

# REPORT ON MACHINERY.

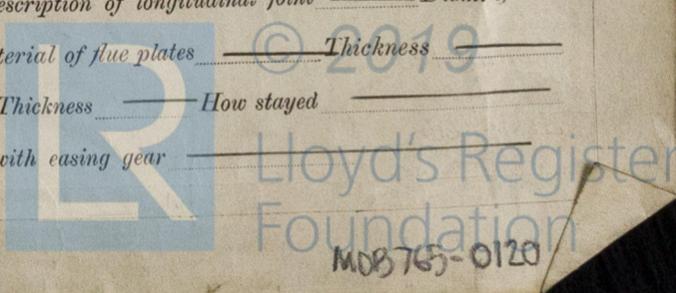
Port of Sunderland

Received at London Office MON. 23 APR 1900

No. in Survey held at Sunderland Date, first Survey 14<sup>th</sup> June 1899 Last Survey 5<sup>th</sup> April 1900  
 7. Book. S/S Askehall (Number of Visits 46)  
 2. S. on the S/S Askehall Modr: 4 Tons { Gross 4231  
 stern Louis Haun. Built at Middlesbrough By whom built A. Cragg & Sons When built 1900  
 gines made at S. land By whom made W. Allan & Co. Ltd. when made 1900  
 lers made at S. land. By whom made W. Allan & Co. Ltd. when made 1900  
 gistered Horse Power \_\_\_\_\_ Owners W. H. Pool Steam Navigation Co. Ltd. Port belonging to West Hartlepool  
 m. Horse Power as per Section 28 378 Is Electric Light fitted no.

**GINES, &c.—Description of Engines Tri. Exp. d.** No. of Cylinders 3 No. of Cranks 3  
 diameter of Cylinders 25 41 69 Length of Stroke 48 Revolutions per minute 65 Diameter of Screw shaft as per rule 13.33  
 diameter of Tunnel shaft as per rule 12.06 Diameter of Crank shaft journals 13 Diameter of Crank pin 13 Size of Crank webs 19 x 8 7/8  
 diameter of screw 14 6 Pitch of screw 14 6 No. of blades 4 State whether moveable f Total surface 90 f  
 of Feed pumps 2 Diameter of ditto 3 3/4 Stroke 27 Can one be overhauled while the other is at work yes.  
 of Bilge pumps 2 Diameter of ditto 4 Stroke 27 Can one be overhauled while the other is at work yes.  
 of Donkey Engines 2 Sizes of Pumps 10 x 10 1/2 x 11 1/2 6 1/2 x 4 x 6 No. and size of Suctions connected to both Bilge and Donkey pumps  
 Engine Room 3 of 3 1/2 In Holds, &c. 2 of 3 1/2 to each Cargo Comp.  
Well 3  
 of bilge injections 1 sizes 5 Connected to condenser, or to circulating pump C.P. Is a separate donkey suction fitted in Engine room & size yes 4"  
 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.  
 How are they protected —  
 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.  
 When were stern tube, propeller, screw shaft, and all connections examined in dry dock new vessel. Is the screw shaft tunnel watertight separately.  
 Is it fitted with a watertight door yes. worked from upper grating.

**BOILERS, &c.—** (Letter for record S) Total Heating Surface of Boilers 6120 f Is forced draft fitted no.  
 No. and Description of Boilers 3 by del. Multitubular Landed. Working Pressure 180 lbs Tested by hydraulic pressure to 360.  
 Date of test 5/11/99 Can each boiler be worked separately yes. Area of fire grate in each boiler 50 No. and Description of safety valves to  
 each boiler 2 Spring Area of each valve 4.07 Pressure to which they are adjusted 185 lbs Are they fitted  
 with easing gear yes. Smallest distance between boilers or uptakes and bunkers or woodwork 16" Mean diameter of boilers 14 5/8"  
 Length 11 0" Material of shell plates S. Thickness 1 3/16 Description of riveting: circum. seams DR lap long. seams T. & d. batt.  
 Diameter of rivet holes in long. seams 1 3/16 Pitch of rivets 8" Lap of plates or width of butt straps 16"  
 Ages of strength of longitudinal joint rivets 86.7 Working pressure of shell by rules 180 1/2 Size of manhole in shell 16" x 12"  
 Diameter of compensating ring Flanged. No. and Description of Furnaces in each boiler 3 Corrugated Material S. Outside diameter 3 1/4"  
 Diameter of plain part top 9" Thickness of plates bottom 1 1/32 Description of longitudinal joint Welded. No. of strengthening rings —  
 Working pressure of furnace by the rules 190 1/2 Combustion chamber plates: Material S. Thickness: Sides 1/16" Back 1/16" Top 1/16" Bottom 1/16"  
 Pitch of stays to ditto: Sides 9 1/2 x 9 1/2 Back 10 x 8 1/2 Top 9 1/2 x 9 1/2 If stays are fitted with nuts or riveted heads nuts. Working pressure by rules 195 1/2  
 Material of stays S. Diameter at smallest part 1.79 Area supported by each stay 85.5 Working pressure by rules 186 1/2 End plates in steam space:  
 Material S. Thickness 1 9/32 Pitch of stays 20" x 20" How are stays secured d. nuts. Working pressure by rules 183 Material of stays S.  
 Diameter at smallest part 7.24 Area supported by each stay 400.7 Working pressure by rules 181 1/2 Material of Front plates at bottom S.  
 Thickness 1/16" Material of Lower back plate S. Thickness 3/4" Greatest pitch of stays 14" Working pressure of plate by rules 200 1/2  
 Diameter of tubes 3 1/4" Pitch of tubes 4 1/2 x 4 1/4 Material of tube plates S. Thickness: Front 1/16" Back 1/16" Mean pitch of stays 11"  
 Pitch across wide water spaces 13 1/2" Working pressures by rules 312 1/2 Girders to Chamber tops: Material S. Depth and  
 Thickness of girder at centre 9 x 20 1/4 Length as per rule 21.5 Distance apart 9 1/4" Number and pitch of Stays in each 2 of 9 1/2"  
 Working pressure by rules 188 1/2 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 —



