built 1925

Engines made at Glasgow By whom made W. Rowan & Co Ltd (Nº 803) when made 1925

Boilers made at Glasgow By whom made W. Rowan & Co Ltd (Nº 803) when made 1925

Registered Horse Power _____ Owners Oniel Shipping Co. Ltd (John Edgar 16.2) Port belonging to Liverpool

Nom. Horse Power as per Section 28 477 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

ENGINES, &c.—Description of Engines Triple expansion No. of Cylinders 3 No. of Cranks 3

Dia. of Cylinders 24"-44"-73" Length of Stroke 48 Revs. per minute 71 Dia. of Screw shaft 14.7" as per rule 14.7" 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 no 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 no Length of stern bush 5'-0" No. of collars 14 1/4

Dia. of Tunnel shaft 13.53" as per rule 13.53" Dia. of Crank shaft journals 13.99" as per rule 14" Dia. of Crank pin 14.5" Size of Crank webs 22 1/2" x 8 3/4" Dia. of thrust shaft under collars 14 1/4" Dia. of screw 18'-0" Pitch of Screw 18'-0" No. of Blades 4 State whether moceable no Total surface 100 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 1/2" Stroke 24" Can one be overhauled while the other is at work yes

No. of Donkey Engines 2 Sizes of Pumps 9 & 12 x 12. 8 & 5 x 8 No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room 4 @ 2 1/2 & 1 @ 2 1/2 in dry tank In Holds, &c. Nº 1 hold - 2 @ 3". Nº 2 hold - 2 @ 3 1/2"

Deep Tank 2 @ 2 1/2". Nº 3 hold - 2 @ 2 1/2" @ 3 1/2" Tunnel well - 1 @ 2 1/2"

No. of Bilge Injections 1 sizes 6" Connected to condenser, or to circulating pump no Is a separate Donkey Suction fitted in Engine room & size 1 @ 4 1/2"

Are all the bilge suction pipes fitted with roses yes Are the MUD BOXES WITH STRAIGHT TAILPIES 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 no

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

BOILERS, &c.—(Letter for record (S)) Manufacturers of Steel Mannesmann-Rheinwerke, Düsseldorf & Lanarkshire Steel Co

Total Heating Surface of Boilers 67350 sq ft Is Forced Draft fitted yes No. and Description of Boilers 3 single ended

Working Pressure 180 lbs per sq in Tested by hydraulic pressure to 320 Date of test 26-2-25 No. of Certificate 16740

Can each boiler be worked separately yes Area of fire grate in each boiler 59 sq ft No. and Description of Safety Valves to each boiler two, direct spring Area of each valve 8.29 sq in Pressure to which they are adjusted 185 Are they fitted with easing gear yes

Smallest distance between boilers or uptakes and bunkers 15" Mean dia. of boilers 14'-6" Length 11'-6" Material of shell plates Steel

Thickness 1 3/16" Range of tensile strength 28-32 tons Are the shell plates welded or flanged no Descrip. of riveting: cir. seams W.R. lap long. seams DBS. TR. Diameter of rivet holes in long. seams 1 1/4" Pitch of rivets 8 23/32" Lap of plates or width of butt straps 18 1/2"

Per centages of strength of longitudinal joint rivets 91.5 Working pressure of shell by rules 181 Size of manhole in shell 19 1/2" x 15 1/2" plate 85.6

Size of compensating ring 9 1/2" x 1 1/2" No. and Description of Furnaces in each boiler 3. Deighton Material steel Outside diameter 3'-7 27/32"

Length of plain part top 35" Thickness of plates bottom 32" Description of longitudinal joint weld No. of strengthening rings none

Working pressure of furnace by the rules 181 Combustion chamber plates: Material steel Thickness: Sides 23/32" Back 21/32" Top 23/32" Bottom 23/32"

Pitch of stays to ditto: Sides 10 1/2" x 9 1/2" Back 9 1/2" x 8 1/2" Top 10 1/2" x 9 1/2" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 184

Material of stays steel Area at smallest part 1 1/2" & 1 1/4" Area supported by each stay 80.75 & 97.12 Working pressure by rules 188 & 187 End plates in steam space: Material steel Thickness 1 1/32" Pitch of stays 19 1/4" x 20" How are stays secured BN Working pressure by rules 180 Material of stays steel

Area at smallest part 3 1/2" x 2 3/4" Area supported by each stay 395 & 353.0 Working pressure by rules 199 & 195 Material of Front plates at bottom steel

