

## REPORT ON MACHINERY.

No. 17127.

Received at London Office

WED. 28 MAR. 1917

Date of writing Report 17 March 1917 When handed in at Local Office 23 March 1917 Port of Greenock

No. in Survey held at Port Glasgow Greenock Date, First Survey 10<sup>th</sup> March 1915 Last Survey 21<sup>st</sup> March 1917  
Reg. Book. (Number of Visits) 104.

on the Steel Steamer Verdun.

Tonnage 5691

Gross 5691

Net 5613

Master Built at Port Glasgow By whom built Russell &amp; Co. When built 1917

Engines made at Greenock By whom made Rankin &amp; Blackmore when made 1917

Boilers made at Greenock By whom made Rankin &amp; Blackmore when made 1917

Registered Horse Power Owners Verdun &amp; Co. Ltd Port belonging to Glasgow.

Nom. Horse Power as per Section 28 564. Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted Yes

## GINES, &amp;c.—Description of Engines

Triple Compound

No. of Cylinders Three

No. of Cranks Three

No. of Cylinders 27-45-72 Length of Stroke 51 Revs. per minute 70 Dia. of Screw shaft as per rule 15.26 as fitted 15.26 Material of screw shaft Steel

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

the propeller boss Yes If the liner is in more than one length are the joints burned No If the liner does not fit tightly at the part

the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive No If two

fitted, is the shaft lapped or protected between the liners No Length of stern bush 63

Dia. of Crank shaft journals as per rule 14.35 as fitted 14.35 Dia. of Crank pin 14.35 Size of Crank webs 22.9 Dia. of thrust shaft under

Dia. of screw 18.6 Pitch of Screw 18.0 No. of Blades 4 State whether moveable No Total surface 112 1/2

Diameter of ditto 4 1/2 Stroke 25 Can one be overhauled while the other is at work Yes

Diameter of ditto 4 1/2 Stroke 25 Can one be overhauled while the other is at work Yes

Key Engines Three Sizes of Pumps 12-12-6-8-7-4-4-6 No. and size of Suctions connected to both Bilge and Donkey pumps

Room Three 3 1/2 In Holds, &amp;c. Light 3 1/2 Tunnels 3

Injections The sizes 6 1/2 Connected to condenser, or to circulating pump Yes Is a separate Donkey Suction fitted in Engine room of size 7 1/2

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 Yes

Connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks Both

Roses 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

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 No How are they protected No

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

Examination of completion of fitting of Sea Connections 8/12/16 of Stern Tube 12/1/17 Screw shaft and Propeller 24/1/17

Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from 1st Stelgon

S, &amp;c.—(Letter for record S) Manufacturers of Steel Edward &amp; Sons, Ltd. &amp; Sons, Ltd. &amp; Sons, Ltd.

Heating Surface of Boilers 8505 Is Forced Draft fitted Yes No. and Description of Boilers Three single ended

Pressure 150 lb Tested by hydraulic pressure to 360 lb Date of test 30/1/16 No. of Certificate 1270

Boiler be worked separately Yes Area of fire grate in each boiler 64 sq ft No. and Description of Safety Valves to

Two Spring Area of each valve 12.5 sq in Pressure to which they are adjusted 185 lb Are they fitted with easing gear Yes

Distance between boilers or uptakes and bunkers or woodwork 20 Mean dia. of boilers 15.9 Length 12.0 Material of shell plates Steel

Range of tensile strength 28/32 Are the shell plates welded or flanged Yes Descrip. of riveting: cir. seams Double

Diameter of rivet holes in long. seams 1 1/4 Pitch of rivets 8 1/2 Lap of plates or width of butt straps 18 1/2

Working pressure of shell by rules 151 lb Size of manhole in shell 16-12

Compensating ring Flanged No. and Description of Furnaces in each boiler 1 Brighton Material Steel Outside diameter 50 1/2

Plain part top Thickness of plates crown 19 1/2 Description of longitudinal joint welded No. of strengthening rings 6

Pressure of furnace by the rules 150 lb Combustion chamber plates: Material Steel Thickness: Sides 4 1/2 Back 4 1/2 Top 4 1/2 Bottom 12 1/2

Plates to ditto: Sides 9 1/2 Back 9 1/2 Top 9 1/2 Bottom 9 1/2 If stays are fitted with nuts or riveted heads Yes Working pressure by rules 151 lb

Diameter at smallest part 1.77 Area supported by each stay 77.5 Working pressure by rules 152 lb End plates in steam space:

Thickness 15 1/2 Pitch of stays 22 1/2 How are stays secured Riveted Working pressure by rules 151 lb Material of stays Steel

at smallest part 7.5 Area supported by each stay 41.9 Working pressure by rules 156 lb Material of Front plates at bottom Steel

