

Rpt. 4.

REPORT ON MACHINERY.

No. 10120.

Received at London Office

Date of writing Report

When handed in at Local Office

8/6/18 Port of

Middlesbrough

10th April 18 Last Survey 29th May 1918No. in Survey held at
Reg. Book.on the SS REXMOREMaster Forworthy Built at SunderlandBy whom built Sir James Caird & Sons (Newcastle) When built 1918Engines made at Middlesbrough By whom made Richardson Westguth & Co Ltd when made 1918Boilers made at Middlesbrough By whom made Richardson Westguth & Co Ltd when made 1918Registered Horse Power 412 Owners Shirburn Line CoPort belonging to Liverpool

Nom. Horse Power as per Section 28

Is Refrigerating Machinery fitted for cargo purposes NoIs Electric Light fitted yes

ENGINES, &c.—Description of Engines

Triple ExpansionNo. of Cylinders 3No. of Cranks 3Dia. of Cylinders 29.40.80 Length of Stroke 54 Revs. per minuteDia. of Screw shaft as per rule 15.96 Material of SteelIs 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

in the 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

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

If two

liners are fitted, is the shaft lapped or protected between the liners

Length of stern bush 5-6 3/4Dia. of Tunnel shaft as per rule 14.65 Dia. of Crank shaft journals as per rule 15.38Dia. of Crank pin 16 1/4 Size of Crank webs 31 40 2 Dia. of thrust shaft undercollars 16 1/8 Dia. of screw 8-9 Pitch of Screw 10-0No. of Blades 4 State whether moveable No Total surface 114.5 #No. of Feed pumps 2 Diameter of ditto 9 Stroke 21Can one be overhauled while the other is at work YesNo. of Bilge pumps 2 Diameter of ditto 4 Stroke 30Can one be overhauled while the other is at work YesNo. of Donkey Engines 2 Sizes of Pumps Bulldog 9 1/2 10 1/2 10 1/2 10 1/2

No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room 2-3 1/2 2-3 1/2 (well) 2-3 1/2 2-3 1/2In Holds, &c. 2-3 1/2 deep tank fore + deep tank aftNo. of Bilge Injections sizes 10 Connected to condenser, or to circulating pump YesIs a separate Donkey Suction fitted in Engine room & size Yes - 3 1/2Are all the bilge suction pipes fitted with roses Yes Are the roses in Engine room always accessible YesAre the sluices on Engine room bulkheads always accessible YesAre all connections with the sea direct on the skin of the ship YesAre they Valves or Cocks bothAre they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates YesAre the Discharge Pipes above or below the deep water line aboveAre they each fitted with a Discharge Valve always accessible on the plating of the vessel YesAre the Blow Off Cocks fitted with a spigot and brass covering plate YesWhat pipes are carried through the bunkers noneHow are they protected YesAre all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times YesAre the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges YesIs the Screw Shaft Tunnel watertight yes Is it fitted with a watertight door yesworked from Engine room top gratingBOILERS, &c.—(Letter for record 5) Manufacturers of Steel John Spenser & SonTotal Heating Surface of Boilers 11000 # Is Forced Draft fitted YesNo. and Description of Boilers John Spenser & SonWorking Pressure 180 lbs Tested by hydraulic pressure to 360 lbsDate of test 20-3-18 No. of Certificate 5844Can each boiler be worked separately Yes Area of fire grate in each boiler 62.4 #

No. and Description of Safety Valves to

each boiler 2 Spring loaded Area of each valve 11.04 #Pressure to which they are adjusted 180 lbs Are they fitted with easing gear yesSmallest distance between boilers or uptakes and bunkers or woodwork 20Mean dia. of boilers 15-9 Length 12-0 Material of shell plates SteelThickness 3/16 1/2 Range of tensile strength 29-33Are the shell plates welded or flanged No Descrip. of riveting: cir. seams 3 R laplong. seams 5 R Butt Diameter of rivet holes in long. seams 1 1/16Pitch of rivets 9 5/8 Lap of plates or width of butt straps 2 1/8Per centages of strength of longitudinal joint 89.9Working pressure of shell by rules 208 lbs Size of manhole in shell 16 3/4 x 20 3/4Size of compensating ring 1 3/4 x 2-8 3/4No. and Description of Furnaces in each boiler 3-Diplo Material Steel Outside diameter 4-1 3/4Length of plain part top 29-2 1/2 bottom 29-2 1/2 Thickness of plates 2 1/32Description of longitudinal joint weld No. of strengthening rings 15Working pressure of furnace by the rules 210 lbs Combustion chamber plates: Material SteelThickness: Sides 2 1/32 Back 2 1/32 Top 2 1/32 Bottom 1 5/16Pitch of stays to ditto: Sides 8 x 8 Back 8 1/2 x 8 Top 8 5/8 x 7 1/2If stays are fitted with nuts or riveted heads nutted Working pressure by rules 223 lbsMaterial of stays Steel Area at smallest part 1.43Area supported by each stay 66.8 Working pressure by rules 204 lbs End plates in steam space:Material Steel Thickness 1 3/16 Pitch of stays 2 1/32 x 16 3/4How are stays secured nutted Working pressure by rules 182 lbs Material of stays SteelArea at smallest part 1.02 Area supported by each stay 348.5Working pressure by rules 210 lbs Material of Front plates at bottom SteelThickness 3 1/32 Material of Lower back plate SteelThickness 2 1/32 Greatest pitch of stays 14 x 8 Working pressure of plate by rules 189Diameter of tubes 2 1/2 Pitch of tubes 3 1/2 x 3 3/4Material of tube plates Steel Thickness: Front 3 1/32 Back 1 3/16 Mean pitch of stays 9.31Pitch across wide water spaces 13 1/2 Working pressures by rules 184 lbsGirders to Chamber tops: Material Steel Depth andthickness of girder at centre 8 1/2 x 1 3/4 Length as per rule 2-8 9/16Distance apart 8 5/8 Number and pitch of stays in each 3 @ 4 1/2Working pressure by rules 203 lbs Steam dome: description of joint to shell none% of strength of joint YesDiameter 1 Thickness of shell plates 1 Material SteelDescription of longitudinal joint none Diam. of rivet holes 1Pitch of rivets 1 Working pressure of shell by rules 184 lbsCrown plates 1 Thickness 1 How stayed 1SUPERHEATER. Type 1 Date of Approval of Plan 1Tested by Hydraulic Pressure to 1Date of test 1 Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler 1Diameter of Safety Valve 1 Pressure to which each is adjusted 1Is Easing Gear fitted 1Lloyd's Register
Foundation

