

# REPORT ON MACHINERY.

No. 17459.  
THU. 22 MAY. 1919

Received at London Office

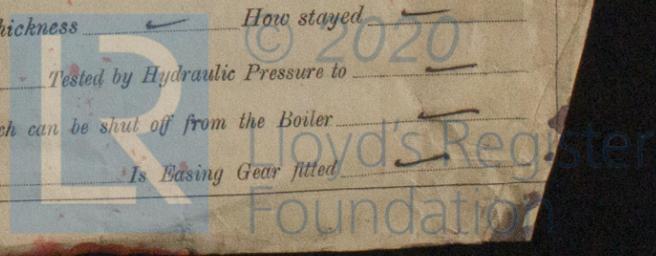
Date of writing Report 16<sup>th</sup> May 1919 When handed in at Local Office 17<sup>th</sup> May 1919 Port of Greenock  
 No. in Survey held at Greenock Date, First Survey 29<sup>th</sup> Nov. 1917 Last Survey 15<sup>th</sup> May, 1919  
 Reg. Book. on the Steel screw steamer "GALTYMORE" (Number of Visits 93)  
 Master F. W. Codling Built at Port Glasgow By whom built Lithgows Limited Tons { Gross 4565 Net 2801.7  
 Engines made at Greenock By whom made Rankin and Blackmore Limited when made 1919  
 Boilers made at Greenock By whom made Rankin and Blackmore Limited when made 1919  
 Registered Horse Power \_\_\_\_\_ Owners Johnston Line Ltd (Lunmen Withy & Co. Ltd, agents) Port belonging to Liverpool  
 Nom. Horse Power as per Section 28 517 Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted Ys

Rankins No 370

ENGINES, &c.—Description of Engines Triple expansion No. of Cylinders 3 No. of Cranks 3  
 Dia. of Cylinders 27"-44"-73" Length of Stroke 48" Revs. per minute 62 Dia. of Screw shaft as per rule 14.69" Material of screw shaft Steel  
 Is the screw shaft fitted with a continuous liner the whole length of the stern tube Ys Is the after end of the liner made water tight in the propeller boss Ys 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 6 1/4"  
 Dia. of Tunnel shaft as per rule 13.3" Dia. of Crank shaft journals as per rule 13.99" Dia. of Crank pin 1 1/2" Size of Crank webs 28" x 9" Dia. of thrust shaft under collars 1 3/4" Dia. of screw 17.6" Pitch of Screw 18.6" No. of Blades 4 State whether moveable Solid Total surface 100. sq. ft.  
 No. of Feed pumps 3 { 1 - Went - 7" dia x 24" Stroke Can one be overhauled while the other is at work Ys  
 No. of Bilge pumps 2 Diameter of ditto 4" Stroke 24" Can one be overhauled while the other is at work Ys  
 No. of Donkey Engines 3 Sizes of Pumps General Service - Went - 7" dia x 18" Stroke No. and size of Suctions connected to both Bilge and Donkey pumps  
 In Engine Room { 4 - 3 1/2" dia for E & B. rooms. In Holds, &c. { 6 - 3 1/2" dia for Forward Holds.  
 { 1 - 2 1/2" " for Tunnel { 4 - 3 1/2" " " Aft. Holds  
 No. of Bilge Injections 1 sizes 12" Connected to condenser, or to circulating pump Ys Is a separate Donkey Suction fitted in Engine room & size Ys 1-3 1/2" dia  
 Are all the bilge suction pipes fitted with roses Ys Are the roses in Engine room always accessible Ys Are the sluices on Engine room bulkheads always accessible Ys  
 Are all connections with the sea direct on the skin of the ship Ys Are they Valves or Cocks Both  
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates Ys Are the Discharge Pipes above or below the deep water line Below  
 Are they each fitted with a Discharge Valve always accessible on the plating of the vessel Ys Are the Blow Off Cocks fitted with a spigot and brass covering plate Ys  
 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 Ys  
 Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges Ys  
 Is the Screw Shaft Tunnel watertight Ys Is it fitted with a watertight door Ys worked from Top platform

