

REPORT ON MACHINERY.

No. 41725

Date of writing Report 10. 2. 1922 When handed in at Local Office 10. 2. 1922 Port of Glasgow
No. in Survey held at Glasgow Date, First Survey 7th Dec 1920 Last Survey 7 Feb 1922
Reg. Book. on the S.S. Gorilla (Number of Visits 30)
Master Built at Glasgow By whom built Harland & Wolff Ltd (6269) Tons Gross 472 Net 351
Engines made at Glasgow By whom made A. H. Inglis Ltd (6269) when made 1922
Boilers made at Glasgow By whom made A. H. Inglis Ltd (6269) when made 1922
Registered Horse Power Owners G. & J. Burns Ltd. Port belonging to Glasgow.
Nom. Horse Power as per Section 28 123 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes.

ENGINES, &c.—Description of Engines Triple No. of Cylinders 3 No. of Cranks 3
Dia. of Cylinders 16" 26" 42" Length of Stroke 30" Revs. per minute 105 Dia. of Screw shaft as per rule 9" 3/4 as fitted 9" 3/4 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 No If two
liners are fitted, is the shaft lapped or protected between the liners No Length of stern bush 3'-6"
Dia. of Tunnel shaft as per rule 8" 07 as fitted None Dia. of Crank shaft journals as per rule 8" 42 as fitted 8" 3/4 Dia. of Crank pin 8" 3/4 Size of Crank webs 5" 8/16 Dia. of thrust shaft under
collars 8" 2 Dia. of screw 11" 1/3 Pitch of Screw 11" 1/3 No. of Blades 4 State whether moveable No Total surface 45 sq ft
No. of Feed pumps 2 Diameter of ditto 2" 1/2 Stroke 15" Can one be overhauled while the other is at work Yes
No. of Bilge pumps 2 Diameter of ditto 2" 1/2 Stroke 15" Can one be overhauled while the other is at work Yes
No. of Donkey Engines 2 Sizes of Pumps Feed 4" 5" 12" Ballast 4" 7" 2" 4" No. and size of Suctions connected to both Bilge and Donkey pumps
In Engine Room 4 @ 2" 1/4 Stokehold 2 @ 2" 1/4 In Holds, &c. Cross bunkers 2 @ 2" 1/2 Holds 2 @ 2" 1/2

No. of Bilge Injections 1 sizes 4" 2 Connected to condenser, or to circulating pump or pumps a separate Donkey Suction fitted in Engine room & size 1-2" 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 Hold bilge suctions How are they protected Strong wood casings
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 None Is it fitted with a watertight door No worked from No

BOILERS, &c.—(Letter for record S) Manufacturers of Steel D. Colville & Sons Ltd John Brown & Co Ltd
Total Heating Surface of Boilers 2144 sq ft Is Forced Draft fitted No No. and Description of Boilers 2 Single Ended Multitubular
Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs. Date of test 2.3.21 No. of Certificate 15424
Can each boiler be worked separately Yes Area of fire grate in each boiler 35.75 sq ft No. and Description of Safety Valves to
each boiler 2 Spring Loaded Area of each valve 5.94 sq in Pressure to which they are adjusted 185 lbs Are they fitted with easing gear Yes
Smallest distance between boilers or uptakes and bunkers or woodwork 8'-0" Mean dia. of boilers 11'-0" Length 10'-6" Material of shell plates Steel
Thickness 1" Range of tensile strength 28/32 tons Are the shell plates welded or flanged No Descrip. of riveting: cir. seams D.R.
long. seams I.R., D.B.S. Diameter of rivet holes in long. seams 1 1/16 Pitch of rivets 4" 3/8 Lap of plates or width of butt straps 15" 3/4
Per centages of strength of longitudinal joint rivets 90% plate 85.6% Working pressure of shell by rules 199 lbs Size of manhole in shell 16" x 12"
Size of compensating ring 32" x 28" x 1" No. and Description of Furnaces in each boiler 2 Horizontal Material Steel Outside diameter 3'-7 1/2"
Length of plain part top V bottom V Thickness of plates crown 1 1/32 bottom 1/32 Description of longitudinal joint Welded No. of strengthening rings 4
Working pressure of furnace by the rules 189 lbs Combustion chamber plates: Material Steel Thickness: Sides 7/8 Back 5/8 Top 5/8 Bottom 7/8
Pitch of stays to ditto: Sides 8" 3/4 x 7 1/2 Back 9" x 7 1/2 Top 8" 1/4 x 7 1/2 If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 196 lbs
Material of stays Steel Area at smallest part 1' 69" Area supported by each stay 6' 5" Working pressure by rules 200 lbs End plates in steam space:
Material Steel Thickness 1 1/16 Pitch of stays 16" x 15 1/2 How are stays secured Back-Nuts Working pressure by rules 184 lbs Material of stays Steel
Area at smallest part 5' 18" Area supported by each stay 2' 52" Working pressure by rules 213 lbs Material of Front plates at bottom Steel
Thickness 1 1/16 Material of Lower back plate Steel Thickness 1 1/16 Greatest pitch of stays 13 1/2 Working pressure of plate by rules 247 lbs.
Diameter of tubes 3 1/4 Pitch of tubes 4 1/2 x 4 1/8 Material of tube plates Steel Thickness: Front 1 1/16 Back 3/4 Mean pitch of stays 9" 8/8
Pitch across wide water spaces 1 1/4 Working pressures by rules 231 lbs Girders to Chamber tops: Material Steel Depth and
thickness of girder at centre 7 1/4 x 7 1/4 (2) Length as per rule 2' 3 1/4 Distance apart 8 1/4 Number and pitch of stays in each 3 @ 7 1/2
Working pressure by rules 182 lbs Steam dome: description of joint to shell None % of strength of joint No
Diameter No Thickness of shell plates No Material No Description of longitudinal joint No Diam. of rivet holes No
Pitch of rivets No Working pressure of shell by rules No Crown plates No Thickness No How stayed No

