

## REPORT ON MACHINERY.

No. 42310

Received at London Office

WED. NOV. 22 1922

Date of writing Report 20<sup>th</sup> Nov 22 When handed in at Local Office 20<sup>th</sup> Nov 22 Port of Glasgow  
No. in Survey held at Glasgow Date, First Survey 2nd Feb 1921 Last Survey 11<sup>th</sup> Nov 1922  
Reg. Book. on the Steel S.S. "Lurcher" (Number of Visits 40) Gross 774  
Tons Net 333  
Master Burns & Laird Lines Ltd Built at Glasgow By whom built A. J. Inglis Ltd 65/P When built 1922  
Engines made at Glasgow By whom made A. J. Inglis Ltd 65/P when made 1922  
Boilers made at Glasgow By whom made A. J. Inglis Ltd 65/P when made 1922  
Registered Horse Power 123 Owners Burns & Laird Lines 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 Expansion No. of Cylinders 3 No. of Cranks 3  
Dia. of Cylinders 16" 26" 42" Length of Stroke 30 Revs. per minute 104 Dia. of Screw shaft 9 1/4" Material of 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 ✓ If two  
liners are fitted, is the shaft lapped or protected between the liners ✓ Length of stern bush 3'-6"  
Dia. of Tunnel shaft as per rule Dia. of Crank shaft journals as per rule Dia. of Crank pin 8 3/4" Size of Crank webs 16" x 5 1/2" Dia. of thrust shaft under  
collars 8 1/2" Dia. of screw 11'-3" Pitch of Screw 11'-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 7' x 5' x 12' Ballast 4' x 2' x 7' No. and size of Suctions connected to both Bilge and Donkey pumps.  
In Engine Room 3 - 2 1/4" Strokehold 2 - 2 1/4" In Holds, &c. Cross Bunkers 2 - 2 1/4" Hold 2 - 2 1/4" No. 1 Hold  
1 - 2 - 2 1/4" No. 2 Hold 2  
No. of Bilge Injections 1 sizes 4 1/2" Connected to condenser, or to circulating pump or P. Is 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 ✓  
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 ✓ 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 S.) Manufacturers of Steel D. Colville & Sons Ltd John Brown & Co. Ltd  
Total Heating Surface of Boilers 2145 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 10-8-22 No. of Certificate 16096  
Can each boiler be worked separately yes Area of fire grate in each boiler 35.45 sq. ft. No. and Description of Safety Valves to  
each boiler 2 - 2 1/2" Valves Area of each valve 5.94 sq. ft. Pressure to which they are adjusted 180 Are they fitted with easing gear yes  
Smallest distance between boilers or uptakes and bunkers or woodwork 2'-6" Mean dia. of boilers 11'-0" Length 10'-6" Material of shell plates Steel  
Thickness 1" Range of tensile strength 29 TONS Are the shell plates welded or flanged no Descrip. of riveting: cir. seams D.R.  
long. seams T.R.D.B.S Diameter of rivet holes in long. seams 1 1/16" Pitch of rivets 7 3/8" Edge of plates or width of butt straps 15 1/2"  
Per centages of strength of longitudinal joint 90 Working pressure of shell by rules 199 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 Morrison Material S Outside diameter 3'-4 1/2"  
Length of plain part top Thickness of plates bottom 32 Description of longitudinal joint Weld No. of strengthening rings ✓  
Working pressure of furnace by the rules 189 Combustion chamber plates: Material S Thickness: Sides 5/8" Back 5/8" Top 5/8" Bottom 5/8"  
Pitch of stays to ditto: Sides 8 1/4" 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  
Material of stays S Area at smallest part 1.69 sq. ft. Area supported by each stay 64.5 sq. ft. Working pressure by rules 200 End plates in steam space:  
Material S Thickness 1 1/2" Pitch of stays 16" x 15 1/2" How are stays secured Back nuts Working pressure by rules Back 187 Material of stays Steel  
Area at smallest part 5.18 sq. ft. Area supported by each stay 252 sq. ft. Working pressure by rules 213 Material of Front plates at bottom Steel  
Thickness 1 1/2" Material of Lower back plate Steel Thickness 1 1/2" Greatest pitch of stays 13 1/2" Working pressure of plate by rules 247  
Diameter of tubes 3 1/4" Pitch of tubes 4 1/2" x 4 1/2" Material of tube plates S Thickness: Front 13/16" Back 3/4" Mean pitch of stays 9" x 8 1/2"  
Pitch across wide water spaces 14" Working pressures by rules 231 lbs. Girders to Chamber tops: Material Steel Depth and  
thickness of girder at centre 7 1/2" x 4" double Length as per rule 2' 3 1/4" Distance apart 8 1/4" Number and pitch of stays in each 3 @ 12"  
Working pressure by rules 182 Steam dome: description of joint to shell None fitted % 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?

