

# REPORT ON MACHINERY.

Port of WEST HARTLEPOOL. THUR. 5 APR 1900

Received at London Office

No. in Survey held at Hartlepool Date, first Survey 19<sup>th</sup> Oct. 1898 Last Survey 30<sup>th</sup> March 1900  
 Reg. Book. 18 on the Shel. S.S. "WHANGAPE" ~~Adriana~~ ~~Asaba~~ (Number of Visits 1.05)  
 Master Robats. Built at Middlesbro' By whom built Sir R. Dixon & Co. Lm. When built 1900  
 Engines made at Hartlepool By whom made J. Richardson & Son. Lm. when made 1900  
 Boilers made at Hartlepool By whom made J. Richardson & Son Lm. when made 1900  
 Registered Horse Power \_\_\_\_\_ Owners A. L. Jones. Port belonging to Liverpool.  
 Nom. Horse Power as per Section 28 255 Is Electric Light fitted No.

ENGINES, &c. — Description of Engines Triple expansion No. of Cylinders three No. of Cranks three  
 Diameter of Cylinders 23" - 36" - 59" Length of Stroke 42" Revolutions per minute 60 Diameter of Screw shaft as per rule 11.9"  
 Diameter of Tunnel shaft as fitted 11" Diameter of Crank shaft journals 11 3/4" Diameter of Crank pin 12 1/4" Size of Crank webs 7 1/2" x 18 1/2"  
 Diameter of screw 15' - 9" Pitch of screw 15' - 9" No. of blades 4 State whether moveable no Total surface 72 sq. ft.  
 No. of Feed pumps 2 Diameter of ditto 2 1/4" Stroke 24" Can one be overhauled while the other is at work yes  
 No. of Bilge pumps 2 Diameter of ditto 3 1/4" Stroke 24" Can one be overhauled while the other is at work yes  
 No. of Donkey Engines Two Sizes of Pumps Two 6" x 6" duplex. Ballast No. and size of Suctions connected to both Bilge and Donkey pumps  
 In Engine Room Four. — Two 3 1/2" x Two 3" dia. In Holds, &c. Fore Hold. Two 3" dia.  
Main Hold. Two 3" dia. Aft Hold. Two 3" dia. Tunnel well One 2 1/2" dia.  
 No. of bilge injections one sizes 5" Connected to condenser, or to circulating pump no separate donkey suction fitted in Engine room & size 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 ✓  
 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 ✓  
 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 apparently.  
 Is it fitted with a watertight door Yes. worked from top side grating.

BOILERS, &c. — (Letter for record S) Total Heating Surface of Boilers 4040 sq. ft. Is forced draft fitted no  
 No. and Description of Boilers 2 single ended. byl. Mull. Working Pressure 180 lbs. Tested by hydraulic pressure to 360 lbs.  
 Date of test 23.12.99 Can each boiler be worked separately Yes Area of fire grate in each boiler 44.1 sq. ft. No. and Description of safety valves to  
 each boiler Two. Spring direct. Area of each valve 4 sq. in. 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 18" Mean diameter of boilers 14' - 6"  
 Length 10' - 6" Material of shell plates steel Thickness 1 3/16" Description of riveting: circum. seams double long. seams treble  
 Diameter of rivet holes in long. seams 1 3/32" Pitch of rivets 8 1/2" Lap of plates or width of butt straps 19 1/2"  
 Per centages of strength of longitudinal joint 85.9 Working pressure of shell by rules 182 lbs. Size of manhole in shell 13" x 16 1/2"  
 Size of compensating ring 30" x 30" x 1 1/2" No. and Description of Furnaces in each boiler 3 Morrison Material steel Outside diameter 45 1/2"  
 Length of plain part top 6" bottom 7' - 0" Thickness of plates top 9/16" bottom 9/16" Description of longitudinal joint weld No. of strengthening rings ✓  
 Working pressure of furnace by the rules 193 lbs. Combustion chamber plates: Material steel Thickness: Sides 9/16" Back 9/16" Top 9/16" Bottom 15/16"  
 Pitch of stays to ditto: Sides 4 1/8" Back 4 1/2" Top 4 1/8" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 182 lbs  
 Material of stays steel Diameter at smallest part 1 3/8" Area supported by each stay 60 sq. in. Working pressure by rules 194 lbs End plates in steam space:  
 Material steel Thickness 39/32" Pitch of stays 15 1/4" x 14 1/2" How are stays secured Double nut washer Working pressure by rules 181 lbs. Material of stays steel  
 Diameter at smallest part 2 1/2" Area supported by each stay 213 sq. in. Working pressure by rules 186 lbs Material of Front plates at bottom steel  
 Thickness 13/16" Material of Lower back plate steel Thickness 25/32" Greatest pitch of stays 12 1/2" Working pressure of plate by rules 192 lbs  
 Diameter of tubes 3 1/2" Pitch of tubes 4 5/8" Material of tube plates steel Thickness: Front 1" Back 3/4" Mean pitch of stays 9 1/4"  
 Pitch across wide water spaces 14 1/2" Working pressures by rules 182 lbs. Girders to Chamber tops: Material steel Depth and  
 thickness of girder at centre 4 1/4" x 1 1/2" Length as per rule 24" Distance apart 4 1/2" Number and pitch of Stays in each Two. 4 1/8"  
 Working pressure by rules 192 lbs. 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 ✓