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? *No*

If so, is a report now forwarded? *✓*

SPARE GEAR. State the articles supplied:— *2 Top end bolts Link, 2 bottom end bolts Link, 2 main bearing bolts, 1 set coupling bolts, 1 set feed and bilge pump valves, quantity assorted bolts Link, iron of various sizes.*

The foregoing is a correct description,

A. & J. INGLIS LIMITED.
William Booth, Secy.

Manufacturers.

Dates of Survey while building { During progress of work in shops -- } *1920: Oct 7 Dec 7. 16. 18. 21. 22. 28. 29 (1921) Jan 11. 13. 17. 24. 25 Oct 1. 2. 9. 15. 16. Mar 1. 2. 8. 12. 15. 25 Apr 8 May*
{ During erection on board vessel -- } *26. 27 Jun 13 (1922) Dec 4. 7.*
Total No. of visits *30.*

Is the approved plan of main boiler forwarded herewith *No*

" " " donkey " " " *✓*

Dates of Examination of principal parts—Cylinders *24/12/21* Slides *28/2/20* Covers *1/2/21* Pistons *1/2/21* Rods *1/2/21*
Connecting rods *28/12/20* Crank shaft *21/12/20* Thrust shaft *21/12/20* Tunnel shafts *None* Screw shaft *21/12/20* Propeller *21/12/20*
Stern tube *18/12/20* Steam pipes tested *12/15/3/21* Engine and boiler seatings *22/12/20* Engines holding down bolts *25/3/21*
Completion of pumping arrangements *24/5/21* Boilers fixed *25/3/21* Engines tried under steam *26/5/21 7.2.22.*

Completion of fitting sea connections *29/12/20* Stern tube *29/12/20* Screw shaft and propeller *29/12/20*

Main boiler safety valves adjusted *26/5/21* Thickness of adjusting washers *Port Boiler P²¹ S³² Starboard Boiler P²³ S³²*

Material of Crank shaft *Steel* Identification Mark on Do. *LLOYDS 5875 21/12/20* Material of Thrust shaft *Steel* Identification Mark on Do. *LLOYDS 5875 21/12/20*

Material of Tunnel shafts *None* Identification Marks on Do. *✓* Material of Screw shafts *Steel* Identification Marks on Do. *LLOYDS 5875 21/12/20*

Material of Steam Pipes *Copper* Test pressure *360 lbs/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 *S.S. "Redbreast."*

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

The Engines & Boilers of this Vessel have been built under Special Survey, the materials and workmanship are good, they have been well fitted on board, tried under steam and found to work satisfactorily.

The Machinery of this Vessel is eligible in our opinion for the record of
+ L M C 2.22. in the Register Book

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

+ L. M. C. - 2.22.

C.L.

MACHINERY CERT.
WRITTEN 4/4/22
(dated 15/2/22)

L. G.
17/2/22.

The amount of Entry Fee ... £ *3* : - :
Special ... £ *30* : *15* :
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : :
When applied for. *14.2.22*
When received. *18.2.22*

W. S. Murray + S. F. Dorey.
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute *GLASGOW 14 FEB 1922*

Assigned *+ L M C 2.22.*



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