Thickness 27/32" Material of Lower back plate steel Thickness 3/4" Greatest pitch of stays 13 3/8" x 8 1/2" Working pressure of plate by rules 181

Diameter of tubes 2 1/2" Pitch of tubes 3 23/32" x 3 5/8" Material of tube plates steel Thickness: Front 27/32" Back 23/32" Mean pitch of stays 10.125"

Pitch across wide water spaces 13 1/2" Working pressures by rules F20S. B 180 Girders to Chamber tops: Material steel Depth and thickness of girder at centre 2 @ 8" x 5" Length as per rule 33.125" Distance apart 9 1/2" Number and pitch of stays in each 2 @ 10 1/2"

Working pressure by rules 191 Steam dome: description of joint to shell none % of strength of joint _____

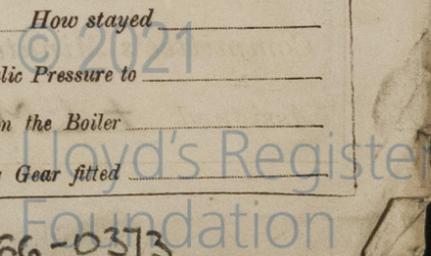
Diameter _____ Thickness of shell plates _____ Material _____ Description of longitudinal joint _____ Diam. of rivet holes _____

Pitch of rivets _____ Working pressure of shell by rules _____ Crown plates _____ Thickness _____ How stayed _____

SUPERHEATER. 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 _____



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 screw shaft and one propeller

The foregoing is a correct description,

For David Rowan & Co Ltd
Arch^d W. Grierson Manufacturer.

Dates of Survey while building { During progress of work in shops --- 1924 Jun 16 July 9 10 15 30 Aug 4 11 12 22 27 Sept 15 10 12 23 19 Oct 7 9 21 Nov 4 5 12 26 Dec 2 5 12 19
During erection on board vessel --- 1925 Jan 12 13 19 20 23 26 27 Feb 2 3 9 10 13 26 Mar 2 3 4 13 16 19 20 27 Apr 1 6 14 15 16 20 21 22 25
Total No. of visits 59 May 4 19.

Is the approved plan of main boiler forwarded herewith yes

" " " donkey " " " —

Dates of Examination of principal parts—Cylinders 26-11-24 Slides 26-1-25 Covers 12-12-24 Pistons 19-1-25 Rods 3-3-25
Connecting rods 5-12-24 Crank shaft 9-2-25 Thrust shaft 16-3-25 Tunnel shafts 10-2-25 Screw shaft 4-3-25 Propeller 23-1-25
Stern tube 23-1-25 Steam pipes tested 3-3-25 Engine and boiler seatings 1-4-25 Engines holding down bolts 27-1-25

Completion of pumping arrangements 23-4-25 Boilers fixed 16-4-25 Engines tried under steam 19-5-25

Completion of fitting sea connections OK Stern tube OK Screw shaft and propeller 23-4-25

Main boiler safety valves adjusted 25-4-25 Thickness of adjusting washers all 3/8"

Material of Crank shaft I. Steel Identification Mark on Do. LLOYDS NO 7150 L.C.D. 9-2-25 Material of Thrust shaft I. Steel Identification Mark on Do. LLOYDS NO 7171 L.C.D. 16-3-25

Material of Tunnel shafts I. Steel Identification Marks on Do. LLOYDS NO 803 L.C.D. 10-2-25 Material of Screw shafts I. Steel Identification Marks on Do. LLOYDS NO 1050 L.C.D. 4-3-25

Material of Steam Pipes Lap welded wrought iron Test pressure 540 lbs. mark on screw shaft LLOYDS NO 1050 L.C.D. 4-3-25

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 Yes If so, state name of vessel "Saint Oswald"

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

The materials and workmanship are good.
The machinery has been constructed under special Survey in accordance with the Rules, properly fitted on board, tried under steam and found good. It is eligible in my opinion for classification and the record + LMC 5, 25.

It is submitted that this vessel is eligible for THE RECORD. + LMC 5. 25. FD. CL.

JWD.
28/5/25.
GRS

S. C. Davis.
Engineer Surveyor to Lloyd's Register of Shipping.

The amount of Entry Fee ... £ 5 : :
Special ... £ 96 : 11 :
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : :
When applied for, 22/5/25.
When received, 22/5/25.

Committee's Minute GLASGOW 26 MAY 1925

Assigned + LMC 525

A. G. Glasgow.
22/5/25

Certificates (if required) to be sent to
The Surveyors are requested not to write on or below the space for Committee's Minute.

