

Received at London Office MON. 21 MAY. 1917

Date of writing Report 11-5-1917 When handed in at Local Office 16-5-1917 Port of Sunderland  
 No. in Survey held at Sunderland Date, First Survey 6 Mar. '16 Last Survey 11-5-1917  
 Reg. Book. Suppl 62 on the new steel S/S "SUFFOLK COAST." (Number of Visits)  
 Master \_\_\_\_\_ Built at Middlesbrough By whom built W. Harkness & Son Ltd (S/P N° 212) Tons { Gross 864  
 { Net 415  
 Engines made at Sunderland By whom made MacCall & Pollock Ltd (N° 274) when made 1914  
 Boilers made at Sunderland By whom made MacCall & Pollock Ltd (N° 274) when made 1914  
 Registered Horse Power \_\_\_\_\_ Owners Powell Bacon & Hough Limited Port belonging to Liverpool  
 Nom. Horse Power as per Section 28 125 ✓ 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 *16.27.44* Length of Stroke *30* Revs. per minute *75* Dia. of Screw shaft as per rule *9.05* Material of (S.M.) Steel  
 as fitted *9 1/4"* screw shaft)  
 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 *37"*  
 Dia. of Tunnel shaft as per rule *8.096"* Dia. of Crank shaft journals as per rule *8.5"* Dia. of Crank pin *8 3/4"* Size of Crank webs *59 7/8 x 12 1/2* Dia. of thrust shaft under  
 collars *8 3/4"* Dia. of screw *11.0"* Pitch of Screw *13.6"* No. of Blades *4* State whether moveable *no* Total surface *62 1/2*  
 No. of Feed pumps *2* Diameter of ditto *2 1/2"* Stroke *16"* Can one be overhauled while the other is at work *yes*  
 No. of Bilge pumps *2* Diameter of ditto *2 1/2"* Stroke *16"* Can one be overhauled while the other is at work *yes*  
 No. of Donkey Engines *2* Sizes of Pumps *6 7/8 x 7. 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 @ 2 1/4 & 1 @ 2"* In Holds, &c. *2 @ 2"*

No. of Bilge Injections 1 sizes A Connected to condenser, or to circulating pump C.P. Is a separate Donkey Suction fitted in Engine room & size Yes 2 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 valves  
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 Forward hold suction How are they protected under 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 19.3.17 of Stern Tube 20-4-17 Screw shaft and Propeller 20-4-17  
Is the Screw Shaft Tunnel watertight none Is it fitted with a watertight door Machinery worked from

**BOILERS, &c.**—(Letter for record 5) **Manufacturers of Steel** John Spencer & Sons Limited

**Total Heating Surface of Boilers** 2060 ft<sup>2</sup> **Is Forced Draft fitted** no **No. and Description of Boilers** one single ended marine

**Working Pressure** 180 **Tested by hydraulic pressure to** 360 **Date of test** 14-4-17 **No. of Certificate** 3396

**Can each boiler be worked separately** yes **Area of fire grate in each boiler** 59 ft<sup>2</sup> **No. and Description of Safety Valves to each boiler** two direct spring

**Area of each valve** 5.940" **Pressure to which they are adjusted** 185 **Are they fitted with easing gear** yes

**Smallest distance between boilers or uptakes and bunkers or woodwork** 4'-3" **Mean dia. of boilers** 15'-6" **Length** 10'-6" **Material of shell plates** steel

**Thickness** 1 3/16 **Range of tensile strength** 29 1/2 - 33 **Are the shell plates welded or flanged** no **Descrip. of riveting: cir. seams** N.R.

**long. seams** DB STR **Diameter of rivet holes in long. seams** 1 1/4" **Pitch of rivets** 8 3/4" **Lap of plates or width of butt straps** 1'-6 1/2"

**Per centages of strength of longitudinal joint** 88 **Working pressure of shell by rules** 184 **Size of manhole in shell** 16" x 12"

**Size of compensating ring** 27" x 29" x 1 3/16" **No. and Description of Furnaces in each boiler** 3 plain **Material** steel **Outside diameter** 3'-8 1/2"

**Length of plain part** 75" **Thickness of plates** 1 1/16" **Description of longitudinal joint** welded **No. of strengthening rings** 1

**Working pressure of furnace by the rules** 182 **Combustion chamber plates: Material** steel **Thickness: Sides** 1 1/16" **Back** 1 1/16" **Top** 1 1/16" **Bottom** 1 1/16"

**Pitch of stays to ditto: Sides** 9 1/2" x 9 1/4" **Back** 10" x 8 1/2" **Top** 8 3/4" x 10 1/8" **If stays are fitted with nuts or riveted heads** nuts in case **Working pressure by rules** 182

**Material of stays** steel **Diameter at smallest part** 2.030" **Area supported by each stay** 88.60" **Working pressure by rules** 206 **End plates in steam space:**

