

REPORT ON MACHINERY.

No. 11600
SAT. 9 JUN. 1923

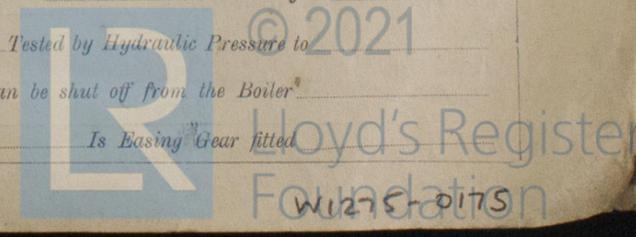
Received at London Office

Date of writing Report 19 When handed in at Local Office 29.5.23 19 Port of Glasgow
 No. in Survey held at Glasgow and Huddersburgh Date, First Survey 23.4. April Last Survey 28.5. May 1923
 Reg. Book. on the Steel Screw Steamer ATHERTON (Number of Visits 10) (S.S. No 41)
 Master Built at Hawerton Hill By whom built Jurmain S. P. Co Ltd Tons {Gross / Net} When built
 Engines made at Glasgow By whom made Messrs Ross & Duncan No. 1091 when made 1923
 Boilers made at do By whom made do No. 1645-6 when made 1923
 Registered Horse Power Owners Port belonging to
 Nom. Horse Power as per Section 28 156 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted no

ENGINES, &c.—Description of Engines Triple Expansion (See Gls Rpt No 42693) No. of Cylinders 3 No. of Cranks 3
 Dia. of Cylinders 17"-27½"-45" Length of Stroke 33" Revs. per minute Dia. of Screw shaft 9.84" as per rule 9.84" as fitted 10.7/16" Material of screw shaft 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 yes If two liners are fitted, is the shaft lapped or protected between the liners ✓ Length of stern bush 40½"
 Dia. of Tunnel shaft as per rule 8.62" as fitted 8¾" Dia. of Crank shaft journals as per rule 9.05" as fitted 9½" Dia. of Crank pin 9½" Size of Crank webs 17½" x 6" Dia. of thrust shaft under collars 9½" Dia. of screw 12'-3" Pitch of Screw 12'-6" No. of Blades 4 State whether moceable no Total surface 50 f²
 No. of Feed pumps 2 Diameter of ditto 2¾" Stroke 16½" Can one be overhauled while the other is at work yes
 No. of Bilge pumps 2 Diameter of ditto 3" Stroke 16½" Can one be overhauled while the other is at work yes
 No. of Donkey Engines 2 Sizes of Pumps 6x8x8 Ballast 7x4½x6 No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room 3 @ 2½" In Holds, &c. 2 @ 3" in fore hold, 3 @ 3" in aft hold
 Tunnel well one @ 2½"
 No. of Bilge Injections 1 sizes 4" Connected to condenser or to circulating pump yes Is a separate Donkey Suction fitted in Engine room & size yes 3½"
 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
 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 above
 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 fore holds How are they protected Wood culling
 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 Rpt Is it fitted with a watertight door yes worked from Top platform.

