

REPORT ON MACHINERY.

No. 34259

Received at London Office

WED. NOV. 14 1917.

Date of writing Report 12 Nov. 1917 When handed in at Local Office

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Port of Glasgow

No. in Survey held at Glasgow
Reg. Book.

Date, First Survey 1-6-16 Last Survey 6th November 1917

(Number of Visits)

1104 on the

S.S. MONTILLA

Tons { Gross 5597
Net 3500

Master

Built at Glasgow

By whom built Russell + Co (no 693)

When built 1914

Engines made at Glasgow

By whom made D. Rowan + Co (no 650)

when made 1914

Boilers made at Glasgow

By whom made D. Rowan + Co

when made 1914

Registered Horse Power

Owners Blue Star Line Ltd

Port belonging to London

Nom. Horse Power as per Section 28 548

Is Refrigerating Machinery fitted for cargo purposes ☒Is Electric Light fitted ☒

ENGINES, &c.—Description of Engines Triple expansion

No. of Cylinders 3

No. of Cranks 3

Dia. of Cylinders $24\frac{1}{2} \times 41\frac{1}{2} \times 40$ Length of Stroke 48" Revs. per minute 80Dia. of Screw shaft as per rule $14\frac{1}{2}$ as fitted 16" Material of screw shaft SteelIs 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 partbetween the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive ☒ If twoliners are fitted, is the shaft lapped or protected between the liners ☒Length of stern bush $5'4"$ Dia. of Tunnel shaft as per rule 13.079 as fitted $13\frac{1}{2}$ Dia. of Crank shaft journals as per rule 13.733 as fitted 14"Dia. of Crank pin $14\frac{1}{4}$ Size of Crank webs 9" Dia. of thrust shaft undercollars $14\frac{1}{4}$ Dia. of screw $17'0"$ Pitch of Screw $16'6"$ No. of Blades 4 State whether moveable ☒ Total surface $925'$ No. of Feed pumps 2 Dia. of ditto $10\frac{1}{2} \times 8$ Stroke 21" Can one be overhauled while the other is at work ☒No. of Bilge pumps 2 Dia. of ditto 4" Stroke 24" Can one be overhauled while the other is at work ☒No. of Donkey Engines 4 Sizes of Pumps $7 \times 10 \times 15$ $8 \times 6 \times 18$ $6 \times 6 \times 10$ $5 \times 5 \times 8$ No. and size of Suctions connected to both Bilge and Donkey pumpsIn Engine Room 3 $3\frac{1}{2}"$ In Holds, &c. Two $3\frac{1}{2}"$ in each hold.One $2\frac{1}{2}"$ in tunnel wellNo. of Bilge Injections 1 sizes 6" Connected to condenser, or to circulating pump ☒ Is a separate Donkey Suction fitted in Engine room & size ☒ $3\frac{1}{2}"$ 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 noneAre all connections with the sea direct on the skin of the ship ☒ Are they Valves or Cocks BothAre 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 lower than*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 *See large suction* How are they protected *in linings*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 ☒Dates of examination of completion of fitting of Sea Connections *Greenock* of Stern Tube *Greenock* Screw shaft and Propeller *Greenock*Is the Screw Shaft Tunnel watertight ☒ Is it fitted with a watertight door ☒ worked from *Ship Platform*BOILERS, &c.—(Letter for record S) Manufacturers of Steel *Stubby of Scotland*Total Heating Surface of Boilers $8433'$ Is Forced Draft fitted ☒ No. and Description of Boilers 3 *single ended*

Working Pressure 200 Tested by hydraulic pressure to 400 Date of test 3-2-17 No. of Certificate 13688