**Material** steel **Thickness** 1 5/16" **Pitch of stays** 24 1/4" x 16" **How are stays secured** N.N. **Working pressure by rules** 182 **Material of stays** steel

**Diameter at smallest part** 7.24" **Area supported by each stay** 388.0" **Working pressure by rules** 194 **Material of Front plates at bottom** steel

**Thickness** 2 1/2" **Material of Lower back plate** steel **Thickness** 1 3/16" **Greatest pitch of stays** 13 1/4" x 8 1/2" **Working pressure of plate by rules** 184

**Diameter of tubes** 3 1/4" **Pitch of tubes** 3 9/8" x 3 3/4" **Material of tube plates** steel **Thickness: Front** 2 1/2" **Back** 2 1/2" **Mean pitch of stays** 11 3/4"

**Pitch across wide water spaces** 14 1/2" x 10" **Working pressures by rules** 216 **Girders to Chamber tops: Material** steel **Depth and thickness of girder at centre** 20 8 1/8" x 1 5/16"

**Length as per rule** 30" **Distance apart** 10 1/8" **Number and pitch of stays in each** 2 @ 8 3/4"

**Working pressure by rules** 189 **Superheater or Steam chest; how connected to boiler** none **Can the superheater be shut off and the boiler worked separately** yes

**Diameter** 10" **Length** 10' **Thickness of shell plates** 1 1/16" **Material** steel **Description of longitudinal joint** butt **Diam. of rivet holes** 1 1/4"

**Pitch of rivets** 8" **Working pressure of shell by rules** 184 **Diameter of flue** 10" **Material of flue plates** steel **Thickness** 1 1/16"

**If stiffened with rings** yes **Distance between rings** 10' **Working pressure by rules** 216 **End plates: Thickness** 1 1/2" **How stayed** by stays

**Working pressure of end plates** 189 **Area of safety valves to superheater** 1.540" **Are they fitted with easing gear** yes



IS A DONKEY BOILER FITTED?

yes ✓

If so, is a report now forwarded?

yes ✓

SPARE GEAR. State the articles supplied:— Two connecting rod top and bottom end bolts and nuts. Two main bearing bolts. One set of coupling bolts. One set of feed and bilge pump valves.  $\frac{1}{2}$  set of air pump valves.  $\frac{1}{4}$  set of valves for each donkey pump iron and bolts of various sizes.

The foregoing is a correct description,

MAG COLL & POLLOCK LTD.

*Richardson*

Manufacturer.

Dates of Survey while building { During progress of work in shops -- 1916. Mar. Apr. 12. May 19. Oct. 2. Nov. 8. 28. Dec. 5. 12. Jan. 5. 16. 26. Feb. 22. Mar. 15. 20. 28. 30. Apr. 14. During erection on board vessel -- 17. 20. 24. 27. May 1. 5. 9. 11. at Mdb: 1917 Mar. 19. 21. Total No. of visits (24) + 2. Is the approved plan of main boiler forwarded herewith yes ✓

Dates of Examination of principal parts—Cylinders 5-1-17 Slides 15-3-17 Covers 12-4-16 Pistons 5-1-17 Rods 22-2-17 Connecting rods 22-2-17 Crank shaft 24-1-16 Thrust shaft 5-12-16 Tunnel shafts none Screw shaft 20-3-17 Propeller 30-3-17 Stern tube 28-3-17 Steam pipes tested 5-5-17 Engine and boiler seatings 21.3.17 Engines holding down bolts 1-5-17 Completion of pumping arrangements 11-5-17 Boilers fixed 5-5-17 Engines tried under steam 9-5-17 Main boiler safety valves adjusted 9-5-17 Thickness of adjusting washers P  $\frac{3}{8}$ " S  $\frac{7}{16}$ ".

Material of Crank shaft S.M. Steel Identification Mark on Do. 41849.A.H. Material of Thrust shaft S.M. Steel Identification Mark on Do. 41849.A.H.

Material of Tunnel shafts none Identification Marks on Do. — Material of Screw shafts S.M. Steel Identification Marks on Do. 41849.A.H.

Material of Steam Pipes Solid drawn copper. 1 @ 4 $\frac{1}{2}$ " x 5" x 9. Test pressure 400 pounds per sq. in.

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 ✓

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

The materials and workmanship are good.  
The machinery has been constructed under special survey and is eligible in my opinion for classification and the record + LMC 5.17.

SUNDERLAND.

Certificate (if required) to be sent to

The amount of Entry Fee ... £ 2 : - : When applied for, 18. MAY 1917  
Special ... £ 18 : 15 :  
Donkey Boiler Fee ... £ : :  
Travelling Expenses (if any) £ : : When received, 4/7/17

Committee's Minute FR 15 JUN 1917

Assigned

+ Lmb 5-17

MACHINERY CERTIFICATE  
WRITTEN

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



© 2020

Lloyd's Register  
Foundation