

REPORT ON MACHINERY.

No. 42664
W.F.D. & 2 MAY 1923

Received at London Office

Date of writing Report 28th April 1923 When handed in at Local Office 28th April, 1923 Port of Glasgow

No. in Survey held at Glasgow Date, First Survey 10. 11. 1920 Last Survey 19. 4. 1923

Reg. Book. 55206 on the s.s. "BRIARPARK" (Number of Visits 46)

Master Built at Grangemouth By whom built Grangemouth Dockyard Co. Ltd. (408) Tons Gross 1950 Net 1180 When built 1923.

Engines made at Glasgow By whom made S. Rowan & Co. Ltd. No 759 when made 1923.

Boilers made at Glasgow By whom made S. Rowan & Co. Ltd. No 759 when made 1923.

Registered Horse Power Owners Penholm Shipping Co. Ltd. (J. G. Penholm & Co.) Port belonging to Greenock.

Nom. Horse Power as per Section 28 227 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 21" x 35" x 57" Length of Stroke 36 Revs. per minute 70 Dia. of Screw shaft as per rule 11.782" Material of screw shaft Iron as fitted 12"

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 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 48"

Dia. of Tunnel shaft as per rule 10.28" Dia. of Crank shaft journals as per rule 10.79" Dia. of Crank pin 11" Size of Crank webs 2 1/4" x 7" Dia. of thrust shaft under collars 11 1/4" Dia. of screw 14-9" Pitch of Screw 16-0" No. of Blades 4 State whether moveable No Total surface 68 sq ft

No. of Feed pumps 2 Diameter of ditto 3 1/4" Stroke 18" Can one be overhauled while the other is at work Yes

No. of Bilge pumps 2 Diameter of ditto 3 1/2" Stroke 18" Can one be overhauled while the other is at work Yes

No. of Donkey Engines Two Sizes of Pumps 7 1/2" & 9" No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room 2 @ 2 3/4" and 2 @ 3" to dry tank in stokehold In Holds, &c. Fore Hold 2 @ 2 3/4" After Hold 2 @ 2 3/4" and 1 @ 2 1/2" to Hold Well - One @ 2 1/2" to Tunnel Well.

No. of Bilge Injections 1 sizes 4 1/2" Connected to condenser, or to circulating pump Pump Is a separate Donkey Suction fitted in Engine room & size Yes 3"

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 None 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 Yes Is it fitted with a watertight door Yes worked from Upper deck.

BOILERS, &c.—(Letter for record 5) Manufacturers of Steel S. Colville & Son, Dundee

Total Heating Surface of Boilers 3712 sq ft Is Forced Draft fitted No No. and Description of Boilers Two Single ended multitubular 25B.

Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 18-5-21 No. of Certificate 15829

Can each boiler be worked separately Yes Area of fire grate in each boiler 56.5 sq ft No. and Description of Safety Valves to each boiler Two spring loaded Area of each valve 5.93 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 9" Mean dia. of boilers 14-6" Length 10-6" Material of shell plates S

Thickness 1 1/4" Range of tensile strength 28/32 tons Are the shell plates welded or flanged No Descrip. of riveting: cir. seams L.D.R. long. seams T.R.D.B.S. Diameter of rivet holes in long. seams 1 1/4" Pitch of rivets 8 21/32" Lap of plates or width of butt straps 18 1/2"

Per centages of strength of longitudinal joint rivets 90.5 Working pressure of shell by rules 181 Size of manhole in shell 16 x 12" plate 85.5

Size of compensating ring 33 1/2" x 29 1/2" x 1 1/2" No. and Description of Furnaces in each boiler 3 Corrugated Material S Outside diameter 3-9 1/16"

Length of plain part top Thickness of plates crown 17/32" Description of longitudinal joint Weld No. of strengthening rings - bottom 17/32"

Working pressure of furnace by the rules 181 Combustion chamber plates: Material S Thickness: Sides 23/32" Back 5/8" Top 23/32" Bottom 23/32"

Pitch of stays to ditto: Sides 9 x 8 3/8" Back 9 1/4" x 8" Top 9 7/8" x 10" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 180

Material of stays S Area at smallest part 2.07 Area supported by each stay 74 sq in Working pressure by rules 251 End plates in steam space: Material S Thickness 1 1/4" Pitch of stays 2 1/4" x 9" How are stays secured S nuts Working pressure by rules 182 Material of stays S

Area at smallest part 7.00 sq in Area supported by each stay 403 sq in Working pressure by rules 181 Material of Front plates at bottom S

Thickness 29/32" Material of Lower back plate S Thickness 25/32" Greatest pitch of stays 13" Working pressure of plate by rules 181

Diameter of tubes 3 1/2" Pitch of tubes 5" x 5" Material of tube plates S Thickness: Front 29/32" Back 13/16" Mean pitch of stays 11 1/4"