BOILERS, &c.—(Letter for record (S)) Manufacturers of Steel Messrs Colville & Sons Ltd
See Glasgow Report No 42693
 Total Heating Surface of Boilers 2806 f² Is Forced Draft fitted no No. and Description of Boilers Two single ended
 Working Pressure 180 Tested by hydraulic pressure to 320 lb Date of test 23-4-23 No. of Certificate 16237-9
 Can each boiler be worked separately yes Area of fire grate in each boiler 39.5' No. and Description of Safety Valves to each boiler 2 Direct Spring Area of each valve 4.9 f² Pressure to which they are adjusted 184 lb Are they fitted with easing gear yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 1'-6" Mean dia. of boilers 12'-0" Length 10'-6" Material of shell plates Steel
 Thickness 1" Range of tensile strength 28-32 Are the shell plates welded or flanged no Descrip. of riveting: cir. seams S.R. long. seams T.R.D.B.S. Diameter of rivet holes in long. seams 1½" Pitch of rivets 7" Lap of plates or width of butt straps 1-5¼"
 Per centages of strength of longitudinal joint rivets 84.5% plate 83.9% Working pressure of shell by rules 180 Size of manhole in shell 16" x 12"
 Size of compensating ring 30½" x 26½" No. and Description of Furnaces in each boiler 2 Union Material steel Outside diameter 3'-7½"
 Length of plain part top ✓ bottom ✓ Thickness of plates crown 9/16" bottom 7/16" Description of longitudinal joint Weld No. of strengthening rings ✓
 Working pressure of furnace by the rules 204 Combustion chamber plates: Material steel Thickness: Sides ¼" Back 5/8" Top ¼" Bottom ¼"
 Pitch of stays to ditto: Sides 9½" x 9" Back 8½" x 8½" Top 9½" x 9" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 187
 Material of stays Steel Area at smallest part 2.07 f² Area supported by each stay 85.5' Working pressure by rules 195 End plates in steam space: Material Steel Thickness 1½" Pitch of stays 17" x 16" How are stays secured S. nuts Working pressure by rules 185 Material of stays steel
 Area at smallest part 5.18 f² Area supported by each stay 272 Working pressure by rules 198 Material of Front plates at bottom steel
 Thickness 27/32 Material of Lower back plate Steel Thickness 27/32 Greatest pitch of stays 14" x 8½" Working pressure of plate by rules 183
 Diameter of tubes 3½" Pitch of tubes 4½" x 4½" Material of tube plates steel Thickness: Front 27/32" Back 3/4" Mean pitch of stays 10"
 Pitch across wide water spaces 14" Working pressures by rules 342 Girders to Chamber tops: Material steel Depth and thickness of girder at centre 7¾" x 1¼" Length as per rule 30½" Distance apart 9" Number and pitch of stays in each 2 @ 9½"
 Working pressure by rules 194 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 _____ 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?

SPARE GEAR. State the articles supplied:— *Two each of con. rod 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; Assorted bolts and nuts; iron of various sizes; one cast iron propeller and minor gear*

The foregoing is a correct description



Manufacturer.

Dates of Survey while building

1923 Apr 23 May 2 4 10 15 17 19 23 25 28

Is the approved plan of main boiler forwarded herewith *no*

Is the approved plan of main boiler forwarded herewith *no*

Is the approved plan of main boiler forwarded herewith *no*

Is the approved plan of main boiler forwarded herewith *no*

Dates of Examination of principal parts—Cylinders *6.2.23* Slides *6.2.23* Covers *27.3.23* Pistons *11-20* Rods *6.2.23*

Connecting rods *25.11.20* Crank shaft *21.1.21* Thrust shaft *12.4.23* Tunnel shafts *12.4.23* Screw shaft *25.4.23* Propeller *25.4.23*

Stern tube *25.4.23* Steam pipes tested *17.5.23* Engine and boiler seatings *3.5.23* Engines holding down bolts *28-5-23*

Completion of pumping arrangements *25.5.23* Boilers fixed *25.5.23* Engines tried under steam *25.5.23*

Completion of fitting sea connections *23.4.23* Stern tube *3.5.23* Screw shaft and propeller *10-5-23*

Main boiler safety valves adjusted *25.5.23* Thickness of adjusting washers *Port 13/8 P-2/4; Star Boiler 5-2/4*

Material of Crank shaft *Steel* Identification Mark on Do. *1091 JES* Material of Thrust shaft *steel* Identification Mark on Do. *1091 JSC*

Material of Tunnel shafts *Steel* Identification Marks on Do. *1091 JSC* Material of Screw shafts *steel* Identification Marks on Do. *1091 JSC*

Material of Steam Pipes *Solid drawn copper (4" x 4.7)* Test pressure *360 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. Rawlinson Hull Rpt N° 11569*

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

The machinery of this vessel has been built under Special Survey—See Glasgow Report No. 42693, and has now been satisfactorily fitted on board in accordance with the Rules, examined under steam and all found in good condition

The machinery is now in a good and safe working condition and renders the vessel eligible in our opinion to have the notation of \times LMC-5.23 in the Register Book

It is submitted that this vessel is eligible for THE RECORD. + LMC 5.23. CL.

Handwritten signature and date 11/6/23

W. Morrison & Co. Engineers Surveyors to Lloyd's Register of Shipping.

The amount of Entry Fee ... £ Special *1/5* ... £ *7-16-0* Donkey Boiler Fee ... £ Travelling Expenses (if any) £

Committee's Minute *FRI. 15 JUN. 1923*

Assigned *+ LMC 5.23 C.L.*

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

CERTIFICATE WRITTEN

