

REPORT ON MACHINERY

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 10th March 1915 Last Survey 21st March 1917

Reg. Book. on the Steel Steamer "Verdun" (Number of Visits 104)

Master Built at Port Glasgow By whom built Russell & Co. Tons Gross 5691 Net 5613 When built 1917

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

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

Registered Horse Power Owners Verdun S. S. 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, &c.—Description of Engines

Triple Compound No. of Cylinders Three No. of Cranks Three

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 Is the after end of the liner made water tight

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

the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive If two

fitted, is the shaft lapped or protected between the liners Length of stern bush 63

as per rule 14.65 Dia. of Crank shaft journals as per rule 14.35 as fitted 14.35 Dia. of Crank pin 1 1/2 Size of Crank webs 22.9 1/2 Dia. of thrust shaft under

as fitted 13 3/4 Dia. of screw 18.6 Pitch of Screw 18.0 No. of Blades 4 State whether moceable No Total surface 112 1/2

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

ge pumps 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 & 4 & 6 No. and size of Suctions connected to both Bilge and Donkey pumps

Room Three 3 1/2 In Holds, &c. Light 3 1/2 Tunnel 3

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

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

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

raised 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

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

are carried through the bunkers How are they protected

Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times

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

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 Is it fitted with a watertight door worked from 1st Stbd Room

S, &c.—(Letter for record S) Manufacturers of Steel Stewart & Lugg & Co. Ltd Glasgow

ating Surface of Boilers 8505 1/2 Is Forced Draft fitted No. and Description of Boilers Three single Ended

Pressure 180 Tested by hydraulic pressure to 360 Date of test 30/1/16 No. of Certificate 1270

boiler be worked separately Area of fire grate in each boiler 64 by 7 No. and Description of Safety Valves to

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

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

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

all the rivets Diameter of rivet holes in long. seams 1 1/4 Pitch of rivets 8 7/8 Lap of plates or width of butt straps 18 1/2

es of strength of longitudinal joint rivets 86.4 Working pressure of shell by rules 181 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 180 Combustion chamber plates: Material steel Thickness: Sides 4 1/2 Back 4 1/2 Top 4 1/2 Bottom 12 1/2

ays to ditto: Sides 9 1/2 Back 9 1/2 Top 9 1/2 If stays are fitted with nuts or riveted heads Working pressure by rules 182

of stays steel Diameter at smallest part 1.77 Area supported by each stay 77.5 Working pressure by rules 182 End plates in steam space:

Thickness 15 1/2 Pitch of stays 22 1/2 How are stays secured all nut Working pressure by rules 181 Material of stays steel

at smallest part 7.5 Area supported by each stay 419 Working pressure by rules 186 Material of Front plates at bottom steel

13 1/2 Material of Lower back plate steel Thickness 25 1/2 Greatest pitch of stays 12 1/2 Working pressure of plate by rules 185

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

itch across wide water spaces 13 1/2 Working pressures by rules 280 Girders to Chamber tops: Material steel Depth and

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

Working pressure by rules 183 Superheater or Steam chest; how connected to boiler Can the superheater be shut off and the boiler worked

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

holes 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 top end bolts. Two bottom end bolts. Two main bearing bolts. Two sets coupling bolts. One set back pump valves. One set bridge pump valves. Propeller. 3 cylinder escape valve springs. One full set of lead check valves. Piston nuts.*

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. 13. 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 - - - July: 3. 6. 11. 17. 21. 26. 28. Aug: 2. 16. 18. 24. 26. 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. 2. 12. 14. 21. 23. Mar. 7. 14. 21.* Is the approved plan of main boiler forwarded herewith *Yes*

“ “ “ donkey “ “ “ *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 *P 9/16 - 5 1/16 - P 17/16 - 5 9/16 - P 9/16 - 5 9/16*

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 *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*
Is this machinery duplicate of a previous case *Yes* If so, state name of vessel *Yes*

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 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.

J.W.D. *A.P.R.*
29/3/17

The amount of Entry Fee ... £ 5 : 0 :
Special ... £ 48 : 4 :
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : :
When applied for, 23.3.1917
When received, 27.3.17

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

Committee's Minute **GLASGOW.** 27 MAR. 1917
Assigned + L.M.C. 3, 17

MACHINERY CERTIFICATE
DATE 28/3/17



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