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:—

2 Top end conn. rod bolts + nuts. 1 Feed Pump Suck Valve. 50 Bolts + Nuts (assorted)  
2 Bottom end " " " " " Discharge Valve 1 Safety Valve Spring  
2 Main bearing bolts. 1 Bilge Pump Suck Valve 1 Extra Valve " each eye  
1 Set (6) Coupling Bolts. 1 " " Discharge " 6 Boiler Tubes.

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 - 1921 Feb 2-7 Mar 8-14 May 4-6 18 23-31 Jun 7-10 24 Jul 6-29 Aug 15 Sep 20 Oct 3-31 27 Nov 17-29 Dec 15-19  
During erection on board vessel - 1922 Mar 6 Jun 7 Aug 10-25 29 Sep 4-11 13 15 20-21 Oct 3-19 Nov 3-7 11  
Total No. of visits 40

Is the approved plan of main boiler forwarded herewith *sent with Rpt. on Redbreast 23/11/22*

Dates of Examination of principal parts—Cylinders 15-12-21 Slides 7-6-21 Covers 31-5-21 Pistons 6-7-21 Rods 7-6-21  
Connecting rods 31-5-21 Crank shaft 15-8-21 Thrust shaft 15-8-21 Tunnel shafts none Screw shaft 4-9-22 Propeller 13-9-22  
Stern tube 4-9-22 Steam pipes tested 5-10-22 Engine and boiler seatings 11-10-22 Engines holding down bolts 11-10-22  
Completion of pumping arrangements 7-11-22 Boilers fixed 19-10-22 Engines tried under steam 11<sup>th</sup> Nov. 1922.  
Completion of fitting sea connections 12-9-22 Stern tube 13-9-22 Screw shaft and propeller 13-9-22  
Main boiler safety valves adjusted 3-11-22 Thickness of adjusting washers Port Boiler s.v. 7/16 Star Boiler s.v. 3/8 fl.  
Material of Crank shaft M.S. Identification Mark on Do. 654.P. 15-8-21 Material of Thrust shaft M.S. Identification Mark on Do. 654.P. 15-8-21  
Material of Tunnel shafts none Identification Marks on Do. 654.P. 15-8-21 Material of Screw shafts M.S. Identification Marks on Do. 654.P. 15-8-21  
Material of Steam Pipes Copper Test pressure 360 lbs/1"  
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" "Gonilla" "Oyshore Coast"

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

The machinery of this Vessel has been constructed under special survey in accordance with the Rules and approved Plans. It has been efficiently secured on board and tried under working conditions satisfactorily. Materials and Workmanship are good.

This machinery in our opinion is eligible to be classed + L.M.C. 11-22.

It is submitted that  
this vessel is eligible for  
THE RECORD. + L.M.C. 11-22. C.L.

C.A.A.T.  
23/11/22

The amount of Entry Fee ... £ 3 : 0 :  
Special ... £ 30 : 15 :  
Donkey Boiler Fee ... £ : :  
Travelling Expenses (if any) £ : :  
When applied for, 17-11-1922  
When received, 24-11-1922

John Scott, Harry Clarke  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 21 NOV 1922

Assigned + L.M.C. 11-22. MACHINERY CERT. WRITTEN 22/11/22



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Foundation