

Received at London Office

WED. JUL. 10, 1913

Date of writing Report 25 June 1918 When handed in at Local Office 1 July 1918 Port of Greenock

No. in Survey held at Greenock Date, First Survey 19<sup>th</sup> Feby, 1918: Last Survey 5 July 1918.

Reg. Book. on the Steel Steamer Ardgowan (Number of Visits )

Gross	5334.24
Tons	
Net	3415.02

Master Built at Stn Glasgow By whom built W Hamilton & Co When built 1918.

Engines made at Greenock By whom made John S Kincaid & Co Ltd When made 1918.

Boilers made at Greenock By whom made Hankin & Blackmore Ltd When made 1918.

Registered Horse Power Owners Ard Steamers Ltd. Port belonging to Greenock.

**MULTITUBULAR BOILERS—MAIN, AUXILIARY OR DONKEY.** Manufacturers of Steel Glasgow & S. C. & S. C. Scotland

(Letter for record S) Total Heating Surface of Boilers 6697 sq ft Is forced draft fitted Yes No. and Description of Boilers Two single ended

No. of Certificate 1342 Can each boiler be worked separately Yes Working Pressure 180 lb Tested by hydraulic pressure to 360 lb Date of test 20-21/5/19

safety valves to each boiler Two spring Area of each valve 12.56 sq in Pressure to which they are adjusted 185 lb

Are they fitted with easing gear Yes In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler Yes

Smallest distance between boilers or uptakes and bunkers or woodwork 10' Mean dia. of boilers 17'0" Length 12'0"

Material of shell plates Steel Thickness 1 1/2" Range of tensile strength 28-32 Are the shell plates welded or flanged Yes

Descrip. of riveting: cir. seams None long. seams All lap steel Diameter of rivet holes in long. seams 1 1/2" Pitch of rivets 9 7/8"

Lap of plates or width of butt straps 20 1/2" Per centages of strength of longitudinal joint rivets 87.1 Working pressure of shell by rules 181 lb plate 85.76

Size of manhole in shell 16" x 12" Size of compensating ring Flanged iron 1 1/2" No. and Description of Furnaces in each boiler Four Brighton

Material Steel Outside diameter 45 1/2" Length of plain part top 17 1/2" Thickness of plates crown bottom 1 1/2"

Description of longitudinal joint Butt welded No. of strengthening rings Four Working pressure of furnace by the rules 181 lb Combustion chamber plates: Material Steel Thickness: Sides 10/16" Back 10/16" Top 10/16" Bottom 11/16" Pitch of stays to ditto: Sides 9 1/8" Back 8 1/4" = 8 1/2"

If stays are fitted with nuts or riveted heads None Working pressure by rules 186 lb Material of stays Steel Area at smallest part 1.73

Area supported by each stay 72 Working pressure by rules 192 lb End plates in steam space: Material Steel Thickness 1 1/8"

Pitch of stays 19" = 16 1/2" How are stays secured Anchor bolts Working pressure by rules 186 lb Material of stays Steel Area at smallest part 5.79

Area supported by each stay 219 Working pressure by rules 189 lb Material of Front plates at bottom Steel Thickness 1 7/16" Material of Lower back plate Steel Thickness 2 5/16" Greatest pitch of stays 12 1/8" Working pressure of plate by rules 194 lb Diameter of tubes 2 1/2"

Pitch of tubes 3 1/4" = 3 5/8" Material of tube plates Steel Thickness: Front 1 7/16" Back 1 1/16" Mean pitch of stays 9.4" Pitch across wide water spaces 13" Working pressures by rules 186 lb Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 8 1/2" = 14" Length as per rule 32 1/16" Distance apart 9' Number and pitch of Stays in each Three 8"

Working pressure by rules 186 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 Lifting Gear fitted \_\_\_\_\_

*The foregoing is a correct description,*  
**RANKIN & BLACKMORE, LTD.,**  
*A. J. Evans* **Director.** *Manufacturer.*

Dates of Survey while building	During progress of work in shops - -	(1918) Feb. 19. 21. 25-27. May. 5. 7. 11. 19. 27. Apr. 14. 9. 12. 16. 18.	Is the approved plan of boiler forwarded herewith	25
	During erection on board vessel - - -	22. 25. 29. May. 2. 6. 9. 16. 20. 22. 28.		
			Total No. of visits	25

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) *Workmanship good.*

These two main Bridges have been constructed under special  
allowance in accordance with the approved North Point. Tested by hydraulic  
pressure and found good. They have now been efficiently fitted on board  
the above named steamer.

Survey Fee	...	...	£	:	:	} When applied for, .....	191
Travelling Expenses (if any)	£	:	:	:	} When received, .....		191

See Report attached hereto.

Committee's Minute GLASGOW. 9 JUL 1918

Assigned See attached machinery report.

Engineer Surveyor to Lloyd's Register of Shipping.

Lloyd's Register  
Foundation