

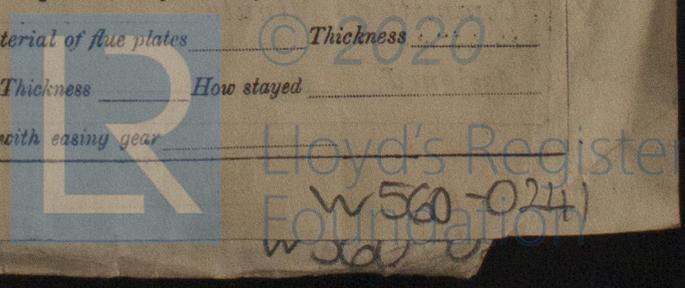
# REPORT ON MACHINERY.

Received at London Office

Date of writing Report 15 MAY 1918 When handed in at Local Office 15 MAY 1918 Port of South Shields  
 No. in Survey held at South Shields - Bill May Date, First Survey 5<sup>th</sup> July 17 Last Survey 23<sup>rd</sup> April 1918  
 Reg. Book. on the Steel screw steamer "Squadron" (Number of Visits 20) Tons { Gross 362 Net 143  
 Master Bill May Built at Bill May By whom built Morris' Slipway 64 Tons When built 1918. 4  
 Engines made at South Shields By whom made GT Grey & Co Ltd (564) when made 1918. 4  
 Boilers made at Hebburn By whom made Palmer's Coy Ltd (830) when made 1918. 4  
 Registered Horse Power \_\_\_\_\_ Owners (William Mason & Co.) Port belonging to Liverpool  
 Nom. Horse Power as per Section 28 64 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted no

ENGINES, &c.—Description of Engines Compound Inverted No. of Cylinders 2 No. of Cranks 2  
 Dia. of Cylinders 17- 34 Length of Stroke 24 Revs. per minute 100 Dia. of Screw shaft 7.5 as per rule 7.6 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 ✓  
 If two liners are fitted, is the shaft lapped or protected between the liners ✓ Length of stern bush 2'- 8"  
 Dia. of Tunnel shaft 7.5 as per rule 7.6 machinery aft— Dia. of Crank shaft journals 7.35 as per rule 7.4 Dia. of Crank pin 7.5 Size of Crank webs 11x5 Built Dia. of thrust shaft under collars 7.5 Dia. of screw 8.9 Pitch of Screw 11- 3 No. of Blades 4 State whether moveable no Total surface 32 sq ft  
 No. of Feed pumps 2 Diameter of ditto 2 1/4 Stroke 13 Can one be overhauled while the other is at work yes  
 No. of Bilge pumps 2 Diameter of ditto 2 3/8 Stroke 13 Can one be overhauled while the other is at work yes  
 No. of Donkey Engines One Sizes of Pumps Duplex 5 1/4 x 3 1/2 x 5 No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room 2 of 2" dia In Holds, &c. 3 of 2" dia  
 No. of Bilge Injections 1 sizes 2 3/4 Connected to condenser, or to circulating pump cp Is a separate Donkey Suction fitted in Engine room & size 1/2" 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 ✓  
 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 Hold Suctions How are they protected Cased in wood.  
 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 29. Nov 17 of Stern Tube 25. Nov 17 Screw shaft and Propeller 25. Nov 17  
 Is the Screw Shaft Tunnel watertight ✓ Is it fitted with a watertight door ✓ worked from ✓