Can each boiler be worked separately ☒ Area of fire grate in each boiler $505'$ No. and Description of Safety Valves toeach boiler *Double Spring* Area of each valve $8.3"$ Pressure to which they are adjusted 205 lbs. Are they fitted with easing gear ☒Smallest distance between boilers or uptakes and bunkers or woodwork 30" Mean dia. of boilers $15'0"$ Length $12'0"$ Material of shell plates SteelThickness $1\frac{2}{4}"$ Range of tensile strength 28 to 32 Are the shell plates welded or flanged ☒ Descrip. of riveting: cir. seams *D. Lap.*long. seams *in Butt* Diameter of rivet holes in long. seams $1\frac{3}{8}"$ Pitch of rivets $9\frac{1}{2}"$ Lap of plates or width of butt straps $20\frac{1}{2}"$ Per centages of strength of longitudinal joint rivets 87.6 Working pressure of shell by rules 205 Size of manhole in shell 16×12 Size of compensating ring $2'7" \times 2'11"$ No. and Description of Furnaces in each boiler 3 *main* Material Steel Outside diameter $46"$ Length of plain part top $19"$ bottom $32"$ Thickness of plates crown $19"$ bottom $32"$ Description of longitudinal joint *welded* No. of strengthening ringsWorking pressure of furnace by the rules 205 Combustion chamber plates: Material Steel Thickness: Sides $2\frac{1}{2}"$ Back $2\frac{1}{2}"$ Top $2\frac{1}{2}"$ Bottom $2\frac{1}{2}"$ Pitch of stays to ditto: Sides $8\frac{5}{16} \times 8\frac{7}{8}$ Back $9\frac{1}{8} \times 8$ Top $8\frac{3}{8} \times 8\frac{3}{4}$ If stays are fitted with nuts or riveted heads ☒ Working pressure by rules 201Material of stays Steel Area at smallest part $2.07"$ Area supported by each stay $44"$ Working pressure by rules 210 End plates in steam space:Material Steel Thickness $1\frac{1}{4}"$ Pitch of stays $15\frac{1}{2} \times 20\frac{1}{2}$ How are stays secured 2 *nuts* Working pressure by rules 212 Material of stays SteelArea at smallest part $7.06"$ Area supported by each stay $318"$ Working pressure by rules 230 Material of Front plates at bottom SteelThickness $1\frac{1}{4}"$ Material of Lower back plate Steel Thickness $3\frac{1}{2}"$ Greatest pitch of stays $14\frac{1}{4}"$ Working pressure of plate by rules 225Diameter of tubes $2\frac{1}{2}"$ Pitch of tubes $3\frac{1}{16} \times 3\frac{1}{16}$ Material of tube plates Steel Thickness: Front $1\frac{1}{4}"$ Back $1\frac{3}{16}"$ Mean pitch of stays $7\frac{3}{8} \times 11\frac{1}{16}$ Pitch across wide water spaces $13\frac{1}{2}"$ Working pressures by rules 247-204 Girders to Chamber tops: Material Steel Depth andthickness of girder at centre $10" \times 4\frac{1}{8}"$ Length as per rule $35\frac{1}{2}"$ Distance apart $8\frac{3}{4}"$ Number and pitch of stays in each $3 @ 8\frac{3}{8}"$

Working pressure by rules 223 Superheater or Steam chest; how connected to boiler none 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

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

009640-009646-0026

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Lloyd's Register
Foundation

VERTICAL DONKEY BOILER—

Manufactured of Steel No Donkey Boiler fitted to vessel

No.	Description				
Made at	By whom made		When made	Where fixed	
Working pressure	tested by hydraulic pressure to	Date of test	No. of Certificate	Fire grate area	Description of Safety
Valves	No. of Safety Valves	Area of each	Pressure to which they are adjusted		Date of adjustment
If fitted with casing gear	If steam from main boilers can enter the donkey boiler		Dia. of donkey boiler	Length	
Material of shell plates	Thickness	Range of tensile strength	Descrip. of riveting long. seams		
Dia. of rivet holes	Whether punched or drilled	Pitch of rivets	Lap of plating	Per centage of strength of joint	Rivets Plates
Working pressure of shell by rules	Thickness of shell crown plates	Radius of do.	No. of stays to do.	Dia. of stays	
Diameter of furnace Top	Bottom	Length of furnace	Thickness of furnace plates	Description of joint	
Working pressure of furnace by rules	Thickness of furnace crown plates	Radius of do.	Stayed by		
Diameter of uptake	Thickness of uptake plates	Thickness of water tubes	Dates of survey		

