

REPORT ON MACHINERY.

No. 27107

Received at London Office THU. 6-DEC. 1917

Date of writing Report 10 When handed in at Local Office 5 DEC 1917 Port of SUNDERLAND

No. in Survey held at SUNDERLAND Date, First Survey 12 April 1916 Last Survey 17 Dec 1917

Reg. Book 43 on the new steel S/S "ALLENDALE" (Number of Visits 42) Gross 2153 Tons Net 1304

Master G. Present Built at Sunderland By whom built Osgbourne Graham & Co. (151-205) When built 1917

Engines made at Sunderland By whom made Macdonald & Pollock L^d (No. 281) when made 1917

Boilers made at Sunderland By whom made Macdonald & Pollock L^d (No. 281) when made 1917

Registered Horse Power _____ Owners Furness Withy & Co. Port belonging to London

Nom. Horse Power as per Section 28 231 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 21-35-58" Length of Stroke 39" Revs. per minute 68 Dia. of Screw shaft as per rule 12.05 Material of (S.H.) steel as fitted 12.14" 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 no 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 no If two liners are fitted, is the shaft lapped or protected between the liners no Length of stern bush 49"

Dia. of Tunnel shaft as per rule 10.572" Dia. of Crank shaft journals as per rule 11.1" Dia. of Crank pin 11 3/8" Size of Crank webs 6 1/2 x 7 1/16" Dia. of thrust shaft under collars 11 3/8" Dia. of screw 15-0" Pitch of Screw 14-6" No. of Blades 4 State whether moveable no Total surface 68 sq ft

No. of Feed pumps 2 Diameter of ditto 3 1/2" Stroke 20" Can one be overhauled while the other is at work yes

No. of Bilge pumps 2 Diameter of ditto 3 1/2" Stroke 20" Can one be overhauled while the other is at work yes

No. of Donkey Engines 2 Sizes of Pumps 6 1/4 x 6 9 1/2 x 10 1/2 No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room 3 @ 2 3/4" In Holds, &c. Fore hold - 2 @ 2 3/4" after hold - 2 @ 2 3/4"

Tunnel well 1 @ 2 1/2" Brown Hunter 2 @ 2 3/4"

No. of Bilge Injections 1 sizes 5 1/2" Connected to condenser, or to circulating pump 6. P. Is a separate Donkey Suction fitted in Engine room & size 1 @ 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 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 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 14-9-17 of Stern Tube 4-10-17 Screw shaft and Propeller 9-10-17

Is the Screw Shaft Tunnel watertight yes Is it fitted with a watertight door yes worked from Top platform

BOILERS, &c.—(Letter for record (5)) Manufacturers of Steel J. & S. Spence & Sons L^d

Total Heating Surface of Boilers 3616 Is Forced Draft fitted no No. and Description of Boilers two single ended main

Working Pressure 180 Tested by hydraulic pressure to 360 Date of test 28-9-17 & 4-10-17 No. of Certificate 3431 & 3434

Can each boiler be worked separately yes Area of fire grate in each boiler 59 sq ft No. and Description of Safety Valves to each boiler two direct spring Area of each valve 5.93 sq ft Pressure to which they are adjusted 185 Are they fitted with easing gear yes

Smallest distance between boilers or uptakes and bunkers or woodwork 1-6" Mean dia. of boilers 14-6" Length 10-6" Material of shell plates steel

Thickness 1 1/8" Range of tensile strength 29 3/4-33 Are the shell plates welded or flanged no Descrip. of riveting: cir. seams W.R. long. seams DBSTR Diameter of rivet holes in long. seams 1 3/16" Pitch of rivets 8 1/4" Lap of plates or width of butt straps 17 5/8"

Per centages of strength of longitudinal joint rivets 88.7 Working pressure of shell by rules 184 Size of manhole in shell 16 x 12" plate 85.6

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

Length of plain part top 7-6" bottom 8-7/8" Thickness of plates crown 1 3/16" bottom 1 3/16" Description of longitudinal joint welded No. of strengthening rings none

Working pressure of furnace by the rules 181 Combustion chamber plates: Material steel Thickness: Sides 1 1/16" Back 1 1/16" Top 1 1/16" Bottom 7/8"