**DONKEY BOILER**— Description *None fitted.*  
 Made at ✓ By whom made ✓ When made ✓ Where fixed ✓  
 Working pressure ✓ tested by hydraulic pressure to ✓ No. of Certificate ✓ Fire grate area ✓ Description of safety valves ✓  
 No. of safety valves ✓ Area of each ✓ Pressure to which they are adjusted ✓ If fitted with easing gear ✓ If steam from main boilers  
 enter the donkey boiler ✓ Diameter of donkey boiler ✓ Length ✓ Material of shell plates ✓ Thickness  
 Description of riveting long. seams ✓ Diameter of rivet holes ✓ Whether punched or drilled ✓ Pitch of rivets  
 Lap of plating ✓ Per centage of strength of joint Rivets ✓ Thickness of shell crown plates ✓ Radius of do. ✓ No. of Stays to do.  
 Dia. of stays. ✓ Diameter of furnace Top ✓ Bottom ✓ Length of furnace ✓ Thickness of furnace plates ✓ Descript  
 joint ✓ Thickness of furnace crown plates ✓ Stayed by ✓ Working pressure of shell by rules  
 Working pressure of furnace by rules ✓ Diameter of uptake ✓ Thickness of uptake plates ✓ Thickness of water tubes ✓

**SPARE GEAR.** State the articles supplied:— *Spare gear supplied in accordance with requirements and in addition, propeller & shaft, 1/3 crank & 2 safety valve Springs*

The foregoing is a correct description,

*WILLIAM ALLAN & CO. LIMITED, Manufacturers Main Engines*

*Henry James*  
 Dates During progress of work in shops— 1899— June 14, 16, 24, 29, July 4, 7, 11, 13, 14, 20, 22, 27, 29, August 2, 15, 18, 22, 25, 31  
 During erection on board vessel— Sept 1, 6, Oct 5, 12, 19, 26, 31, Nov 2, 6, 8, 14, 15, 22 1900— Jan 12, 17, 18, 22  
 building Total No. of visits 46. Mdb. 4. March 8, 20, 21, 22, 23, 26, 28, April 2, 5.  
 Mdb. 1900 Feb. 20, 28, March 15, April 14.

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

**ENGINES**—Length of stern bush *5 ft.* Diameter of crank shaft journals *as per rule 12.69" as fitted 13"* Diameter of thrust shaft under collars *13"*  
**BOILERS**—Range of tensile strength *27-32 1/2* Are they welded or flanged *ends* **DONKEY BOILERS**—No. ✓ Range of tensile strength  
 Is the approved plan of main boiler forwarded herewith *duplicate* Is the approved plan of donkey boiler forwarded herewith ✓

*Machinery and boilers constructed under special materials and workmanship good. Engines examined under steam + safety valves adjusted under steam to 185 lbs. The vessel has returned to Middlebro. for completion where the following remains to be done. Pumping arrangement completed as per approved plan + Spare gear examined. 4 tunnel watertight door fitted. In our opinion this vessel will be eligible for the record of L.M.C. 4/100 when completed.*

*The above mentioned requirements have now been carried out.*

It is submitted that this vessel is eligible for THE RECORD. L.M.C. 4.00

*C.M.B. 2/3*

The amount of Entry Fee... £ 3:  
 Special ... £ 38: 18:  
 Donkey Boiler Fee ... £ :  
 Travelling Expenses (if any) £ :  
 When applied for, 17.4.00  
 When received, 12/5/1900

*J. Lindlay Lidley*  
 Engineer Surveyor to Lloyd's Register of British & Foreign

Committee's Minute  
 Assigned

FRI 27 APR 1900

+ L.M.C. 4.00



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Certificate (if required) to be sent to

The Surveys are requested not to write on or below the space for Committee's Minute.

EXHIBIT CERTIFICATE