Material of Lower back plate Steel Thickness 25 1/2 Greatest pitch of stays 12 1/2 Working pressure of plate by rules 155 lb

Diameter of tubes 2 1/2 Pitch of tubes 37 1/2 Material of tube plates Steel Thickness: Front 14 1/2 Back 12 1/2 Mean pitch of stays 9.15

Pitch across wide water spaces 13 1/2 Working pressures by rules 250 lb Girders to Chamber tops: Material Steel Depth and

Thickness of girder at centre 10 1/2 Length as per rule 57 7/8 Distance apart 8 1/2 Number and pitch of stays in each Three 8 1/2

Working pressure by rules 153 lb Superheater or Steam chest; how connected to boiler Can the superheater be shut off and the boiler worked

separately Diameter Length Thickness of shell plates Material Description of longitudinal joint Diam. of rivet

Pitch of rivets Working pressure of shell by rules Diameter of flue Material of flue plates Thickness

If stiffened with rings Distance between rings Working pressure by rules End plates: Thickness How stayed

Working pressure of end plates Area of safety valves to superheater Are they fitted with easing gear

MS37-0167



IS A DONKEY BOILER FITTED?

No

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:—*Two sets coupling bolts. One set main bearing bolts. Two sets coupling bolts. One set main pump valves. One set bridge pump valves. Propeller. 3 cylinder escape valve springs. One full set of dead check valves. Anti-kick.*

The foregoing is a correct description,  
RANKIN & BLACKMORE, LTD.

*A. J. Jervis*

Director.

Manufacturer.

Dates of Survey while building { During progress of work in shops - - (1915) March 10. Nov. 16. (1916) Jan. 18. 20. 24. 27. 31. Feb. 1. 4. 9. 11. 16. 29. Nov. 24. 31. April 4. 7. 13. 17. 21. 26. 27. May 2. 4. 9. 11. 16. 18. 22. 24. 26. June 2. 9. 13. 15. 20. 22. During erection on board vessel - - - 27. 29. July 3. 6. 11. 17. 21. 26. 28. Aug. 2. 16. 18. 24. Sep. 12. 14. 18. 21. 25. 26. 28. Oct. 3. 5. 9. 12. 16. 20. 26. 30. Nov. 2. 6. 9. 13. 16. 20. 22. 27. 28. 30. Dec. 1. 5. 7. 8. 11. 14. 15. 18. 21. 22. Total No. of visits 25. 23. (1917) Jan. 8. 11. 12. 15. 17. 18. 24. 26. Feb. 12. 14. 21. 23. Mar. 7. 14. 21. Is the approved plan of main boiler forwarded herewith Yes

Dates of Examination of principal parts—Cylinders 5/10/16 Slides 11/1/17 Covers 5/10/16 Pistons 11/1/17 Rods 30/10/16 Connecting rods 12/10/16 Crank shaft 26/10/16 Thrust shaft 14/12/16 Tunnel shafts 21/12/16 Screw shaft 24/12/16 Propeller 21/12/16 Stern tube 14/12/16 Steam pipes tested 23/2/17 Engines and boiler seatings 12/1/17 Engines holding down bolts 24/2/17 Completion of pumping arrangements 2/2/17 Boilers fixed 24/2/17 Engines tried under steam 14/3/17 Main boiler safety valves adjusted 14/2/17 Thickness of adjusting washers 19/12. 5 1/2 - 21/12. 5 1/2 - 19/12. 5 1/2

Material of Crank shaft *Steel* Identification Mark on Do. 210 Material of Thrust shaft *Steel* Identification Mark on Do. 210 Material of Tunnel shafts *Steel* Identification Marks on Do. 210 Material of Screw shafts *Steel* Identification Marks on Do. 210 Material of Steam Pipes *Iron* Test pressure 600 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

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 Registry Rules. They are now in very opinion in safe working condition and the case is respectfully submitted for the satisfaction of L.M.C. 3-17 in the Register Book.*

It is submitted that  
this vessel is eligible for  
THE RECORD. + L.M.C. 3. 17. F.D.

The amount of Entry Fee ... £ 5 : 0 : When applied for, 23. 3. 1917  
Special ... £ 48 : 4 :  
Donkey Boiler Fee ... £ : : When received, 28/0  
Travelling Expenses (if any) £ : : 27. 3. 17

Committee's Minute GLASGOW. 27 MAR. 1917

Assigned + L.M.C. 3, 17

Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

MACHINERY CERTIFICATE  
WRITTEN 28/3/17



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Foundation