

## REPORT ON MACHINERY.

No. 17260.

Received at London Office

Date of writing Report 4 March 1918 When handed in at Local Office 8 March 1918 Port of Greenwich

No. in Survey held at Greenwich  
Reg. Book.Date, First Survey 25<sup>th</sup> June, 1914. Last Survey 8 March 1918  
(Number of Visits 80)on the Steamer A. G. A. "Richardson"

Gross

Net

When built 1918

Master Built at Dumbarton By whom built A. McMillan &amp; Son

Engines made at Greenwich By whom made John &amp; Kincaid &amp; Co. Ltd when made 1918

Boilers made at Greenwich By whom made John &amp; Kincaid &amp; Co. Ltd when made 1918

Registered Horse Power Owners British Admiralty Port belonging to

Nom. Horse Power as per Section 28 141 Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted

## ENGINES, &amp;c.—Description of Engines Triple Compound No. of Cylinders Three No. of Cranks Three

Dia. of Cylinders 15-25 1/2-41 Length of Stroke 30 Revs. per minute 100 Dia. of Screw shaft as per rule 8.78 Material of screw shaft as fitted 9

Is the screw shaft fitted with a continuous liner the whole length of the stern tube Is the after end of the liner made water tight

in the propeller boss 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 36

Dia. of Tunnel shaft as per rule 2.71 Dia. of Crank shaft journals as per rule 8.15 Dia. of Crank pin 8 1/2 Size of Crank webs 15 1/2-5 1/2 Dia. of thrust shaft under

collars 8 1/2 Dia. of screw 10.9 Pitch of Screw 10.9 No. of Blades 4 State whether moveable Total surface 36.528

No. of Feed pumps 2 Diameter of ditto 5 Stroke 15 Can one be overhauled while the other is at work

No. of Bilge pumps 2 Diameter of ditto 2 1/2 Stroke 15 Can one be overhauled while the other is at work

No. of Donkey Engines 2 Sizes of Pumps 5.15-8.10 No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room Three 2 1/2 In Holds, &amp;c. one 2 1/2

No. of Bilge Injections 7 Connected to condenser, or to circulating pump Is a separate Donkey Suction fitted in Engine room &amp; size 2 1/2

Are all the bilge suction pipes fitted with roses Are the roses in Engine room always accessible Are the sluices on Engine room bulkheads always accessible

Are all connections with the sea direct on the skin of the ship Are they Valves or Cocks

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates Are the Discharge Pipes above or below the deep water line

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel Are the Blow Off Cocks fitted with a spigot and brass covering plate

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

Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges

Is the Screw Shaft Tunnel watertight Is it fitted with a watertight door worked from

## BOILERS, &amp;c.—(Letter for record S) Manufacturers of Steel Glasgow Works Ltd &amp; Co. Ltd

Total Heating Surface of Boilers 2202 Is Forced Draft fitted No. and Description of Boilers Two single ended

Working Pressure 180 Tested by hydraulic pressure to 360 Date of test 19/10/17 No. of Certificate 1812

Can each boiler be worked separately Area of fire grate in each boiler 7 No. and Description of Safety Valves to

each boiler Two spring Area of each valve 3.980 Pressure to which they are adjusted 185 Are they fitted with easing gear

Smallest distance between boilers or uptakes and bunkers or woodwork 8 1/2 Mean dia. of boilers 10.3 Length 11.0 Material of shell plates

Thickness 29/32 Range of tensile strength 28 1/2-32 1/2 Are the shell plates welded or flanged Descrip. of riveting: cir. seams

long. seams All ship 3/4 Diameter of rivet holes in long. seams 3/16 Pitch of rivets 7/16 Lap of plates or width of butt straps 15

Per centages of strength of longitudinal joint rivets 85.72 Working pressure of shell by rules 193 Size of manhole in shell 16-12

Size of compensating ring 29/32 No. and Description of Furnaces in each boiler Two horizontal Material Outside diameter 39 1/2

Length of plain part top Thickness of plates crown 8 1/2 Description of longitudinal joint welded No. of strengthening rings 4

Working pressure of furnace by the rules 193 Combustion chamber plates: Material Thickness: Sides 19/16 Back 29/32 Top 19/16 Bottom 19/16

Pitch of stays to ditto: Sides 9 1/2-7 1/2 Back 8 1/2 Top 9 1/2-7 1/2 If stays are fitted with nuts or riveted heads Working pressure by rules 184

Material of stays Area at smallest part 1.73 Area supported by each stay 76.56 Working pressure by rules 184 End plates in steam space:

Material Thickness 1 Pitch of stays 18 1/2 How are stays secured All nuts Working pressure by rules 180 Material of stays

Area at smallest part 7.85 Area supported by each stay 38.6 Working pressure by rules 211 Material of Front plates at bottom

Thickness 1 Material of Lower back plate Thickness 1 Greatest pitch of stays 13 1/2 Working pressure of plate by rules 267

Diameter of tubes 5 Pitch of tubes 4 1/2 Material of tube plates Thickness: Front 1 Back 29/32 Mean pitch of stays 9.2

Pitch across wide water spaces 13 1/2 Working pressures by rules 187 Girders to Chamber tops: Material Depth and

thickness of girder at centre 8 1/2-14 1/2 Length as per rule 277 Distance apart 9 1/2 Number and pitch of stays in each 7 1/2

Working pressure by rules 189 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 Easing Gear fitted

011805-011812-0254



Home ✓

✓

SPARE GEAR. State the articles supplied:— Two top end bolts, ✓ Two Bottom end bolts, ✓ 4 main bearing bolts, ✓ one set coupling bolts, ✓ one set feed pump valves, ✓ one set Ridge pump valves, ✓ Air pump Rod, ✓ one set Air pump links, ✓ the Eccentric Clutch and Rod, ✓ Sprocket shaft 1/2 Port Crank shaft, ✓ Piston Rod, ✓ main bearing bush, ✓ one set Thrust shoes ✓ valves spindle ✓ Sprocket 16 Condenser tubes ✓ 50 Journals ✓ one set Air pump valves ✓ and an expansion ✓

*The foregoing is a correct description,*  
for and on behalf of **JOHN G. KINCAID & COY., LIMITED.**

Director.

