

REPORT ON MACHINERY.

Received at London Office

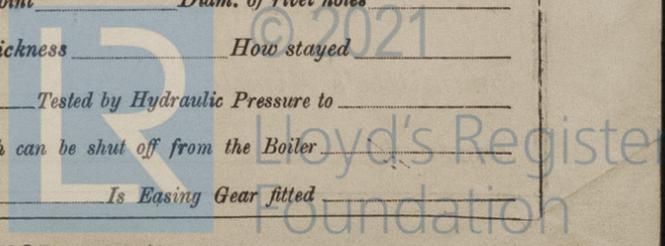
THU. 19 DEC. 1918

Date of writing Report 5.12.18 When handed in at Local Office 18/12/18 Port of MIDDLESBRO'
 No. in Survey held at Middlesbrough Date, First Survey 29th Oct. 17 Last Survey 26th Nov. 1918
 Reg. Book. on the Steel screw steamer "War Palace" (Number of Visits 65)
 Master Built at Middlesbrough By whom built Sir R. Dixon & Co Tons { Gross 3112.45
 Engines made at Middlesbrough By whom made Richardsons Westgarth & Co Ltd when made 1918
 Boilers made at do By whom made do when made 1918
 Registered Horse Power 433 Owners Shipping Controller Port belonging to London
 Nom. Horse Power as per Section 28 434 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Triple expansion vertical No. of Cylinders 3 No. of Cranks 3
 Dia. of Cylinders 26.41 x 68 Length of Stroke 45 Revs. per minute 98 Dia. of Screw shaft as per rule 13.57 Material of S. 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
 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 Yes Length of stern bush 5'-0"
 Dia. of Tunnel shaft as per rule 12.42 Dia. of Crank shaft journals as per rule 13.04 Dia. of Crank pin 13 1/4" Size of Crank webs 1 1/2 x 1 1/2" Dia. of thrust shaft under
 collars 13 1/4" Dia. of screw 16'-0" Pitch of Screw 16'-3" No. of Blades 4 State whether moccable No Total surface 150 sq
 No. of Feed pumps 2 Diameter of ditto 3 1/2" Stroke 24" Can one be overhauled while the other is at work Yes
 No. of Bilge pumps 2 Diameter of ditto 3 1/2" Stroke 24" Can one be overhauled while the other is at work Yes
 No. of Donkey Engines 3 Sizes of Pumps 2 @ 9 1/2" x 7" x 18" No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room 4 @ 3" In Holds, &c. Forward 6 @ 3" aft 2 @ 3" 2 @ 2 1/2"
General well 1 @ 2 1/2"
 No. of Bilge Injections 1 sizes 11" Connected to condenser or to circulating pump Yes Is a separate Donkey Suction fitted in Engine room & size 4 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 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 Main below
 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 Suctions to forward holds How are they protected Wood ceiling
 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
 Is the Screw Shaft Tunnel watertight See hull Report Is it fitted with a watertight door No worked from Trunk at each end

BOILERS, &c.—(Letter for record S) Manufacturers of Steel Leeds Forge Co. & John Spencer Sons
 Total Heating Surface of Boilers 6420 sq Is Forced Draft fitted Yes No. and Description of Boilers 3 Single ended
 Working Pressure 180 Tested by hydraulic pressure to 360 Date of test 30.8.18 No. of Certificate 5923
 Can each boiler be worked separately Yes Area of fire grate in each boiler 51.7 sq No. and Description of Safety Valves to
 each boiler 2 direct spring Area of each valve 8.29 Pressure to which they are adjusted 185 Are they fitted with easing gear Yes
 Smallest distance between boilers on uptakes and bunkers on woodwork 5'-8 1/2" Mean dia. of boilers 14'-0" Length 11'-8 1/2" Material of shell plates Steel
 Thickness 1 1/8" Range of tensile strength 28/32 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams 2 air lap
 long. seams 2 air lap Diameter of rivet holes in long. seams 1 3/16" Pitch of rivets 8 1/2" Lap of plates or width of butt straps 18"
 Per centages of strength of longitudinal joint rivets 86.3 Working pressure of shell by rules 182 Size of manhole in shell None
 plate 86.0
 Size of compensating ring No. and Description of Furnaces in each boiler 3 Dighton's Material Steel Outside diameter 43"
 Length of plain part top Thickness of plates crown 7 1/2" Description of longitudinal joint Weld No. of strengthening rings
 bottom bottom
 Working pressure of furnace by the rules 190 Combustion chamber plates: Material Steel Thickness: Sides 1 1/6" Back 3/4" Top 1 1/6" Bottom 1 1/6"
 Pitch of stays to ditto: Sides 7/8 x 9" Back 10/8 x 9" Top 9/8 x 9" If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 193
 Material of stays Steel Area at smallest part 2.03 Area supported by each stay 84.3 Working pressure by rules 217 End plates in steam space:
 Material Steel Thickness 1 1/32" Pitch of stays 2 3/4 x 19 1/2" How are stays secured Nuts & Washers Working pressure by rules 182 Material of stays Steel
 Area at smallest part 8.24 Area supported by each stay 463 Working pressure by rules 185 Material of Front plates at bottom Steel
 Thickness 7/32" Material of Lower back plate Steel Thickness 2 1/32" Greatest pitch of stays 1 3/2 x 9" Working pressure of plate by rules 184
 Diameter of tubes 2 3/4" Pitch of tubes 4 x 4" Material of tube plates Steel Thickness: Front 3/32" Back 3/4" Mean pitch of stays 10"
 Pitch across wide water spaces 13 1/2" Working pressures by rules 185 Girders to Chamber tops: Material Steel Depth and
 thickness of girder at centre 10 1/2" : 1 1/2" Length as per rule 35 1/2" Distance apart 9 3/8" Number and pitch of stays in each 3 @ 9"
 Working pressure by rules 200 Steam dome: description of joint to shell None % of strength of joint
 Diameter Thickness of shell plates Material Description of longitudinal joint Diam. of rivet holes
 Pitch of rivets Working pressure of shell by rules Crown plates Thickness How stayed

