

## REPORT ON MACHINERY.

No. 40370  
WED. SEP. 22 1920

Received at London Office

Date of writing Report 20.9.20 When handed in at Local Office 20.9.20 Port of Glasgow  
 No. in Survey held at Coatbridge Date, First Survey Dec 1919 Last Survey 8<sup>th</sup> Sept 1920  
 Reg. Book. on the Machinery for S.S. "Beatty Rose" (Number of Vessels 34)  
 Master Paulley Built at Paisley By whom built Fullerton & Co. 16. 18. 266 Tons Gross  
 Engines made at Coatbridge By whom made Wm. Beardmore & Co. 16. 18. 544 when made 1920  
 Boilers made at Glasgow By whom made A. & W. Dalgleish & Co. 16. 18. 755/6 when made 1920  
 Registered Horse Power 144.25 Owners Richard Hughes & Co Port belonging to Liverpool  
 Nom. Horse Power as per Section 28 144.25 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 16" 26" 14 1/2" Length of Stroke 33" Revs. per minute 96 Dia. of Screw shaft 9.29 as per rule 8.29 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 8.32" as per rule 8.32" Dia. of Crank shaft journals 8.44" as per rule 8.44" Dia. of Crank pin 9" Size of Crank webs 16 1/2" Dia. of thrust shaft under  
 collars 9 1/4" Dia. of screw 11.3" Pitch of Screw 13.0" No. of Blades 4 State whether moveable no Total surface 50 sq. ft.  
 No. of Feed pumps 2 Diameter of ditto 3" Stroke 16 1/2" Can one be overhauled while the other is at work yes  
 No. of Bilge pumps 2 Diameter of ditto 3" Stroke 16 1/2" Can one be overhauled while the other is at work yes  
 No. of Donkey Engines 2 Sizes of Pumps 7x8x8" 6x4 1/4x6" No. and size of Suctions connected to both Bilge and Donkey pumps  
 In Engine Room 4 Blt down 1-2 1/4" 2-2" 1-2 1/2" Spec. Bilge In Holds, &c. 2w-2"  
 No. of Bilge Injections 1 sizes 4" Connected to condenser, or to circulating pump Pump Is a separate Donkey Suction fitted in Engine room & size 4x2 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 none Is it fitted with a watertight door — worked from —

BOILERS, &c.—(Letter for record —) Manufacturers of Steel —  
 Total Heating Surface of Boilers 2550 Is Forced Draft fitted no No. and Description of Boilers 2 Single Ended  
 Working Pressure 180 lbs Tested by hydraulic pressure to 360 Date of test 23.1.20 No. of Certificate 15089-15049  
 Can each boiler be worked separately — Area of fire grate in each boiler — No. and Description of Safety Valves to —  
 each boiler double spring loaded Area of each valve 4.9 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 12" 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 —  
 Percentages of strength of longitudinal joint — Working pressure of shell by rules — Size of manhole in shell —  
 Size of compensating ring — No. and Description of Furnaces in each boiler — Material — Outside diameter —  
 Length of plain part — Thickness of plates — Description of longitudinal joint — No. of strengthening rings —  
 Working pressure of furnace by the rules — Combustion chamber plates: Material — Thickness: Sides — Back — Top — Bottom —  
 Pitch of stays to ditto: Sides — Back — Top — If stays are fitted with nuts or riveted heads — Working pressure by rules —  
 Material of stays — Area at smallest part — 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 —  
 Material 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 connecting rod top end bolts & nuts: 2 connecting rod bottom end bolts & nuts: 2 main bearing bolts: 1 set of coupling bolts: a quantity of assorted bolts & nuts: iron of various sizes: 1 set of feed & bilge pump valves.

The foregoing is a correct description,

WILLIAM BEARDMORE & CO., LIMITED, Manufacturer.

per R. Sneddon.

Dates of Survey while building { During progress of work in shops - - - 1919: Dec 18, 23 (1920) Jan 6, 9, Feb 3, 10, 20, 24 Mar 9, 23, 31 Apr 8, 20, 26 May 3, 14, 19, 25, 28 Jun 1, 8, 16, 23, 29 July 1, 13, Aug 6, 12, 18, 25, 30, Sep 4, 6, 8.  
During erection on board vessel - - -  
Total No. of visits 37

Is the approved plan of main boiler forwarded herewith *See boiler Report*

" " " donkey " " " ✓

Dates of Examination of principal parts—Cylinders 31-3-20 Slides 26-4-20 Covers 31-3-20 Pistons 20-4-20 Rods 20-4-20

Connecting rods 19-5-20 Crank shaft 3-2-20 Thrust shaft 25-6-20 Tunnel shafts *none* Screw shaft 25-6-20 Propeller 25-6-20

Stern tube 25-6-20 Steam pipes tested 25-8-20 Engine and boiler seatings 6-8-20 Engines holding down bolts 30-8-20

Completion of pumping arrangements 8-9-20 Boilers fixed 8-9-20 Engines tried under steam 8-9-20

Completion of fitting sea connections 23-6-20 Stern tube 1-7-20 Screw shaft and propeller 1-7-20

Main boiler safety valves adjusted 4-9-20 Thickness of adjusting washers *Port Blr 5 3/8 Star Blr 5 1/2*

Material of Crank shaft M.S. Identification Mark on Do. *4014* Material of Thrust shaft M.S. Identification Mark on Do. *4014*

Material of Tunnel shafts *none* Identification Marks on Do. *3-2-20* Material of Screw shafts M.S. Identification Marks on Do. *25-6-20*

Material of Steam Pipes *Copper* Test pressure *360 lbs*

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 *no* If so, state name of vessel ✓

General Remarks (State quality of workmanship, opinions as to class, &c. *The Engines have been built under Special Survey. The Materials and Workmanship are good throughout.*

*The machinery has been securely fitted on board, and proved satisfactory on steam trial*

*It is submitted that this vessel be eligible for a record of + L.M.C. 9-20 in the Register Book.*

*It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 9-20*

*Recd 25/9/20*

*APR*

The amount of Entry Fee ... £ 2 . 0 . 0  
Special ... £ 21 . 12 . 0  
Donkey Boiler Fee ... £ : :  
Travelling Expenses (if any) £ : :  
When applied for, 17-9-1920  
When received, 12/4/20

*John Barr. & A. T. Thomas*  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 21 SEP 1920

Assigned *+ L.M.C. 9-20*  
*22-9-20*