

REPORT ON MACHINERY

No. 71419
MON. 25 NOV. 1918

Received at London Office

NEWCASTLE-ON-TYNE

Date of writing Report 7th Nov. 1918 When handed in at Local Office 10 Port of NEWCASTLE-ON-TYNE
 in Survey held at Newcastle Date, First Survey 20th Mar. 1918 Last Survey 8th Nov. 1918
 eg. Book. on the S.S. "Woe Citadel" (Number of Vents 7) Gross 5684 Tons Not 3563
 Master Built at Newcastle By whom built Horthumberland & B Co When built 1918
 Engines made at Newcastle By whom made H. E. Marine Eng Co 2351 when made 1918
 Boilers made at do By whom made do when made 1918
 Registered Horse Power Owners The Shipping Controller Port belonging to London
 Nom. Horse Power as per Section 28 619 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

ENGINES, &c.—Description of Engines Triple Expansion No. of Cylinders 3 No. of Cranks 3
 Dia. of Cylinders 27"-45"-75" Length of Stroke 54 Revs. per minute 79 Dia. of Screw shaft 15.25" Material of Steel
 Is 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
 Is 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 yes Length of stern bush 5'-6"
 Dia. of Tunnel shaft 13.96" Dia. of Crank shaft journals 14.66" Dia. of Crank pin 14.25" Size of Crank webs 30.25" x 9.5" Dia. of thrust shaft under
 collars 14.25" Dia. of screw 17'-9" Pitch of Screw 16'-9" No. of Blades 4 State whether moveable no Total surface 93.6
 No. of Feed pumps 2 (Weir's) Diameter of ditto 12.9" Stroke 21" Can one be overhauled while the other is at work yes
 No. of Bilge pumps 2 Diameter of ditto 4.5" Stroke 30" Can one be overhauled while the other is at work yes
 No. of Donkey Engines 2 Sizes of Pumps 10.25" x 14" x 24", 9.25" x 7" x 18" No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room Two 3.5" In Holds, &c. No. 1 hold 2.35", No. 2 hold 2.35"
Cross Bunker 2.35", No. 3 hold 2.35", No. 4 hold 2.35", Tunnel Well 1-2.5"
 No. of Bilge Injections 2 sizes 11" Connected to condenser or to circulating pump yes Is a separate Donkey Suction fitted in Engine room & size yes 3.5"
 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 none
 Are all connections with the sea direct on the skin of the ship yes Are they Valves or Cocks Both
 Are 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 Both
 Are 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 yes
 What pipes are carried through the bunkers Hold suction How are they protected Wood casing
 Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times yes
 Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges yes
 Dates of examination of completion of fitting of Sea Connections 16.9.18 of Stern Tube 16.9.18 Screw shaft and Propeller 23.10.18
 Is the Screw Shaft Tunnel watertight yes Is it fitted with a watertight door no worked from yes

BOILERS, &c.—(Letter for record S) Manufacturers of Steel John Spence & Sons
 Total Heating Surface of Boilers 9525.6 Is Forced Draft fitted yes No. and Description of Boilers Three, single-ended
 Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Dates of test 1.10.9.18, 1.16.9.18, 1.20.9.18 No. of Certificates 1-9147, 1-9149, 1-9151
 Can each boiler be worked separately yes Area of fire grate in each boiler 73.4 No. and Description of Safety Valves to
 each boiler Two spring Area of each valve 12.56" Pressure to which they are adjusted 185 lbs Are they fitted with easing gear yes
 Smallest distance between boilers or uptakes and bunkers on woodwork 2'-6" Mean dia. of boilers 16'-0" Length 12'-5.32" Material of shell plates Steel
 Thickness 1.56" Range of tensile strength 29.3 - 33 Are the shell plates welded or flanged no Descrip. of riveting: cir. seams Lap
 long. seams HS. Y. Riv Diameter of rivet holes in long. seams 1.35" Pitch of rivets 9.5" Lap of plates or width of butt straps 20.5"
 Per centages of strength of longitudinal joint 88.6 Working pressure of shell by rules 191 lbs Size of manhole in shell 16" x 12"
 Size of compensating ring Flanged No. and Description of Furnaces in each boiler 4 - sightless Material Steel Outside diameter 43"
 Length of plain part top 17", bottom 32" Thickness of plates 17", 32" Description of longitudinal joint Welded No. of strengthening rings yes
 Working pressure of furnace by the rules 190 lbs Combustion chamber plates: Material Steel Thickness: Sides 23/32" Back 3/4" Top 23/32" Bottom 7/8"
 Pitch of stays to ditto: Sides 10.18" x 8.25" Back 10.18" x 9.76" Top 10.18" x 9.45" Are stays fitted with nuts or riveted heads nuts Working pressure by rules 198 lbs
 Material of stays Steel Diameter at smallest part 2.03" Area supported by each stay 88.59" Working pressure by rules 206 lbs End plates in steam space:
 Material Steel Thickness 1.76" Pitch of stays 23.25" x 22.25" How are stays secured sn & lb Working pressure by rules 185 lbs Material of stays Steel
 Diameter at smallest part 9.62" Area supported by each stay 528" Working pressure by rules 189 lbs Material of Front plates at bottom Steel
 Thickness 31/32" Material of Lower back plate Steel Thickness 2.75" Greatest pitch of stays 13.57" Working pressure of plate by rules 187 lbs
 Diameter of tubes 2.25" Pitch of tubes 3.34" x 3.5" Material of tube plates Steel Thickness: Front 31/32" Back 3/4" Mean pitch of stays 9.4"
 Pitch across wide water spaces 13.57" Working pressures by rules 181 lbs Girders to Chamber tops: Material Steel Depth and
 thickness of girder at centre 10.5" x 1.34" Length as per rule 36.25" Distance apart 10.18" Number and pitch of stays in each 3 - 8.34"
 Working pressure by rules 200 lbs Superheater or Steam chest; how connected to boiler none Can the superheater be shut off and the boiler worked
 separately yes Diameter yes Length yes Thickness of shell plates yes Material yes Description of longitudinal joint yes Diam. of rivet
 holes yes Pitch of rivets yes Working pressure of shell by rules yes Diameter of flue yes Material of flue plates yes Thickness yes
 If stiffened with rings yes Distance between rings yes Working pressure by rules yes End plates: Thickness yes How stayed yes
 Working pressure of end plates yes Area of safety valves to superheater yes Are they fitted with easing gear yes

