

REPORT ON MACHINERY.

No. 42237

Hull No 3387

Received at London Office

Date of writing Report 16.10.22 When handed in at Local Office 16.10.22 Port of Glasgow WED. 18 OCT. 1922
No. in Survey held at Coalbridge Date, First Survey 11.1.1921 Last Survey 21.12.1921
Reg. Book. 78208 on the Machinery for S.S. "BROOKSIDE" (Number of Visits 21) Gross 581.32 Tons Net 252.32
Master Built at Goole By whom built Goole Shipbuilding Co. Ltd. No. 241 When built 1922
Engines made at Coalbridge By whom made Wm. Beardmore & Co. Ltd. No. 573 when made 1921
Boilers made at Hull By whom made Messrs C.D. Holmes & Co. Ltd. No. 1237 when made 1922
Registered Horse Power Owners J. Rose Port belonging to Sunderland.
Nom. Horse Power as per Section 28 85 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 13" 21 1/2" 35" Length of Stroke 27" Revs. per minute Dia. of Screw shaft as per rule 7.96" Material of screw shaft M.S.
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 33"
Dia. of Tunnel shaft as per rule 7.13" Dia. of Crank shaft journals as per rule 7.96" Dia. of Crank pin 7 3/8" Size of Crank webs 14 3/4" x 4 1/2" Dia. of thrust shaft under
collars 7 3/8" Dia. of screw 10" 3" Pitch of Screw 14" 0 No. of Blades 4 State whether movable no Total surface 40 sq. ft.
No. of Feed pumps 2 Diameter of ditto 3" Stroke 13 1/2" Can one be overhauled while the other is at work yes
No. of Bilge pumps 2 Diameter of ditto 2 1/2" Stroke 13 1/2" Can one be overhauled while the other is at work yes
No. of Donkey Engines Two Sizes of Pumps 6" x 4" 6" Duplex + donkey boiler pump 3" x 2" x 3" No. and size of Suctions connected to both Bilge and Donkey pumps
In Engine Room Two 2" Engine room forward 9" aft. In Holds, &c. Two 2" Port & one starboard

No. of Bilge Injections 1 sizes 3 1/2" Connected to condenser, or to circulating pump pump 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
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 Is it fitted with a watertight door worked from

BOILERS, &c.—(Letter for record) Manufacturers of Steel

Total Heating Surface of Boilers 1530 sq. ft. Is Forced Draft fitted no No. and Description of Boilers 1 S.E. Marine Type
Working Pressure 180 lbs. Tested by hydraulic pressure to Date of test No. of Certificate
Can each boiler be worked separately Area of fire grate in each boiler 47 1/2 sq. ft. No. and Description of Safety Valves to
each boiler 2 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 Length Material of shell plates
Thickness Range of tensile strength Are the shell plates welded or flanged Descrip. of riveting: cir. seams
long. seams Diameter of rivet holes in long. seams Pitch of rivets Lap of plates or width of butt straps
Per centages of strength of longitudinal joint rivets Working pressure of shell by rules Size of manhole in shell
Size of compensating ring No. and Description of Surges in each boiler 5 Material Outside diameter
Length of plain part top Thickness of plates crown Description of longitudinal joint No. of strengthening rings
bottom Working pressure of furnace by the rules See Separate Report No. 3267 Combustion chamber plates Material Thickness: Sides Back Top Bottom
Pitch of stays to ditto: Sides See Back Top If stays are fitted with nuts or riveted heads Working pressure by rules
Material of stays Area at smallest part Hull Area supported by each stay Working pressure by rules End plates in steam space:
Material Thickness Pitch of stays How are stays secured Working pressure by rules Material of stays
Area at smallest part Area supported by each stay Working pressure by rules Material of Front plates at bottom
Thickness Material of Lower back plate Thickness Greatest pitch of stays Working pressure of plate by rules
Diameter of tubes Pitch of tubes Material of tube plates Thickness: Front Back Mean pitch of stays
Pitch across wide water spaces Working pressures by rules Girders to Chamber tops: Material Depth and
thickness of girder at centre Length as per rule Distance apart Number and pitch of stays in each
Working pressure by rules Steam dome: description of joint to shell % 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 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?

yes

If so, is a report now forwarded?

yes.

