

Rpt. 4.

REPORT ON MACHINERY.

No. 42664

WED. 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. 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. J. 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 $21 \times 35 \times 57$ Length of Stroke 36 Revs. per minute 70 Dia. of Screw shaft as per rule $11 \frac{7}{8}$ Material of screw shaft Iron

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 $10 \frac{28}{32}$ Dia. of Crank shaft journals as per rule $10 \frac{7}{8}$ Dia. of Crank pin 11 Size of Crank webs $21 \frac{1}{4} \times 7$ Dia. of thrust shaft under collars $11 \frac{1}{4}$ Dia. of screw $14 \frac{1}{2}$ Pitch of Screw $16 \frac{1}{2}$ No. of Blades 4 State whether moveable No Total surface $68 \frac{1}{2}$

No. of Feed pumps 2 Diameter of ditto $3 \frac{1}{4}$ Stroke 18 Can one be overhauled while the other is at work Yes

No. of Bilge pumps 2 Diameter of ditto $3 \frac{1}{2}$ Stroke 18 Can one be overhauled while the other is at work Yes

No. of Donkey Engines Two Sizes of Pumps $7 \frac{1}{2}$ & $9 \frac{1}{2}$ No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room $2 @ 2 \frac{3}{4}$ and $2 @ 3$ to dry tank in stokehold In Holds, &c. Fore Hold $2 @ 2 \frac{3}{4}$ After Hold $2 @ 2 \frac{3}{4}$ and $1 @ 2 \frac{1}{2}$ to hold well — One $2 \frac{1}{2}$ to Tunnel well.

No. of Bilge Injections 1 sizes $4 \frac{1}{2}$ 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, Glasgow

Total Heating Surface of Boilers $3712 \frac{1}{2}$ Is Forced Draft fitted No No. and Description of Boilers Two Single ended multitubular

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 $56 \frac{1}{2}$ No. and Description of Safety Valves to each boiler Two spring loaded Area of each valve $593 \frac{1}{2}$ 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 $14 \frac{1}{2}$ Length $10 \frac{1}{2}$ Material of shell plates S

Thickness $1 \frac{1}{4}$ 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 $1 \frac{1}{4}$ Pitch of rivets $8 \frac{21}{32}$ Lap of plates or width of butt straps $18 \frac{1}{2}$

Per centages of strength of longitudinal joint rivets 90.5 Working pressure of shell by rules 181 Size of manhole in shell 16×12

Size of compensating ring $33 \frac{1}{2} \times 29 \frac{1}{2} \times 1 \frac{1}{2}$ No. and Description of Furnaces in each boiler 3 Corrugated Material S Outside diameter $3-9 \frac{1}{16}$

Length of plain part top Thickness of plates crown $1 \frac{17}{32}$ Description of longitudinal joint Weld No. of strengthening rings —

Working pressure of furnace by the rules 181 Combustion chamber plates: Material S Thickness: Sides $2 \frac{3}{32}$ Back $5 \frac{1}{8}$ Top $2 \frac{3}{32}$ Bottom $2 \frac{3}{32}$

Pitch of stays to ditto: Sides $9 \times 8 \frac{1}{8}$ Back $9 \frac{1}{4} \times 8$ Top $9 \frac{1}{8} \times 10$ If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 180

Material of stays S Area at smallest part $2 \cdot 07$ Area supported by each stay $74 \frac{1}{2}$ Working pressure by rules 251 End plates in steam space: Material S Thickness $1 \frac{1}{4}$ Pitch of stays $2 \frac{1}{4} \times 9$ How are stays secured S Nuts Working pressure by rules 182 Material of stays S

Area at smallest part $7 \cdot 06$ Area supported by each stay $403 \frac{1}{2}$ Working pressure by rules 181 Material of Front plates at bottom S

Thickness $2 \frac{3}{32}$ Material of Lower back plate S Thickness $2 \frac{3}{32}$ Greatest pitch of stays 13 Working pressure of plate by rules 181

Diameter of tubes $3 \frac{1}{2}$ Pitch of tubes 5×5 Material of tube plates S Thickness: Front $2 \frac{3}{32}$ Back $1 \frac{3}{16}$ Mean pitch of stays $11 \frac{1}{4}$

Pitch across wide water spaces 14 Working pressures by rules 187 Girders to Chamber tops: Material S Depth and thickness of girder at centre $8 \frac{1}{2} \times 1 \frac{3}{4}$ Length as per rule $30 \frac{1}{8}$ Distance apart 10 Number and pitch of stays in each $2 @ 9 \frac{7}{8}$

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. Ld.
Agent N. Grierson

Manufacturer.

Dates of Survey while building
(During progress of work in shops --)
(During erection on board vessel --)
Total No. of visits

1920 Nov 10 30 1921 Jan 11 25 26 7 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
1922 Jan 22 29 Nov 1 Dec 9 26 1923 Mar 2 6 14 26 27 29 Apr 3 6 18 19
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 Port boiler P 5 1/8" S 5 1/8" Star boiler P 3 1/8" S 5 1/8"
Material of Crank shaft S Identification Mark on Do. 3-21 JE Material of Thrust shaft S Identification Mark on Do. 21-4-21 JE
Material of Tunnel shafts S Identification Marks on Do. LR 445 17/8. 1-12-21 Material of Screw shafts Iron Identification Marks on Do. LR 222 0 19-5-21
Material of Steam Pipes Aswelded 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' Ing 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.

It is submitted that

THE RECORD. + LMC 4.23. CL.

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 3/5/23

Committee's Minute

GLASGOW

1-MAY 1923

Assigned

+ LMC 4.23.

MACHINERY DEPT.

WRITTEN 2.5.23



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