002674 002681-0101

IS A DONKEY BOILER FITTED? *No*

If so, is a report now forwarded? *✓*

SPARE GEAR. State the articles supplied:— *Two top end, two bottom end & two main bearing bolts & nuts a set of coupling bolts, a set of feed & bilge pump valves a quantity of assorted bolts nuts & iron.*

The foregoing is a correct description,

FOR THE NORTH EASTERN MARINE ENGINEERING CO. LD.

Manufacturer.

Dates of Survey while building { During progress of work in shops -- *Mar 20. Apr 29. May 2. 7. 8. 10. 13. 14. 15. 16. 17. 21. 22. 23. 24. 27. 28. 30. 31. Jun 7. 13. 18. 19. 20. 21. July 1. 3. 8. 10. 15. 16.*
During erection on board vessel -- *7. 19. 22. 23. 24. Aug 1. 6. 8. 12. 15. 21. 22. 26. 28. 30. Sept 2. 3. 5. 6. 9. 10. 12. 13. 16. 19. 20. 22. Oct 1. 2. 9. 23. Nov 5. 6. 8.*
Total No. of visits *67*

Is the approved plan of main boiler forwarded herewith *yes*

" " " donkey " " " *✓*

Dates of Examination of principal parts—Cylinders *21. 8. 18* Slides *23. 9. 18* Covers *6. 8. 18* Pistons *6. 8. 18* Rods *1. 8. 18*
Connecting rods *22. 4. 18* Crank shaft *24. 7. 18* Thrust shaft *21. 6. 18* Tunnel shafts *20. 6. 18* Screw shaft *21. 8. 18* Propeller *13. 9. 18*
Stern tube *12. 8. 18* Steam pipes tested *6. 11. 18* Engine and boiler seatings *5. 11. 18* Engines holding down bolts *6. 11. 18*
Completion of pumping arrangements *7. 11. 18* Boilers fixed *6. 11. 18* Engines tried under steam *7. 11. 18*
Main boiler safety valves adjusted *7. 11. 18* Thickness of adjusting washers PB. $P\frac{1}{2}S\frac{3}{8}$, CB. $P\frac{7}{16}S\frac{1}{2}$, SB. $P\frac{7}{16}S\frac{1}{2}$
Material of Crank shaft *Steel* Identification Mark on Do. *L. X. 7-18* Material of Thrust shaft *Steel* Identification Mark on Do. *L. X. 6-18*
Material of Tunnel shafts *Steel* Identification Marks on Do. *L. X. 6-18* Material of Screw shafts *Steel* Identification Marks on Do. *L. X. 8-18*
Material of Steam Pipes *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 *yes* If so, state name of vessel *S. S. Wal Castle*

General Remarks (State quality of workmanship, opinions as to class, &c. *The engines & boiler of this vessel have been constructed under special survey & the materials & workmanship are found to be good. The engines have been tried under steam & the boiler safety valves adjusted at the working pressure.*

The machinery is now in good & safe working condition & eligible in my opinion to have the notation of + LMC 11-18

A report on the electric installation will be forwarded when received from the Electricians.

The vessel is fitted for carrying oil fuel in the double bottom FP above 150°F. in accordance with the requirements for standard vessels.

It is submitted that
this vessel is eligible for
THE RECORD + LMC 11-18 F.D.

The amount of Entry Fee ... £ : :
Special ... £ 126 : 6 :
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : :
When applied for, 12 NOV 1918
When received, 18.12.18

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

Committee's Minute

Assigned

TUE NOV 26 1918

+ LMC 11.18

F. D.



© 2020

Lloyd's Register
Foundation