SPARE GEAR.

State the articles supplied:—

Two top end bolts & nuts, 2 bottom end bolts & nuts, 2 main bearing bolts & nuts, 1 set of coupling bolts, 1 set of feed & bilge pump valves, 1 main & one donkey check valve. a quantity of bolts & nuts & iron of various sizes.

The foregoing is a correct description,

WILLIAM BEARDMORE & CO., LIMITED.

Manufacturer.

Dates of Survey while building { During progress of work in shops - - 1921 Jan 11. 18. 28 Feb 1. 9. 17. 28 Mar 4. 10. 21. 31 Apr 8. 27 May 17. 27 Jun 10. 29 Sep 6. 14 Oct 18 Dec 21
During erection on board vessel - - - Hull Sep 27 to Oct 28/22
Total No. of visits 21 + 8 = 29

Is the approved plan of main boiler forwarded herewith

" " " donkey " " "

Dates of Examination of principal parts—Cylinders 4.3.21. Slides 8.4.21. Covers 4.3.21. Pistons 31.3.21. Rods 31.3.21.

Connecting rods 8.4.21. Crank shaft 4.3.21. Thrust shaft 29.6.21. Tunnel shafts none. Screw shaft 29.6.21. Propeller 29.6.21.

Stern tube 29.6.21. Steam pipes tested 17-10-22. Engine and boiler seatings 29-9-22. Engines holding down bolts 12-10-22.

Completion of pumping arrangements 27-10-22. Boilers fixed 12-10-22. Engines tried under steam 27-10-22.

Completion of fitting sea connections 24-11-21. Stern tube 24-11-21. Screw shaft and propeller 24-11-21.

Main boiler safety valves adjusted 27-10-22. Thickness of adjusting washers P $\frac{5}{16}$ S $\frac{3}{8}$

Material of Crank shaft M.S. Identification Mark on Do. 6435. 13. 4.3.21. Material of Thrust shaft M.S. Identification Mark on Do. 6435. 13.

Material of Tunnel shafts Identification Marks on Do. Material of Screw shafts M.S. Identification Marks on Do. 29.6.21.

Material of Steam Pipes S.D. Copper. Test pressure 360 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 "Glenside"

General Remarks (State quality of workmanship, opinions as to class, &c. The machinery has been built

under special survey in accordance with the Rules of the Society. The materials & workmanship are good. The engine has been dispatched to Hull to be fitted on board the vessel.

This machinery has been properly fitted & secured on board the S.S. "BROOKSIDE". The steam pipe has been tested as above, & the safety valves adjusted under steam & tested for accumulation. On completion the machinery was tested under full power & found satisfactory.

In my opinion the vessel is eligible for the record - L.M.C. 10.22

It is submitted that this vessel is eligible for THE RECORD.

+ L.M.C. 10.22. C.L.

P. Fitzgerald

8/11/22

The amount of Entry Fee ... £ 2 : 0 :
Special ... £ 8 : 10 :
Donkey Boiler Fee ... £ 4 : 5 :
Installing Machinery ... £ 1 : 10 :
Travelling Expenses (if any) £ 1 : 10 :
When applied for, 17.10.22.
When received, 31/11/22 - Hall.

John Barr.

Engineer Surveyor to Lloyd's Register of Shipping.

FRI. 10 NOV. 1922

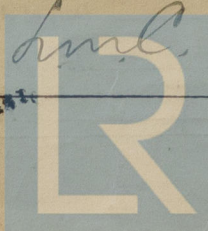
Committee's Minute

Assigned

Deferred

GLASGOW 17 OCT 1922

MACHINERY CERT.
WRITTEN



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