

REPORT ON MACHINERY.

No. 34999

Date of writing Report 12th July 1918 When handed in at Local Office 23rd July 1918 Port of Glasgow Received at London Office WED. JUL. 31. 1918

No. in Survey held at Glasgow Date, First Survey 14th Aug. 1916 Last Survey 9th July 1918

Reg. Book. on the S.S. "Argartan" (Number of Violets 58)

Master Built at Campbelltown By whom built Campbelltown S. B. Co. Ltd Tons 1918

Engines made at Glasgow By whom made Ross & Duncan. Ings No 1021 when made 1918

Boilers made at Glasgow By whom made Ross & Duncan. Boilers Nos 1529-30 when made 1918

Registered Horse Power Owners Lang & Fulton Ltd Port belonging to Greenock

Nom. Horse Power as per Section 28 142. Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted no

ENGINES, & C.—Description of Engines Triple Expansion No. of Cylinders 3 No. of Cranks 3

Dia. of Cylinders 18 x 27 1/2 x 45 Length of Stroke 33 Revs. per minute 80 Dia. of Screw shaft 9.8 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 40"

Dia. of Tunnel shaft 8.85 Dia. of Crank shaft journals 9.29 Dia. of Crank pin 9 1/2" Size of Crank webs 17 1/2 x 6 1/2" Dia. of thrust shaft under collars 9 3/8" Dia. of screw 12-1" Pitch of Screw 13-6" No. of Blades 4 State whether moveable no Total surface 52 sq

No. of Feed pumps 2 Diameter of ditto 3" Stroke 16 1/2" Can one be overhauled while the other is at work Yes

No. of Bilge pumps 2 Diameter of ditto 3" Stroke 16 1/2" Can one be overhauled while the other is at work Yes

No. of Donkey Engines Three Sizes of Pumps 2 off 1 x 4 1/2 x 6: 1 off 7 x 9 x 8 No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room Three 2 1/2" dia. Tunnel, one 2 1/4" In Holds, &c. Fore hold. Two - 2 1/4" dia after hold, one 2 1/2" dia

No. of Bilge Injections 1 size 4" Connected to condenser, or to circulating pump C.P. Is a separate Donkey Suction fitted in Engine room & size Yes. 2 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 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 Forward bilge suction How are they protected boxed in

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

Dates of examination of completion of fitting of Sea Connections Greenock Rpt of Stern Tube Greenock Rpt Screw shaft and Propeller Greenock Rpt

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 Steel Co of Scotland

Total Heating Surface of Boilers 2386 Is Forced Draft fitted no No. and Description of Boilers 2 built Single ended

Working Pressure 180 Tested by hydraulic pressure to 360 Date of test 28th 31. May 1918 No. of Certificate 14312-14313

Can each boiler be worked separately Yes Area of fire grate in each boiler 39.5 sq No. and Description of Safety Valves to each boiler Two spring loaded Area of each valve 3.96 sq Pressure to which they are adjusted 185 lbs Are they fitted with easing gear Yes

Smallest distance between boilers 9" dia. of boilers 11-6" Length 10-6" Material of shell plates S

Thickness 31/32" Range of tensile strength 28-32 tons Are the shell plates welded or flanged no Descrip. of riveting: cir. seams L.P.R.

long. seams S. Straps T.P. Diameter of rivet holes in long. seams 1 1/8" Pitch of rivets 6 7/8" Top of plates or width of butt straps 17 1/2"

Per centages of strength of longitudinal joint rivets 88.5 Working pressure of shell by rules 180 lbs Size of manhole in shell 16 x 12"

Size of compensating ring 7 x 31/32" No. and Description of Furnaces in each boiler Two Pelton Material S Outside diameter 46 1/4"

Length of plain part top 9 1/16" Thickness of plates bottom 9 1/16" Description of longitudinal joint weld No. of strengthening rings none

Working pressure of furnace by the rules 190 lbs Combustion chamber plates: Material S Thickness: Sides 5/8" Back 5/8" Top 5/8" Bottom 11/16"

Pitch of stays to ditto: Sides 8 3/4 x 7 3/4" Back 8 3/4 x 8 1/4" Top 8 2 x 7 3/4" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 187

Material of stays S Area at smallest part 1.76 Area supported by each stay 72 sq Working pressure by rules 217 End plates in steam space: Material S Thickness 31/32" Pitch of stays 16 3/4 x 14 1/2" How are stays secured D.N. Wash Working pressure by rules 180 lbs Material of stays S

Area at smallest part 4.43 Area supported by each stay 248 sq Working pressure by rules 186 Material of Front plates at bottom S

Thickness 27/32" Material of Lower back plate S Thickness 27/32" Greatest pitch of stays 13 1/2 x 8 3/4" Working pressure of plate by rules 190