BOILERS, &c.—(Letter for record S.) Manufacturers of Steel William Beardmore & Co. Ltd. The Rankine Steel Co. Ltd.  
 Total Heating Surface of Boilers 7668 sq. ft. Is Forced Draft fitted Ys No. and Description of Boilers Three, single ended  
 Working Pressure 180 lb. sq. in. Tested by hydraulic pressure to 360 lb. sq. in. Date of test 17-10-18 No. of Certificate 1365  
 Can each boiler be worked separately Ys Area of fire grate in each boiler 63.3 sq. ft. No. and Description of Safety Valves to each boiler Two - Spring loaded Area of each valve 9.62 sq. in. Pressure to which they are adjusted 185 lb. sq. in. Are they fitted with easing gear Ys  
 Smallest distance between boilers or uptakes and bunkers or woodwork 18" Internal Mean dia. of boilers 15.6" Length 11.6" Material of shell plates Steel  
 Thickness 1 1/4" Range of tensile strength 28-32 Are the shell plates welded or flanged No Descrip. of riveting: cir. <sup>END</sup> seams D.R.  
 long. seams BDS: T.R. Diameter of rivet holes in long. seams 1 5/16" Pitch of rivets 9/16" Lap of plates or width of butt straps 19 1/2"  
 Per centages of strength of longitudinal joint rivets 88.3 Working pressure of shell by rules 182 lb. sq. in. Size of manhole in <sup>END</sup> shell 16" x 12" plate 85.6  
 Size of compensating ring plate flanged. No. and Description of Furnaces in each boiler 3 - Deighton Material Steel Outside diameter 50 3/16"  
 Length of plain part <sup>top</sup> — Thickness of plates <sup>bottom</sup> 19 1/32" Description of longitudinal joint welded No. of strengthening rings Corrugated.  
 Working pressure of furnace by the rules 188 lb. Combustion chamber plates: Material Steel Thickness: Sides 2 3/32" Back 1 1/16" Top 2 3/32" Bottom 2 3/32"  
 Pitch of stays to ditto: Sides 10 5/8" x 9 1/4" Back 10 1/4" x 8 3/4" Top 10 5/8" x 9 1/4" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 180 lb.  
 Material of stays Steel Area at smallest part 2.395 sq. ft. Area supported by each stay 98.3 sq. in. Working pressure by rules 270 lb. End plates in steam space:  
 Material Steel Thickness 1 1/32" Pitch of stays 21 3/4" How are stays secured D.N. and W. Working pressure by rules 181 lb. Material of stays Steel  
 Area at smallest part 8.4836 sq. ft. Area supported by each stay 473 sq. in. Working pressure by rules 186 lb. Material of Front plates at bottom Steel  
 Thickness 1 1/16" Material of Lower back plate Steel Thickness 2 7/32" Greatest pitch of stays 13 5/8" Working pressure of plate by rules 187.6 lb.  
 Diameter of tubes 2 3/4" Pitch of tubes 4" x 3 3/8" Material of tube plates Steel Thickness: Front 3 1/32" Back 3/4" Mean pitch of stays 9 7/8"  
 Pitch across wide water spaces 13 5/8" Working pressures by rules 181.2 lb. Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 10" x 1 3/4" Length as per rule 35 9/16" Distance apart 10 5/8" Number and pitch of stays in each 3 - 9 1/4"  
 Working pressure by rules 188 lb. 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 Basing Gear fitted —

W126-0190



IS A DONKEY BOILER FITTED? *no.*

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:— *Two top end bolts - Two bottom end bolts - Two main bearing bolts - One set of Coupling bolts - One set of feed pump valves - One set of bilge pump valves - One set of feed check valves (main and auxiliary) - One feed pump escape valve spring - One propeller - One propeller shaft (continuous line) - Bolts and nuts &c.*

The foregoing is a correct description,

RANKIN & BLACKMORE, LTD.,

*A. Forster* Director, Manufacturer.

Dates of Survey while building: During progress of work in shops -- *Nov. 24 Dec. 3 (1918) Jan. 16-24-29 Feb. 15-7-13-15-19-21-27 Mar. 5-7-11-14-19-25-27 Apr. 4-12-16-18-22-25-29 May 2-3-6-9-16-22-28-30 June 3-6-11-13-17-26 July 17-21-24-26-30 Aug. 1-2-8-19-27 Sept. 2-6-12-16-20-23-24-27 Oct. 1-4-9-14-17-21-24-29 Nov. 8-21-26-27 Dec. 10-17-18-20 (1919) Jan. 23. Mar. 19-20-26-26 Apr. 8-16-18-25-28 May 5-7-8*  
During erection on board vessel -- *9-12-15 :-*  
Total No. of visits *93.*

Is the approved plan of main boiler forwarded herewith *yes*  
" " " donkey " " "

Dates of Examination of principal parts—Cylinders *9/10/18* Slides *27/11/18* Covers *9/12/18* Pistons *21/11/18* Rods *21/11/18*  
Connecting rods *21/11/18* Crank shaft *24/9/18* Thrust shaft *23/1/19* Tunnel shafts *23/1/19* Screw shaft *27/11/18* Propeller *10/12/19*  
Stern tube *26/11/18* Steam pipes tested *Glasgow* Engine and boiler seatings *11/3/19* Engines holding down bolts *8/4/19*

Completion of pumping arrangements *8/5/19* Boilers fixed *8/5/19* Engines tried under steam *8/5/19*  
Completion of fitting sea connections *11/3/19* Stern tube *11/3/19* Screw shaft and propeller *18/3/19*  
Main boiler safety valves adjusted *8/5/19* Thickness of adjusting washers *P.B. P 3/16, S 3/16 Full, C.B. P 3/16, S 3/16, S.B. P 3/16, S 3/16*

Material of Crank shaft *2. Steel* Identification Mark on Do. *298* Material of Thrust shaft *2. Steel* Identification Mark on Do. *298*

Material of Tunnel shafts *2. Steel* Identification Marks on Do. *298* Material of Screw shafts *2. Steel* Identification Marks on Do. *298*

Material of Steam Pipes *Steel* Test pressure *540 lb. sq. (Glasgow)*

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 *1/2 "Cross Hill"*

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

*The machinery and boilers of this vessel have been constructed under Special Survey and placed onboard in accordance with the Rules of the Society. They are now, in my opinion, in safe working condition and respectfully submitted for the notations:— F.D. + L.M.C. 5-19 in the Register Book.*

It is submitted that this vessel is eligible for THE RECORD, + L.M.C. 5-19. F.D.

*Roll 26.5.19*

*J.H.D.*

*G.P.R.*

*Geo. A. Pring*  
Engineer Surveyor to Lloyd's Register of Shipping.

The amount of Entry Fee ... £ *3 : 0 :*  
Special ... £ *45 : 17 :*  
Donkey Boiler Fee ... £ *—*  
Travelling Expenses (if any) £ *29*  
Committee's Minute *GLASGOW*

Assigned *+ L.M.C. 5-19*

*70*

*22/5/19*



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*Greenock*

Certificate (if required) to be sent to  
The Surveyors are requested not to write on or below the space for Committee's Minute.