

REPORT ON MACHINERY.

No. 1934

MON. 30 JAN. 1922

Date of writing Report 18th Jan^y 1922 When handed in at Local Office 28th Jan^y 1922 Port of Barrow-in-FurnessNo. in Survey held at Barrow-in-Furness Date, First Survey 20th Aug. 1920 Last Survey 23rd Jan^y 1922

Reg. Book.

39297 on the T.S.S. "Sliese Donard"

(Number of Visits 100)

Master ☒ Built at Barrow-in-Furness By whom built Vickers LtdTons { Gross 1115 94
Net 432 83
When built 1922Engines made at Barrow-in-Furness By whom made Vickers Ltd (Eng. No 591) when made 1922Boilers made at Barrow-in-Furness By whom made Vickers Ltd when made 1922Registered Horse Power 3000 Owners London & North Western Rly Co. Ltd Port belonging to DublinNom. Horse Power as per Section 28 420 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted YesENGINES, &c.—Description of Engines Twin Setcs Four Cyl. Triple Exp. No. of Cylinders 8 No. of Cranks 8Dia. of Cylinders 19"-29 1/2"-2 LP 33" Length of Stroke 30" Revs. per minute 145 Dia. of Screw shaft as per rule 10" solid Material of Steel
as fitted 10 1/4" solid screw shaftIs the screw shaft fitted with a continuous liner the whole length of the stern tube No 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 No Ends of liners stepped, & grooves filled with white metal
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 Yes If two
liners are fitted, is the shaft lapped or protected between the liners Yes Length of stern bush 4'-6 1/2"Dia. of Tunnel shaft as per rule 8.9" solid Dig. of Crank shaft journals as per rule 9.35 solid
as fitted 9 1/4" x 2 1/2" hole as fitted 9 3/4" x 3" hole Dia. of Crank pin 10 1/4" Size of Crank webs 19 1/2" x 6 1/8" Dia. of thrust shaft under
collars 9 3/4" x 3" hole Dia. of screw 10'-0" Pitch of Screw 13'-6" No. of Blades 3 State whether mocenble Yes Total surface 33.5 sq ftNo. of Feed pumps 2 Diameter of ditto 8" Stroke 24" Can one be overhauled while the other is at work YesNo. of Bilge pumps 2 Diameter of ditto 9" Stroke 10" Can one be overhauled while the other is at work YesNo. of Donkey Engines 3 Sizes of Pumps Bilge + Ballast (20 ft) Sanitary 10 x 6 1/2 x 10 No. and size of Suctions connected to both Bilge and Ballast
Donkey pumpsIn Engine Room 2-2 1/2" bore + 1-3 1/2" bore, In Stokehold 2-2 1/2" In Holds, &c. 1-2 1/2" in Main Hold for 1-2 1/2"
Chain Locker, 2-2 1/2" in tunnelsNo. of Bilge Injections 5 sizes 6" Connected to condenser, or to circulating pump Pumps Is a separate Donkey Suction fitted in Engine room & size 1-3 1/2"
Yes 1-2 1/2"Are all 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 YesAre all connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks BothAre they 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 aboveAre they 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 YesWhat pipes are carried through the bunkers Ford winch steam & exhaust How are they protected Based in with steel plateAre 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 Yes worked from top platform & on Stone-Lloyd systemMILERS, &c.—(Letter for record (r)) Manufacturers of Steel D. Colville & Sons, J. Spencer & Sons, H. Bessemer & Co.Total Heating Surface of Boilers 6962 sq ft Is Forced Draft fitted Yes No. and Description of Boilers Two Double-Ended Multi-

Working Pressure 180 lbs. Tested by hydraulic pressure to 360 lbs. Date of test 13/9/21, 28/9/21 No. of Certificate 331, 332,