Pitch across wide water spaces 14" Working pressures by rules 187 Girders to Chamber tops: Material S Depth and thickness of girder at centre 8 1/2" x 13/4" Length as per rule 30 1/16" Distance apart 10" Number and pitch of stays in each 2 @ 9 7/8"

Working pressure by rules 184 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 -

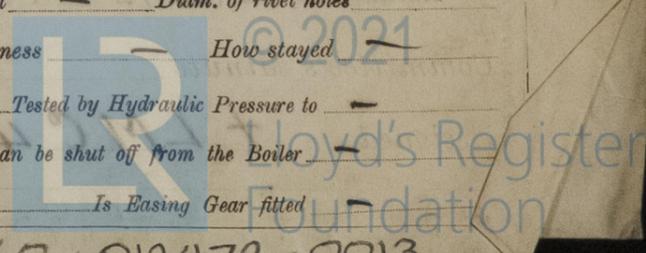
Pitch of rivets - Working pressure of shell by rules - Crown plates - Thickness - How stayed -

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 -

012460-012472-0013



IS A DONKEY BOILER FITTED? *Yes* If so, is a report now forwarded? *Yes*

SPARE GEAR. State the articles supplied:— 2 Connecting rod top-end bolts and nuts; 2 Connecting rod bottom-end bolts and nuts; 2 main-bearing bolts; 1 set of coupling bolts; 1 set of feed and bilge pump valves; 1 set of piston springs; a quantity of assorted bolts and nuts; iron of various sizes; one propeller; and a quantity of additional spare parts.

The foregoing is a correct description,
For David Rowan & Co. L^{td}
Mech^s N. Grierson Manufacturer.

Dates of Survey while building { During progress of work in shops -- 1920 Nov 10, 30, 1921 Jan 11, 25, 26, 27, 16, 25, Mar 1, 8, 11, 22, 25, 29, Apr 11, 14, 20, 21, 25, 27, May 2, 9, 18, 19, 25, 30, Jun 1, Jul 7, 11, Aug 8, Dec 1
During erection on board vessel --- 1922 Jan 22, 29, Nov 1, Dec 9, 26, 1923 Mar 2, 6, 14, 26, 27, 29, Apr 3, 6, 18, 19
Total No. of visits *46* Is the approved plan of main boiler forwarded herewith *Yes*
" " " donkey " " " *Yes*

Dates of Examination of principal parts—Cylinders *11-1-21* Slides *25-3-21* Covers *11-1-21* Pistons *25-3-21* Rods *25-3-21*
Connecting rods *25-3-21* Crank shaft *1-3-21* Thrust shaft *21-4-21* Tunnel shafts *1-12-21* Screw shaft *19-5-21* Propeller *19-5-21*
Stern tube *18-5-21* Steam pipes tested *6-3-23, 26-3-23* Engine and boiler seatings *14-3-23* Engines holding down bolts *29-3-23*
Completion of pumping arrangements *6-4-23* Boilers fixed *29-3-23* Engines tried under steam *19-4-23*
Completion of fitting sea connections *24-10-21* Stern tube *24-10-21* Screw shaft and propeller *24-10-21*
Main boiler safety valves adjusted *3-4-23* Thickness of adjusting washers *P 5/8 S 3/16 Star Boiler P 3/8 S 5/16*
Material of Crank shaft *S* Identification Mark on Do. *LLOYDS 11769 3-21 JE* Material of Thrust shaft *S* Identification Mark on Do. *LR 21-4-21 FF 734516178-1-2-21*
Material of Tunnel shafts *S* Identification Marks on Do. *LR 14-5-21 JE* Material of Screw shafts *Iron* Identification Marks on Do. *LR 19-5-21*
Material of Steam Pipes *As welded Wrot. Iron* Test pressure *540 lbs per sq in*
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 *SS 'Laudpark' Inq No 756*

General Remarks (State quality of workmanship, opinions as to class, &c. *These engine Boilers have been built under Special Survey and in accordance with the Rules and approved Plans. The materials and workmanship are sound & good. The machinery has been fitted on board the vessel in a satisfactory manner, examined under working conditions and found satisfactory, and is eligible, in our opinion, for classification and to have the Record L.M.C. 4.23 in the Register Book.*

Glasgow

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

It is submitted that this vessel is eligible for classification and to have the RECORD. + LMC 4.23. CL.

JWD
3/5/23

The amount of Entry Fee ... £ 4 : 0 : 0 When applied for,
Special ... £ 56 : 15 : 0 1/5/23
Donkey Boiler Fee ... £ : : : When received,
Travelling Expenses (if any) £ 2 : 6/2 3/12/23

J. Seller for Self & Partners, H.B. Porter
Engineer Surveyor Lloyd's Register of Shipping.

Committee's Minute **GLASGOW 1-MAY 1923**
Assigned **+ LMC 4.23**
MACHINERY DEPT.
WRITTEN 2.5.23