OILERS, &c.—(Letter for record \_\_\_\_\_) Manufacturers of Steel J. Spence & Sons Ltd  
 Total Heating Surface of Boilers 1180 sq ft Is Forced Draft fitted no No. and Description of Boilers one cyl. multitubular  
 Working Pressure 130 lbs Tested by hydraulic pressure to 260 lbs Date of test 5.2.17 No. of Certificate 8930  
 Can each boiler be worked separately ✓ Area of fire grate in each boiler 35 sq ft No. and Description of Safety Valves to each boiler two direct Spring Area of each valve 4.9 sq in Pressure to which they are adjusted 135 lbs Are they fitted with easing gear yes  
 Smallest distance between boilers or uptakes and bunkers or woodwork 7'-0" Mean dia. of boilers 12'-0" Length 10'-0" Material of shell plates Steel  
 Thickness \_\_\_\_\_ Range of tensile strength \_\_\_\_\_ Are the shell plates welded or flanged \_\_\_\_\_ Descrip. of riveting: cir. seams \_\_\_\_\_ long. seams \_\_\_\_\_  
 Diameter of rivet holes in long. seams \_\_\_\_\_ Pitch of rivets \_\_\_\_\_ Lap of plates or width of butt straps \_\_\_\_\_  
 Per centages of strength of longitudinal joint \_\_\_\_\_ Working pressure of shell by rules \_\_\_\_\_ Size of manhole in shell \_\_\_\_\_  
 Size of compensating ring \_\_\_\_\_ No. and Description of Furnaces in each boiler \_\_\_\_\_ Material \_\_\_\_\_ Outside diameter \_\_\_\_\_  
 Length of plain part \_\_\_\_\_ Thickness of plates \_\_\_\_\_ Description of longitudinal joint \_\_\_\_\_ No. of strengthening rings \_\_\_\_\_  
 Working pressure of furnace by the rules \_\_\_\_\_ Combustion chamber plates: Material \_\_\_\_\_ Thickness: Sides \_\_\_\_\_ Back \_\_\_\_\_ Top \_\_\_\_\_ Bottom \_\_\_\_\_  
 Pitch of stays to ditto: Sides \_\_\_\_\_ Back \_\_\_\_\_ Top \_\_\_\_\_ If stays are fitted with nuts or riveted heads \_\_\_\_\_ Working pressure by rules \_\_\_\_\_  
 Material of stays \_\_\_\_\_ Diameter at smallest part \_\_\_\_\_ Area supported by each stay \_\_\_\_\_ Working pressure by rules \_\_\_\_\_ End plates in steam space: \_\_\_\_\_  
 Material \_\_\_\_\_ Thickness \_\_\_\_\_ Pitch of stays \_\_\_\_\_ How are stays secured \_\_\_\_\_ Working pressure by rules \_\_\_\_\_ Material of stays \_\_\_\_\_  
 Diameter at smallest part \_\_\_\_\_ Area supported by each stay \_\_\_\_\_ Working pressure by rules \_\_\_\_\_ Material of Front plates at bottom \_\_\_\_\_  
 Thickness \_\_\_\_\_ Material of Lower back plate \_\_\_\_\_ Thickness \_\_\_\_\_ Greatest pitch of stays \_\_\_\_\_ Working pressure of plate by rules \_\_\_\_\_  
 Diameter of tubes \_\_\_\_\_ Pitch of tubes \_\_\_\_\_ Material of tube plates \_\_\_\_\_ Thickness: Front \_\_\_\_\_ Back \_\_\_\_\_ Mean pitch of stays \_\_\_\_\_  
 Pitch across wide water spaces \_\_\_\_\_ Working pressures by rules \_\_\_\_\_ Girders to Chamber tops: Material \_\_\_\_\_ Depth and thickness of girder at centre \_\_\_\_\_ Length as per rule \_\_\_\_\_ Distance apart \_\_\_\_\_ Number and pitch of stays in each \_\_\_\_\_  
 Working pressure by rules \_\_\_\_\_ Superheater or Steam chest; how connected to boiler \_\_\_\_\_ Can the superheater be shut off and the boiler worked separately \_\_\_\_\_  
 Diameter \_\_\_\_\_ Length \_\_\_\_\_ Thickness of shell plates \_\_\_\_\_ Material \_\_\_\_\_ Description of longitudinal joint \_\_\_\_\_ Diam. of rivet holes \_\_\_\_\_ Pitch of rivets \_\_\_\_\_ Working pressure of shell by rules \_\_\_\_\_ Diameter of flue \_\_\_\_\_ Material of flue plates \_\_\_\_\_ Thickness \_\_\_\_\_  
 If stiffened with rings \_\_\_\_\_ Distance between rings \_\_\_\_\_ Working pressure by rules \_\_\_\_\_ End plates: Thickness \_\_\_\_\_ How stayed \_\_\_\_\_  
 Working pressure of end plates \_\_\_\_\_ Area of safety valves to superheater \_\_\_\_\_ Are they fitted with easing gear \_\_\_\_\_