Can each boiler be worked separately Yes Area of fire grate in each boiler 80 sq ft No. and Description of Safety Valves toeach boiler Two, Spring-loaded Area of each valve 14.19 sq in Pressure to which they are adjusted 182 lbs. Are they fitted with easing gear YesSmallest distance between boilers or uptakes and bunkers or woodwork 1'-7" Mean dia. of boilers 12'-6" Length 20'-6" Material of shell plates SteelThickness 1 1/8" Range of tensile strength 28/32 tons Are the shell plates welded or flanged No Descrip. of riveting: cir. seams Centre-Stitch
Double Ends DoubleLong. seams T.R. Double Diameter of rivet holes in long. seams 1 3/16" Pitch of rivets 8" Lap of plates or width of butt straps 17 1/2"

Percentages of strength of longitudinal joint rivets 91.32% plate 85.15% Working pressure of shell by rules 200 lbs. Size of manhole in shell 16" x 12"

Size of compensating ring 38" x 30" x 1 1/8" No. and Description of Furnaces in each boiler 4- Morrison Material Steel Outside diameter 3'-11 1/4"Length of plain part top 10 1/2" Thickness of plates crown 9 1/16" Description of longitudinal joint Weld No. of strengthening rings YesWorking pressure of furnace by the rules 186 lbs. Combustion chamber plates: Material Steel Thickness: Sides 5/8" Back 5/8" Top 5/8" Bottom 7/8"Pitch of stays to ditto: Sides 9 1/2" x 7 1/2" Back 9 1/2" x 7 1/2" Top 9 1/2" x 7" If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 184 lbs.Material of stays Iron Area at smallest part 2.03 sq in Area supported by each stay 41.2 sq in Working pressure by rules 213 lbs. End plates in steam space:Material Steel Thickness 1 1/8" Pitch of stays Mean 18" x 17 1/4" How are stays secured Double nuts Working pressure by rules 182 lbs. Material of stays SteelArea at smallest part 2-593 sq in 8-49 sq in Area supported by each stay 310 sq in Working pressure by rules 184 lbs. Material of Front plates at bottom SteelThickness 7/8" Material of Lower back plate Yes Thickness Yes Greatest pitch of stays Yes Working pressure of plate by rules YesPitch of tubes 2 1/2" Pitch of tubes 3 3/8" Material of tube plates Steel Thickness: Front 7/8" Back 2 1/32" Mean pitch of stays 9.06"Pitch across wide water spaces 13" Working pressures by rules 186 lbs. Girders to Chamber tops: Material Steel Depth and

Thickness of girder at centre 7 1/2" x 1 1/2" Length as per rule 26.53" Distance apart 9 1/2" Number and pitch of stays in each 3-7"

Working pressure by rules 184 lbs. Steam dome: description of joint to shell None % of strength of joint YesMaterial Yes Thickness of shell plates Yes Material Yes Description of longitudinal joint Yes Diam. of rivet holes YesNo. of rivets Yes Working pressure of shell by rules Yes Crown plates Yes Thickness Yes How stayed YesSUPERHEATER. Type None Date of Approval of Plan Yes Tested by Hydraulic Pressure to YesDate of Test Yes Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler YesDiameter of Safety Valve Yes Pressure to which each is adjusted Yes Is Easing Gear fitted Yes

006317-006331-0029

IS A DONKEY BOILER FITTED?

Yes.

If so, is a report now forwarded?

Yes.

SPARE GEAR.

State the articles supplied:— Two H.P. top end bolts & nuts; two H.P. bottom end bolts & nuts; two L.P. top end bolts & nuts; two L.P. bottom end bolts & nuts; two main bearing bolts; one set of coupling bolts; piece of crank shaft interchangeable; one set of feed & bilge pump valves; 2 H.P. & 2 L.P. piston rings; 6 studs for junk rings; air pump bucket & rod complete; 6 air pump valves; 4 feed check valves; propeller shaft & two propeller blades; 3 cyl. escape valves & springs; 10 condenser tubes & 40 ferrules; two safety valve springs; 10 boiler tubes; assorted bolts & nuts & iron.

The foregoing is a correct description,

FOR VICKERS LIMITED,

Manufacturers.

