

## REPORT ON MACHINERY.

No. 17404.  
WED. JAN. 29, 1919

of writing Report 20 Jan 1919 When handed in at Local Office 24 Jan 1919 Port of Greenock  
 in Survey held at Greenock Date, First Survey 8<sup>th</sup> June, 1917; Last Survey 23 Jan 1919  
 Book. on the Steel Steamer War Anchusa (Number of Visits 106.)  
 ter H.R. Mann. Built at Greenock By whom built Garrod & Co Ltd Tons { Gross 5282.78  
 ines made at Greenock By whom made Garrod & Co Ltd when made 1919.  
 ers made at Greenock By whom made Garrod & Co Ltd when made 1919.  
 stered Horse Power Owners The Shipping Controller. Port belonging to London  
 Horse Power as per Section 28 517. Is Refrigerating Machinery fitted for cargo purposes yes Is Electric Light fitted yes

INES, &c.—Description of Engines Triple Compound No. of Cylinders Three No. of Cranks Three  
 of Cylinders 27-44-73 Length of Stroke 48 Revs. per minute 77 Dia. of Screw shaft 14.68 Material of Steel  
 e 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  
 e propeller boss yes If the liner is in more than one length are the joints burned yes If the liner does not fit tightly at the part  
 in the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive yes If two  
 are fitted, is the shaft lapped or protected between the liners yes Length of stern bush 60 1/2  
 of Tunnel shaft as per rule 13.33 Dia. of Crank shaft journals as per rule 13.99 Dia. of Crank pin 14 1/2 Size of Crank webs 28-9 Dia. of thrust shaft under  
 as fitted 13 1/2 Dia. of screw 17.6 Pitch of Screw 16.6 No. of Blades 4 State whether moveable no Total surface 98.2 sq ft  
 f Feed pumps Two Diameter of ditto 4 Stroke 24 Can one be overhauled while the other is at work yes  
 Bilge pumps Two Diameter of ditto 4 Stroke 24 Can one be overhauled while the other is at work yes  
 f Donkey Engines Two Sizes of Pumps 7-18 - 14-24 No. and size of Suctions connected to both Bilge and Donkey pumps  
 Engine Room Four 5 1/2 In Holds, &c. Pine 5 1/2 Tunnel 5 1/2  
Circulating Pump Separate Engine  
 Bilge Injections one size 12 Connected to condenser, or to circulating pump no Is a separate Donkey Suction fitted in Engine room & size yes 5 1/2  
 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 no  
 connections with the sea direct on the skin of the ship yes Are they Valves or Cocks both  
 ey 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 both  
 ey 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  
 pipes are carried through the bunkers yes How are they protected yes  
 Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times yes  
 Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges yes  
 Screw Shaft Tunnel watertight yes Is it fitted with a watertight door yes worked from Top Hallway

ERS, &c.—(Letter for record S) Manufacturers of Steel Cottrill & Co. - Newcastle  
 Heating Surface of Boilers 7668 3/4 Is Forced Draft fitted yes No. and Description of Boilers Three single ended  
 ng Pressure 180 lb Tested by hydraulic pressure to 360 lb Date of test 30/5/18 No. of Certificate 1358  
 ch boiler be worked separately yes Area of fire grate in each boiler 65.8 sq ft No. and Description of Safety Valves to  
 iler Two Spring Area of each valve 9.62 Pressure to which they are adjusted 185 lb Are they fitted with easing gear yes  
 t distance between boilers or uptakes and bunkers or woodwork 24 Mean dia. of boilers 15.6 Length 11.6 Material of shell plates Steel  
 ss 1 1/4 Range of tensile strength 28-32 Are the shell plates welded or flanged yes Descrip. of riveting: cir. seams yes  
 ms all ship 3/4 Diameter of rivet holes in long. seams 15/16 Pitch of rivets 9/16 Lap of plates or width of butt straps 19 1/2  
 tages of strength of longitudinal joint rivets 88.3 Working pressure of shell by rules 182 lb Size of manhole in shell 16-12  
 compensating ring Hanged 1 1/4 No. and Description of Furnaces in each boiler Three single ended Material Steel Outside diameter 50 3/4  
 of plain part top yes Thickness of plates crown 19/32 Description of longitudinal joint Welded No. of strengthening rings Cony  
 bottom yes pressure of furnace by the rules 182 lb Combustion chamber plates: Material Steel Thickness: Sides 23/32 Back 1 1/16 Top 23/32 Bottom 23/32  
 stays to ditto: Sides 10 7/8-9 1/4 Back 10 1/4-8 3/4 Top 10 7/8-9 1/4 If stays are fitted with nuts or riveted heads yes Working pressure by rules 180 lb  
 l of stays Steel Area at smallest part 2.45 Area supported by each stay 98.5 Working pressure by rules 222 lb End plates in steam space:  
 l Steel Thickness 1 1/2 Pitch of stays 21 1/4 How are stays secured all nuts Working pressure by rules 181 lb Material of stays Steel  
 smallest part 8.29 Area supported by each stay 4.73 Working pressure by rules 182 lb Material of Front plates at bottom Steel  
 s 3/32 Material of Lower back plate Steel Thickness 27/32 Greatest pitch of stays 15 7/8 Working pressure of plate by rules 187 lb  
 of tubes 2 1/4 Pitch of tubes 4-3 3/8 Material of tube plates Steel Thickness: Front 5/32 Back 13/16 Mean pitch of stays 9.81  
 cross wide water spaces 15 7/8 Working pressures by rules 181 lb Girders to Chamber tops: Material Steel Depth and  
 of girder at centre 10-14 Length as per rule 55.56 Distance apart 10 7/8 Number and pitch of stays in each Three 9 1/4  
 pressure by rules 187 lb Steam dome: description of joint to shell yes % of strength of joint yes  
 Thickness of shell plates yes Material yes Description of longitudinal joint yes Diam. of rivet holes yes  
 rivets yes Working pressure of shell by rules yes Crown plates yes Thickness yes How stayed yes  
 HEATER. Type yes Date of Approval of Plan yes Tested by Hydraulic Pressure to yes  
 test yes Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler yes  
 diameter of Safety Valve yes Pressure to which each is adjusted yes Is Easing Gear fitted yes