Diameter of tubes 3 1/4" Pitch of tubes 4 1/4 x 4 3/8" Material of tube plates S Thickness: Front 27/32" Back 3/4" Mean pitch of stays 9.9

Pitch across wide water spaces 14 Working pressures by rules 206 Girders to Chamber tops: Material S Depth and thickness of girder at centre 7 3/4 x 13 1/4" Length as per rule 30 7/8" Distance apart 8 1/2" Number and pitch of stays in each Three 7 1/2"

Working pressure by rules 182 Superheater or Steam chest; how connected to boiler Yes Can the superheater be shut off and the boiler worked separately Yes Diameter Yes Length Yes Thickness of shell plates Yes Material Yes Description of longitudinal joint Yes Diam. of rivet holes Yes Pitch of rivets Yes Working pressure of shell by rules Yes Diameter of flue Yes Material of flue plates Yes Thickness Yes

If stiffened with rings Yes Distance between rings Yes Working pressure by rules Yes End plates: Thickness Yes How stayed Yes

Working pressure of end plates Yes Area of safety valves to superheater Yes Are they fitted with easing gear Yes

Lloyd's Register
1968-2113

IS A DONKEY BOILER FITTED? No If so, is a report now forwarded?

SPARE GEAR. State the articles supplied: — 2 each of top & bottom end, main bearing bolts, one set of coupling bolts, 1 set of feed & bilge pump valves, assorted nuts, bolts & rivets.

The foregoing is a correct description,

Ross & Duncan per R.E.K. Manufacturer.

Dates of Survey while building: During progress of work in shops — 16 Aug, 14 Oct, 31 Nov, 2, 13, 23, 29 Dec, 5, 11, 19, 27 Jan, 9, 18, 22 Feb, 24, 12, 14, 23 Mar, 5, 9, 16, 20, 24 Apr, 18, 30, 1918, 12, 14, 25 Feb, 14, 25
 During erection on board vessel — 12, 21, 24, 29, Apr, 4, 5, 9, 15, 22, 27, May, 23, 4, 7, 8, 10, 14, 17, 20, 23, 24, 28, 30, 31, June, 1, 14, 25, July, 1, 5, 6, 9.
 Total No. of visits 58 Is the approved plan of main boiler forwarded herewith See

Dates of Examination of principal parts — Cylinders 12-3-18 Slides 12-3-18 Covers 21-3-18 Pistons 21-3-18 Rods 8-5-18
 Connecting rods 7-5-18 Crank shaft 27-3-18 Thrust shaft 3-5-18 Tunnel shafts 3-5-18 Screw shaft 2-5-18 Propeller 27-4-18
 Stern tube 14-5-18 Steam pipes tested 23-5-18 Engine and boiler seatings See notes Engines holding down bolts 25-6-18
 Completion of pumping arrangements 9-7-18 Boilers fixed 25-6-18 Engines tried under steam 9-7-18
 Main boiler safety valves adjusted 5-7-18 Thickness of adjusting washers See notes
 Material of Crank shaft S Identification Mark on Do. 27-3-18. W.P.H. Material of Thrust shaft S Identification Mark on Do. 3-5-18. J.E.S.
 Material of Tunnel shafts S Identification Marks on Do. 3-5-18. J.E.S. Material of Screw shafts S Identification Marks on Do. 2-5-18. W.P.H.
 Material of Steam Pipes Seames Copper. 3 3/4" Int dia to 170°. Test pressure 360 lbs.

Is an installation fitted for burning oil fuel 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 See If so, state name of vessel St. Redriff. Glas Rpt No. 36681.

General Remarks (State quality of workmanship, opinions as to class, &c.)
These engine & boilers have been built under Special Survey, the materials and workmanship are sound and good. They have been fitted on board in an efficient manner, tried under working conditions with satisfactory results and are eligible in my opinion to be classed in the Register Book with the notation of L.M.C. 7-18.

It is submitted that this vessel is eligible for + L.M.C. 7, 18

26/7/18
19/8/18
J.P.S.

The amount of Entry Fee ... £ 2 0 0 When applied for.
 Special ... £ 21 6 0 26/7/18
 Donkey Boiler Fee ... £ 1 0 0 When received.
 Travelling Expenses (if any) £ 24 8 15 19/8/18

Committee's Minute GLASGOW. 30 JUL 1918

Assigned + L.M.C. 7, 18.



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Write "Bridge Sheer Strake" and "Upper Deck Sheer Strake" opposite the corresponding letter.

THKNE
 CLEAR O
 Do. C
 DBLG. of
 Length
 POOP S
 SHORT I
 FORECA
 Upper
 String
 Second
 String
 FRAME
 REVERS
 LOWER M
 Rowspit
 Copmasts
 Rigging,
 ails.