Manufacturer.

1920 Aug. 20. 25 Sept. 7. 20 Oct. 8. 15. 19. 29. Nov. 9. 12. 16. 19. 23 Dec. 3. 14. 1921 Jan. 5. 7. 18. 28 Feb. 4. 7. 15 Apr. 11. 15. 22 May 3. 10. 11. 12. 24. 31 June 9. 16. 14. 22. 23. 24. 27. 28. 29 July 4. 8. 11. 14. 15. 19. 20 Aug. 9. 10. 11. 12. 16. 17. 18. 22. 23. 25. 26. 30 Sept. 1. 7. 8. 13. 14. 16. 21. 22. 28 Oct. 3. 4. 11. 18. 27 Nov. 2. 8. 9. 15. 18. 22. 23. 24. 25. 28. 29. 30 Dec. 1. 3. 5. 6. 8. 12. 14. 1922 Jan. 11. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30 Feb. 1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100. 101. 102. 103. 104. 105. 106. 107. 108. 109. 110. 111. 112. 113. 114. 115. 116. 117. 118. 119. 120. 121. 122. 123. 124. 125. 126. 127. 128. 129. 130. 131. 132. 133. 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Dates

of Survey

while

building

During progress of work in shops --
During erection on board vessel --
Total No. of visits

100

Is the approved plan of main boiler forwarded herewith

" " " donkey " " "

Dates of Examination of principal parts—

Cylinders 12/8/21, 23/8/21 Slides 17/8/21 Covers 17/8/21 Pistons 24/6/21 Rods 12/5/21

Connecting rods 12/5/21 Crank shaft 23/6/21 Thrust shaft 28/9/21 Tunnel shafts 28/9/21 Screw shaft 22/9/21 Propeller 28/9/21

Stern tube 16/9/21 Steam pipes tested 2/11/21, 9/11/21, Engine and boiler seatings 11/10/21 Engines holding down bolts 24/11/21

Completion of pumping arrangements 5/12/21 Boilers fixed 23/11/21 Engines tried under steam 28/11/21, 8/12/21

Completion of fitting sea connections 22/9/21 Stern tube 28/9/21 Screw shaft and propeller 4/10/21

Main boiler safety valves adjusted 29/11/21, 3/12/21 Thickness of adjusting washers Star F.V. 1/32" A.V. 25/64" Port F.V. 7/16" A.V. 15/32"

Material of Crank shaft Steel Identification Mark on Do. LLOYDS No 261 J.H.

Material of Thrust shaft Steel Identification Mark on Do. LLOYDS No 261 J.H.

Material of Tunnel shafts Steel Identification Marks on Do. LLOYDS No 261 J.H.

Material of Screw shafts Steel Identification Marks on Do. LLOYDS No 261 J.H.

Material of Steam Pipes Solid drawn copper Test pressure 400 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 of this vessel has been constructed under special survey in accordance with requirements & approved plans, & the materials and workmanship are sound & good.

The boilers have been tested by hydraulic pressure to 360 lbs per sq. in. & on completion of fitting on board, their safety valves were adjusted under steam to 182 lbs. Accumulation tests were carried out on the safety valves with satisfactory results. The Machinery was tried under steam in dock, & on completion of fitting out, a full power trial was carried out at sea with satisfactory results.

The Machinery of this vessel is in my opinion, eligible to be classed + L.M.C. 1-22 in the Register Book.

It is submitted that this vessel is eligible for THE RECORD. F. L.M.C. - 1.22. F.D.

The amount of Entry Fee ... £ 5 : 0 : 0 When applied for, 28th Jan. 1922

Special ... £ 88 : 0 : 0 When received, 9.3.22

Donkey Boiler Fee ... £ : : : Travelling Expenses (if any) £ 10 : 0 : 0

Committee's Minute Assigned F.D.

John Houston. Engineer Surveyor to Lloyd's Register of Shipping.

30/1/22

28th Jan. 1922

9.3.22

FRI FEB 3 1922

L.M.C. 1.22

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