

## REPORT ON MACHINERY

JUN 26 SEP 1898

Port of Barrow in Furness

Received at London Office

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No. in Survey held at **Barrow** Date, first Survey **1894. October 24<sup>th</sup>** Last Survey **September 23<sup>rd</sup> 1898**  
 Reg. Book. **Twin SS "Anglia"** (Number of Visits **11**) Tons { Gross **6513.89**  
 on the **Twin SS "Anglia"** Net **4209.15**  
 Master **W.R. Gato** Built at **Barrow** By whom built **Vickers Sons & Maxim Ltd** When built **1898**  
 Engines made at **Barrow** By whom made **Vickers Sons & Maxim Ltd** when made **1898**  
 Boilers made at **No** By whom made **No** when made **1898**  
 Registered Horse Power **649** Owners **Telegraph Construction & Maintenance Co. Limited** Port belonging to **London**  
 Is Electric Light fitted **Yes**

ENGINES, &c.—Description of Engines **Triple Expansion (Twin Screw)** No. of Cylinders **Size** No. of Cranks **Size**  
 Diameter of Cylinders **22" - 35 1/2" - 61"** Length of Stroke **48"** Revolutions per minute **73** Diameter of Screw shaft **as per rule 12.04"**  
 Diameter of Tunnel shaft **as per rule 11 7/8"** Diameter of Crank shaft journals **12 1/2"** Diameter of Crank pin **2 1/2"** Size of Crank webs **25 x 8"**  
 Diameter of screw **16" (worn)** Pitch of screw **19-6"** No. of blades **4** State whether moveable **Yes** Total surface **73.57**  
 No. of Feed pumps **Two** Diameter of ditto **8"** Stroke **24"** Can one be overhauled while the other is at work **Yes**  
 No. of Bilge pumps **four** Diameter of ditto **3 1/2"** Stroke **27"** Can one be overhauled while the other is at work **Yes**  
 No. of Donkey Engines **Two** Sizes of Pumps **10" x 14" x 12" & 8" x 5 1/2" x 8"** No. and size of Suctions connected to both Bilge and Donkey pumps  
 In Engine Room **four 3 1/2"** In Holds, &c. **No. 1 Hold two 3 1/2", No. 2 two 3 1/2", No. 3 two 3 1/2"**  
 No. of bilge injections **2** sizes **9"** Connected to condenser, or to circulating pump **of Pump** Is a separate donkey suction fitted in Engine room & size **Yes 3 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 **Yes**  
 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 **None** How are they protected **Yes**  
 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 **before launch** Is the screw shaft tunnel watertight **Yes**  
 Is it fitted with a watertight door **Yes** worked from **upper deck**

BOILERS, &c.—(Letter for record **S**) Total Heating Surface of Boilers **10853 sq** Is forced draft fitted **No**  
 No. and Description of Boilers **Four Single Ended** Working Pressure **195 lb** Tested by hydraulic pressure to **390 lbs**  
 Date of test **23/9/98** Can each boiler be worked separately **Yes** Area of fire grate in each boiler **80 sq** No. and Description of safety valves to  
 each boiler **Two Spring loaded** Area of each valve **9.62 sq** Pressure to which they are adjusted **195 lb** Are they fitted  
 with easing gear **Yes** Smallest distance between boilers or uptakes and bunkers or woodwork **11"** Mean diameter of boilers **16.4"**  
 Length **10-10'** Material of shell plates **Steel** Thickness **1 1/2"** Description of riveting: circum. seams **Lap 10 x 4** long. seams **10 Butts straps**  
 Diameter of rivet holes in long. seams **1 1/2"** Pitch of rivets **10" & 4 3/4"** Lap of plates or width of butt straps **13.5 2 3/4"**  
 Per centages of strength of longitudinal joint **83.4** Working pressure of shell by rules **208** Size of manhole in shell **16 x 12**  
 Size of compensating ring **3.6 x 2.7 x 1 1/2"** No. and Description of Furnaces in each boiler **4 Purvis** Material **Steel** Outside diameter **3.776**  
 Length of plain part **9"** Thickness of plates **9/32"** Description of longitudinal joint **welded** No. of strengthening rings **7**  
 Working pressure of furnace by the rules **211** Combustion chamber plates: Material **Steel** Thickness: Sides **5/8"** Back **5/8"** Top **7/8"** Bottom **1"**  
 Pitch of stays to ditto: Sides **8 1/2" x 8 1/2"** Back **8 1/2" x 8 1/2"** Top **8 1/2" x 8"** If stays are fitted with nuts or riveted heads **Yes** Working pressure by rules **200**  
 Material of stays **Steel** Diameter at smallest part **1.48"** Area supported by each stay **6.74"** Working pressure by rules **206** End plates in steam space:  
 Material **Steel** Thickness **1 3/16"** Pitch of stays **16 x 17 1/2"** How are stays secured **10 Nuts with washers** Working pressure by rules **200** Material of stays **Steel**  
 Diameter at smallest part **3.776"** Area supported by each stay **2.80** Working pressure by rules **200** Material of Front plates at bottom **Steel**  
 Thickness **7/16"** Material of Lower back plate **Steel** Thickness **1"** Greatest pitch of stays **13 1/4"** Working pressure of plate by rules  
 Diameter of tubes **3 1/2"** Pitch of tubes **4 3/8" & 4 1/4"** Material of tube plates **Steel** Thickness: Front **1 1/2" & 1 1/4"** Back **2 1/2"** Mean pitch of stays **10"**  
 Pitch across wide water spaces **13 3/4"** Working pressures by rules **207** Girders to Chamber tops: Material **Steel** Depth and  
 thickness of girder at centre **8 1/2 x 1 1/2"** Length as per rule **30"** Distance apart **8"** Number and pitch of Stays in each **3. 8 1/2"**  
 Working pressure by rules **203** Superheater or Steam chest; how connected to boiler **—** Can the superheater be shut off and the boiler worked  
 separately **Yes** 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 **—**