Pitch of stays to ditto: Sides 8 5/8 x 10" Back 8 5/8 x 11" Top 8 5/8 x 10 3/8" If stays are fitted with nuts or riveted heads nut in case Working pressure by rules 181

Material of stays steel Diameter at smallest part 2-030" Area supported by each stay 99-20" Working pressure by rules 184 End plates in steam space: Material steel Thickness 1-1/4" Pitch of stays 18 x 21" How are stays secured W.R. Working pressure by rules 183 Material of stays steel

Diameter at smallest part 6-10" Area supported by each stay 347 sq ft Working pressure by rules 182 Material of Front plates at bottom steel

Thickness 3/32" Material of Lower back plate steel Thickness 3/32" Greatest pitch of stays 13 1/4 x 8 5/8" Working pressure of plate by rules 196

Diameter of tubes 3 1/4" Pitch of tubes 4 3/4 x 4 1/2" Material of tube plates steel Thickness: Front 21/32" Back 21/32" Mean pitch of stays 11 5/8"

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 2 @ 12 1/2 x 7 1/2" Length as per rule 28 7/16" Distance apart 10 3/8" Number and pitch of stays in each 2 @ 8 1/2"

Working pressure by rules 192 Superheater or Steam chest; how connected to boiler none 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? *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, one screw shaft and one propeller.*

The foregoing is a correct description,
MAC COLL & POLLOCK LTD.

J. A. Richards
General Manager. Manufacturer.

Dates of Survey while building { During progress of work in shops - - } *14/16 Apr 12 Aug 8/15 1917 Mar 15 May 1 Jun 12 22 25 Jul 5 9 11 13 17 20 27 Aug 11 13 21 31 Sep 3 5*
{ During erection on board vessel - - - } *14 15 18 24 26 28 Oct 2 4 5 9 11 16 17 24 25 30 31 Nov 14 27 29 Dec 1*
Total No. of visits *(42)* Is the approved plan of main boiler forwarded herewith *yes*

Dates of Examination of principal parts - *(18-9-17-HP)* Cylinders *5-7-17* Slides *28-9-17* Covers *13-7-17* Pistons *26-9-17* Rods *15-9-17*
Connecting rods *5-9-17* Crank shaft *19-6-17* Thrust shaft *31-8-17* Tunnel shafts *3-9-17* Screw shaft *24-9-17* Propeller *20-7-17*
Stern tube *28-9-17* Steam pipes tested *3/6* Engine and boiler seatings *5-10-17* Engines holding down bolts *16-10-17*
Completion of pumping arrangements *1-12-17* Boilers fixed *17-10-17* Engines tried under steam *25-10-17*
Main boiler safety valves adjusted *25-10-17* Thickness of adjusting washers *P-P 3/8, S 1/2, S both 3/8*

Material of Crank shaft *5m. 1 steel* Identification Mark on Do. *2288 N. WC* Material of Thrust shaft *5m. 1 steel* Identification Mark on Do. *2292 N. WC*
Material of Tunnel shafts *5m. 1 steel* Identification Marks on Do. *2292 N. WC* Material of Screw shafts *5m. 1 steel* Identification Marks on Do. *2292 N. WC*

Material of Steam Pipes *Lapwelded steel* Test pressure *540 lbs 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. *no*

Have the requirements of Section 49 of the Rules been complied with *no*
Is this machinery duplicate of a previous case *no* If so, state name of vessel *no*

General Remarks (State quality of workmanship, opinions as to class, &c.)
The workmanship and materials are good.
The machinery has been constructed under special survey and is eligible in my opinion for classification and the record + LMC 12.17

It is submitted that
this vessel is eligible for
THE RECORD + LMC 12.17.

J.M. J.W.D. 7/12/17

The amount of Entry Fee ... £ *2* : - :
Special ... £ *31* : *11* :
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : :
When applied for, *5 DEC 1917*
When received, *18-12-1918*

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

Committee's Minute *TUE 11 DEC 1917*
Assigned *+ LMC 12.17*

MACHINERY CERTIFICATE
WRITTEN



SUNDERLAND.

Vertical text on the left margin: The Surveyors are requested not to write on or below the space for Committee's Minute.

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