IS A DONKEY BOILER FITTED? *no*

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied: - *Two top end Bolts and nuts, two Bottom end Bolts and nuts, two main Bearing bolts and nuts, Spare Coupling Bolts and nuts, Spare feed & Bilge pump Valves, one set of junk Ring bolts, an circulating pump Valves, Spare propeller, Spare fire Bars, assorted, Iron Bolts & nuts - Various stores -*

The foregoing is a correct description,  
GEO: T. GREY & Co., LTD.

*G. T. Grey* Director, Manufacturer.

1917  
Dates of Survey while building { During progress of work in shops -- } *Dec 5. 8. Mar. 27. Jan 14. 19. Jul. 19. 30. Aug. 23. Sep. 10. 21. Oct. 1. 16. Nov. 19. 29. 30.*  
{ During erection on board vessel --- } *Dec 13. 18 Jan. 31. Apr. 20. 23.*  
Total No. of visits *20* Is the approved plan of main boiler forwarded herewith *yes*

Dates of Examination of principal parts - Cylinders *21. 9. 17* Slides *21. 9. 17* Covers *1 Oct 17* Pistons *21. 9. 17* Rods *21. 9. 17*  
Connecting rods *21. 9. 17* Crank shaft *1 Oct 17* Thrust shaft *1 Oct 17* Tunnel shafts *✓* Screw shaft *19. 11. 17* Propeller *13. 12. 17*  
Stern tube *19. Nov 17* Steam pipes tested *18. Dec 17* Engine and boiler seatings *13. 12. 17* Engines holding down bolts *23. 4. 18*  
Completion of pumping arrangements *23. 4. 18* Boilers fixed *23. 4. 18* Engines tried under steam *23. 4. 18*  
Main boiler safety valves adjusted *23. 4. 18* Thickness of adjusting washers *P 1/2. S 3/8*  
Material of Crank shaft *Steel* Identification Mark on Do. *LLOYDS GAH 4442* Material of Thrust shaft *Iron* Identification Mark on Do. *LLOYDS 2313 N*  
Material of Tunnel shafts *✓* Identification Marks on Do. Material of Screw shafts *Iron* Identification Marks on Do. *LCS WC 4442 GAH*  
Material of Steam Pipes *Copper S.D.* Test pressure *260lb at 97 Grey scold.*  
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 *to follow. Engine nos 572, 592, 594.*

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

*The machinery built under Special Survey the material and workmanship found good and efficient. The machinery & Boiler fitted up on board, machinery tested under steam (Vessel at Murrumbidgee) and found satisfactory. In my opinion this vessel is now eligible for the notification of L.M.C. 4. 18 to be made in the Register Book.*

It is submitted that this vessel is eligible for THE RECORD + L.M.C. 4. 18.

*AWD* 17/5/18 *GRJ*

The amount of Entry Fee ... £ *10* : : :  
Special *✓* ... £ *5* : 13 : :  
Donkey Boiler Fee ... £ : : :  
Travelling Expenses (if any) £ : : :  
When applied for, *4 - MAY 1918*  
When received, *4 - MAY 1918*

*Leonard Shallcross*  
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute *FRI. 17. MAY. 1918*

Assigned *+ L.M.C. 4. 18*

NEWCASTLE-ON-TYNE

Certificate (if required) to be sent to the Registrar or below the space for Committee's Minute.

MACHINERY CERTIFICATE  
1917-18



© 2020

Lloyd's Register Foundation