SUPERHEATER. Type None Date of Approval of Plan Tested by Hydraulic Pressure to
 Date of Test Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler
 Diameter of Safety Valve Pressure to which each is adjusted Is Easing Gear fitted



R.L.

IS A DONKEY BOILER FITTED? *No.*

If so, is a report now forwarded? *No.*

SPARE GEAR. State the articles supplied:— *Two each of main bearing, connecting rod top & bottom end bolts & nuts. One set of coupling bolts & nuts. One set each of feed & bilge pump valves. C.I propeller. Assorted bolts & nuts, and iron of various sizes. Also minor gear as per mixed list attached to specification.*

The foregoing is a correct description,

of and on behalf of RICHARDSON, WESTGARTH & Co.

E. Hall-Brown.

Manufacturer.

Dates of Survey while building: During progress of work in shops - *1917. Oct 27. Nov 16. 27. 30. Dec 3. 5. 21. 1918. Jan 21. 25. 30. 31. Feb 4. 12. Mar 13. 25. Apr 4. 10. 12. 23. May 1. 2. 24. 29. June 15. 20. 27. 27. July 2. 3. 8. 15. 19. 22. 24. 25. 26. 29. 31. Aug 2. 6. 7. 12. 13. 14. 16. 27. 28. 30. Sep 2. 6. 16. 19. 20. 25. Oct 1. 2. 4. 7. 11. 17. 30. Nov 7. 20. 26. 28.*
During erection on board vessel - - -
Total No. of visits *65.*

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

" " " donkey " " " "

Dates of Examination of principal parts—Cylinders *2.5.18* Slides *2.7.18* Covers *2.7.18* Pistons *24.6.18* Rods *24.6.18*
Connecting rods *24.6.18* Crank shaft *30.4.18* Thrust shaft *6.9.18* Tunnel shafts *6.9.18* Screw shaft *27.8.18* Propeller *3.7.18*
Stern tube *16.9.18* Steam pipes tested *27.8.14* Engine and boiler seatings *28.8.18* Engines holding down bolts *4.10.18*
Completion of pumping arrangements *28.11.18* Boilers fixed *25.9.18* Engines tried under steam *7.10.18*
Completion of fitting sea connections *28.8.18* Stern tube *16.9.18* Screw shaft and propeller *19.9.18*
Main boiler safety valves adjusted *7.10.18* Thickness of adjusting washers *SP 1/4 S 3/8, CP 1/4 S 3/8, PP 1/2 S 1/2*
Material of Crank shaft *steel* Identification Mark on Do. *BC No 14/4 30/4/18* Material of Thrust shaft *steel* Identification Mark on Do. *7151-6/9/18*
Material of Tunnel shafts *steel* Identification Marks on Do. *7151-6/9/18* Material of Screw shafts *steel* Identification Marks on Do. *6033A-21.8.*
Material of Steam Pipes *lap welded* 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. *No.*

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 *Standard E.*

General Remarks (State quality of workmanship, opinions as to class, &c. *The machinery of this vessel has been built under special Survey in accordance with the Rules and the amended specification. The materials and workmanship are good. On completion the engines, boiler, and auxiliary machinery were examined under working conditions and found satisfactory.*

The machinery of this vessel is in a good and efficient condition and eligible in my opinion for notation of + LMC 10.18 in the Regular Book

It is submitted that this vessel is eligible for THE RECORD. + LMC 11.18. F.D.

J.M. W.D. 20/12/18
Thomas Miller
Engineer Surveyor to Lloyd's Register of Shipping.

The amount of Entry Fee ... £ : :
Special ... £ *69:3* } When applied for, *3/12/18*
Donkey Boiler Fee ... £ : : }
Travelling Expenses (if any) £ : : } When received, *11/2/18*

Committee's Minute *F.R. DEC. 20, 1918*
Assigned *+ LMC 11/18*



MIDDLEBRO

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