IS A DONKEY BOILER FITTED?

no

If so, is a report now forwarded?

✓

SPARE GEAR State the articles supplied:— Two of each:— Top end, Bottom end and Main bearing bolts and nuts— One set of Coupling bolts and nuts— One set of Feed and Bilge pump valves— One set of H.P. piston springs— One Centrifugal pump spindle— one Propeller— A quantity of assorted bolts and nuts— various sizes of iron.

The foregoing is a correct description,

RICHARDSONS WESTGARTH & Co. Ltd

Manufacturer.

John A. L. L. L.

Dates of Survey while building { During progress of work in shops - - 1917 Apr 10. 12 July 5. 9. 11. 25 Aug 8. 10. 13. 16. 17. Sep 3. 10. 11. 12. 14. 24 Oct 5. 9. 12
During erection on board vessel - - 19. 23. 24. 29. Nov 2. 5. 7. 9. 12. 16. 19. 26. 27. 28. Dec 3. 7. 10. 12. 17. 19. 20 1918 Jan 4. 7. 9. 11. 14. 17. 21
Total No. of visits 70 95 Is the approved plan of main boiler forwarded herewith Yes

Dates of Examination of principal parts—Cylinders 14-12-17 Slides 19-2-17 Covers 19-2-17 Pistons 19-2-17 Rods 11-3-18
Connecting rods 14-12-17 Crank shaft 29-11-17 Thrust shaft 18-3-18 Tunnel shafts 18-3-18 Screw shaft 18-3-18 Propeller 19-12-17
Stern tube 22-3-18 Steam pipes tested 18-5-18 Engine and boiler seatings 11-4-18 Engines holding down bolts 9-5-18
Completion of pumping arrangements 28-5-18 Boilers fixed 28-5-18 Engines tried under steam 28-5-18
Completion of fitting sea connections 5-2-18 Stern tube 5-2-18 Screw shaft and propeller 11-4-18
Main boiler safety valves adjusted 28-5-18 Thickness of adjusting washers F.P. 1/32 P 1/32 S F.S. 1/2 P 1/32 S A.S. 1/2 P 1/32 S A.P. 1/2 P 1/32 S
Material of Crank shaft Steel Identification Mark on Do. 5968 29-11-17 Material of Thrust shaft Steel Identification Mark on Do. 132-18-17
Material of Tunnel shafts Steel Identification Marks on Do. 132-18-17 Material of Screw shafts Steel Identification Marks on Do. 132-18-17
Material of Steam Pipes Lap welded with iron Test pressure 540 lbs
Is an installation fitted for burning oil fuel no 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 no If so, state name of vessel ✓

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

The machinery and boilers of this vessel have been constructed under special survey are of good material and workmanship and the boilers tested under hydraulic pressure and found satisfactory

The main and auxiliary engines and the boilers were examined under steam and found good.

The engines and boilers are now in a good and safe working condition and eligible in my opinion to have the notation of L.M.C. with date when completed (See letter to Sunderland Surveyors)

Now Completed—Easing gear has been fitted to safety valves—10" suction pipe fitted to bilge injection—Spare gear checked on board.

The machinery and boilers are now in good and safe working condition, and eligible in my opinion to have the notation of L.M.C.

6-18. entered in the Society's Register Book. this vessel is eligible for

The amount of Entry Fee ... £ 3 : 0 :
Special ... £ 55 : 12 :
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : :
When applied for, 8/6/19
When received, 25/7/19

THE RECORD. + L.M.C. 6.18.

Thomas Miller John A. L. L. L.
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned

+ L.M.C. 6.18

FRI. 12. III. 1918

MACHINERY CERTIFICATE

WRITTEN

F. D.



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