SPARE GEAR. State the articles supplied:— Two top end bolts + nuts; Two Bottom end bolts + nuts; Two main bearing bolts + nuts; One set of coupling bolts; One set of feed + large pump valves; A quantity of assorted bolts + nuts

The foregoing is a correct description,

for David Rowan Manufacturer.

Dates of Survey while building
During progress of work in shops -- 1/9/16 Jan. 1. 9. 12. July 10. 18. 21. 24. Aug. 4. 10. 13. 14. 6. 11. 12. 15. 18. 24. 29. Oct. 3. 12. 16. 17. 19. 20. 24. 24. Nov. 1. 6. 8. 10. 13. 15. 17. 20. 23. 30. Dec. 4. 12.
During erection on board vessel -- 1/9. 20. 22. 25. 10/11 Jan. 11. 29. 30. Feb. 3. 4. 7. 20. 24. Mar. 2. 13. 16. 24. 29. Apr. 1. 11. 24. May 2. 6. 7. 8. 11. 18. 25. 29. June 1. 10. 21. 24. July 1. 19. 25.
Total No. of visits Aug. 2. 4. 10. 16. 23. 4. 11. Oct. 3. 11. 12. 18. 23. 26. 27. 28. 29.

Is the approved plan of main boiler forwarded herewith ☒

" " " donkey " " " ☒

Dates of Examination of principal parts—Cylinders 8/11/16 Slides 12/12/16 Covers 8/11/16 Pistons 12/12/16 Rods 19/12/16
Connecting rods 19/12/16 Crank shaft 13/11/16 Thrust shaft 5/2/17 Tunnel shafts 20/2/17 Screw shaft 30/11/16 Propeller 11/1/17
Stern tube 30/11/16 Steam pipes tested 5/5/17 Engine and boiler seatings Bremach Engines holding down bolts 2/5/17
Completion of pumping arrangements 2/5/17 Boilers fixed 2/5/17 Engines tried under steam 6/11/17
Main boiler safety valves adjusted 11/5/17 Thickness of adjusting washers St Blr $\frac{5}{8}$ " $\frac{3}{8}$ " Cent Blr $\frac{7}{16}$ " $\frac{11}{32}$ " Pt Blr $\frac{5}{8}$ " $\frac{3}{8}$ "
Material of Crank shaft Steel Identification Mark on Do. 650 AMK 13-11-16
Material of Thrust shaft Steel Identification Mark on Do. 164 AMK 5-2-17
Material of Tunnel shafts Steel Identification Marks on Do. 650 AMK 20-2-17
Material of Screw shafts Steel Identification Marks on Do. 650 AMK 30-11-16
Material of Steam Pipes W. S. Lape. Test pressure 600 lbs

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

Thin incinerators have been built under special survey the materials and workmanship are of good description they have been well fitted on board and tried under steam

This machinery is now in our opinion eligible to have notification of + LMC 11. 17 (in red) in the Register Book.

It is submitted that this vessel is eligible for THE RECORD. + LMC 11. 17. F.D.

JM JWD 15/11/17

The amount of Entry Fee .. £ 3 : 0 :
Special .. £ 47 : 8 :
Donkey Boiler Fee .. £ ✓ : :
Travelling Expenses (if any) £ ✓ : :
When applied for, 13-11-1917
When received, 15-11-1917

A. McLeod J. H. Coleman
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute GLASGOW 13 NOV. 1917

Assigned + L.M.C. 11. 17.

MACHINERY CERTIFICATE WRITTEN. 14