IS A DONKEY BOILER FITTED?

Same

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 coupling bolts. One set feed pump valves. One set bilge pump valves. One set check valves. Propeller. 12 P Piston valve. One set escape valve springs. Lampeller for circulating pump. Bolts. Nut. &c. Disc for engine stop valve &c.

The foregoing is a correct description,  
FOR CAIRD AND COMPANY, LIMITED.

*Minna McIntosh*

SECRETARY

Manufacturer.

(1917). June 8. 20. 22. July 24. 31. Aug. 2. 22. 31. Sep. 4. Oct. 5. 8. 22. 25. 31. Nov. 5. 9. 13. 27. 30. Dec. 4. 18. 21. 25. (1918).  
Dates of Survey while building { During progress of work in shops - - 1. 16. 18. 21. 25. 29. Feb. 1. 5. 7. 13. 15. 19. 21. 27. Mar. 5. 7. 11. 14. 20. 26. Apr. 1. 4. 7. 12. 16. 18. 22. 25. 29. May. 2. 6. 7. 16. 21. 28. June 4. 24. 25. (1919). Jan. 7. 14. 17. 21. 23. -  
Total No. of visits 106.

Is the approved plan of main boiler forwarded herewith ☒

" " " donkey " " "

Dates of Examination of principal parts—Cylinders 28/5/18 Slides 18/7/18 Covers 28/5/18 Pistons 18/7/18 Rods 18/6/18  
Connecting rods 18/7/18 Crank shaft 4/6/18 Thrust shaft 4/6/18 Tunnel shafts 23/7/18 Screw shaft 24/10/18 Propeller 2/8/18  
Stern tube 2/12/18 Steam pipes tested at Glasgow Engine and boiler seatings 9/12/18 Engines holding down bolts 25/12/18  
Completion of pumping arrangements 17/1/19 Boilers fixed 25/12/18 Engines tried under steam 17/1/19  
Completion of fitting sea connections 4/12/18 Stern tube 4/12/18 Screw shaft and propeller 7/12/18  
Main boiler safety valves adjusted 17/1/19 Thickness of adjusting washers Port 2 1/2" 5 11/16" - Centre 2 1/2" 3 5/16" - Bolt 2 1/2" 5 1/2"  
Material of Crank shaft Steel Identification Mark on Do. 264 Material of Thrust shaft Steel Identification Mark on Do. 264  
Material of Tunnel shafts Steel Identification Marks on Do. 264 Material of Screw shafts Steel Identification Marks on Do. 264  
Material of Steam Pipes Iron Test pressure 540 lb

Is an installation fitted for burning oil fuel ☒ 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 ☒ If so, state name of vessel "War Emerald" SR No. 17348

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

The machinery and boilers of this steamer have been constructed under special survey and placed on board 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 certification F.D and + LMC 1-19 in the Register Book.

It is submitted that  
this vessel is eligible for  
THE RECORD. + LMC 1-19 FD

YK  
30/1/19

JBR

The amount of Entry Fee ... £ : : When applied for,  
Special ... £ 117 : 8 : 23rd Jan 1919  
Donkey Boiler Fee ... £ : :  
Travelling Expenses (if any) £ : : 6.3. 19 1919

*James James*

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 28 JAN 1919

Assigned + L.M.C. 1, 19



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Foundation