*Manufacturer.*

Dates of Survey while building { During progress of work in shops - - { (1917) June 15, July 2, 18, 20, 23, 26, 30, Aug. 3, 7, 8, 10, 13, 14, 16, 21, 23, 28, 29, 30, 31, Sept. 3, 5, 26, 27, Oct. 1, 4, 5, 8, 9, 11, 13, 17, 18, 22, 24, 25, 26, 29, 30, Nov. 1

{ During erection on board vessel - - { 2, 6, 7, 12, 13, 14, 16, 19, 21, 22, 26, 27, 30, Dec. 3, 6, 10, 17, 19, 21 (1918), Jan. 7, 10, 12, 15, 21, 24, 28, 29, 30, Feb. 4, 5, 8, 14, 20, 21, 23, 25, 28, Mar. 1, 2, 8: -

{ Total No. of visits 80. Is the approved plan of main boiler forwarded herewith Yes

Is the approved plan of main boiler forwarded herewith Yes

“ “ “ *donkey* “ “ “

Dates of Examination of principal parts—Cylinders 22/10/17 Slides 22/11/17 Covers 16/11/17 Pistons 3/12/17 Rods 20/11/17

Connecting rods 6/11/17 Crank shaft 4/10/17 Thrust shaft 26/11/17 Tunnel shafts 26/11/17 Screw shaft 2/11/17 Propeller 7/11/17

Stern tube 6/11/17 Steam pipes tested 24/1/18 Engine and boiler seatings 19/12/17 Engines holding down bolts 21/12/17  
Completion of running arrangements 2/3/18 Boilers fixed 14/2/18 Engines tried under steam 14/2/18

Stern tube 4/11/17 Steam pipes tested 24/1/18 Engine and boiler seatings 1/2/18 Engines rotating down bolts 1/2/18  
Completion of pumping arrangements 2/3/18 Boilers fixed 14/2/18 Engines tried under steam 14/2/18

Completion of pumping arrangements	✓	Stern tube	✓	Screw shaft and propeller	✓ See Ekt. 1
Completion of fitting sea connections	✓	Thickness of adjusting washers	Part		
	1 1/2" x 1 1/2"		D 1 1/2" - S 1 1/2" - D 1 1/2" - S 1 1/2"		

Completion of fitting sea connections ✓ Stern tube ✓ Screw shaft and propeller ✓  
Main boiler safety valves adjusted 100/2/18 Thickness of adjusting washers Port 7 13/32 - 5 11/32 - Star 8 11/32

Main boiler safety valves adjusted 10/2/78 Thickness of adjusting washers 1/2" 1/2" 1/2"  
Material of Crank shaft Steel Identification Mark on Do. 247 Material of Thrust shaft Steel Identification Mark on Do. 247  
Material of Scavenge shafts Steel Identification Marks on Do. 247

Material of Tunnel shafts Steel Identification Marks on Do. 207 Material of Screw shafts Steel Identification Marks on Do. 207  
Material of Storm Pipes Steel ✓ Test pressure 600 lb ✓

Material of Tunnel shafts Steel Identification Marks on Do. 247 Material of Screw shafts Iron Identification Marks on Do. 247  
Material of Steam Pipes Steel ✓ Test pressure 600 lb. ✓  
✓ 150° F. ✓

Is an installation fitted for burning oil fuel yes Is the flash point of the oil to be used over 150°F. yes

Is an installation fitted for burning oil fuel yes Is the flash point of the oil to be used over 150 F. yes  
Have the requirements of Section 49 of the Rules been complied with yes

Have the requirements of Section 43 of the Rules been complied with ☒   
 Is this machinery duplicate of a previous case ☒ If so, state name of vessel ☒

*General Remarks* (State quality of workmanship, opinions as to class, &c. Workmanship good.

The Engines and Boilers of this Steamer have been  
constructed under Special Survey and placed on land in accordance  
with the Society's Rules. They are now in my opinion in safe working  
condition and the case is respectfully submitted for the satisfaction  
of L.N.C.S-18 in the Register Book. Filled for Oil Fuel. F.P. about 150°.

It is submitted that  
this vessel is eligible for  
THE RECORD. + LMC 318. FD.

Fitted for oil fuel 3.18. F.P. above  $150^{\circ}\text{F}$ .

The amount of Entry Fee	£	:	:	When applied for,
Special	£	69	9	24 <sup>th</sup> March 1918
Donkey Boiler Fee	£	To be charged		When received,
Travelling Expenses (if any)	£	:	:	25/10/18

19 MAR. 1918

*Committee's Minute* **GLASGOW.**

Assigned + L.M.C. 3, 18.

8  
MACHINERY CERTIFICATE  
WRITTEN 20. 3. 18

Fitted for oil fuel 3, 18. F.P. above  $150^{\circ}\text{F}$ .  $\frac{7}{16}$

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Foundation