

REPORT ON MACHINERY.

No. 10265.

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 Net 1861.98 When built 1918

Engines made at Middlesbrough By whom made Richardson, 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 78 Dia. of Screw shaft as per rule 13.57 as fitted 14.12 Material of L. 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 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 If two liners are fitted, is the shaft lapped or protected between the liners Length of stern bush 5'-0"

Dia. of Tunnel shaft as per rule 12.42 as fitted 12.1/2 Dia. of Crank shaft journals as per rule 13.04 as fitted 13.1/4 Dia. of Crank pin 13.1/4 Size of Crank webs 13.1/2 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 movable No Total surface 1500

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"

Is the Screw Shaft Tunnel watertight See hull Report Is it fitted with a watertight door No worked from trunk at each end

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 x 3"

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 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

BOILERS, &c.—(Letter for record S) Manufacturers of Steel Leeds Forge Co. & John Spencer & Sons

Total Heating Surface of Boilers 6420 sq ft 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 ft 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 20 in lap long. seams 2 1/2 in pitch 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 plate 86.0 Working pressure of shell by rules 182 Size of manhole in shell None

Size of compensating ring No. and Description of Furnaces in each boiler 3 Daigtons Material steel Outside diameter 43"

Length of plain part top bottom Thickness of plates crown bottom 1 1/2" Description of longitudinal joint Weld No. of strengthening rings

Working pressure of furnace by the rules 190 Combustion chamber plates: Material steel Thickness: Sides 1 1/16" Back 3/4" Top 1 1/16" Bottom 1 1/16"

Pitch of stays to ditto: Sides 7/8 x 9" Back 10/8 x 9 1/2" Top 7/8 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 3/32" Material of Lower back plate steel Thickness 2 1/32" Greatest pitch of stays 3 1/2 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

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.

Manufacturer.

E. Hall-Brown.

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. 22. May 1. 2. 24. 29. June 15. 20. 27. 29. 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 *24.8.18* 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 *S P 1/4 S 3/8 C P 1/4 S 3/8 P P 1/2 S 3/4*
Material of Crank shaft *steel* Identification Mark on Do. *BC N 14/4 30/4/18* Material of Thrust shaft *steel* Identification Mark on Do. *7/51-6/9/18*
Material of Tunnel shafts *steel* Identification Marks on Do. *7/51-6/9/18* 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 Register Book.

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

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

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

Committee's Minute

Assigned

FRI DEC 20 1918

+ LMC 11.18

J. D.



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Foundation