

# REPORT ON MACHINERY.

Port of WEST HARTLEPOOL

Received at London Office 10  
14th JUL 1903

No. in Survey held at Hartlepool Date, first Survey 1<sup>st</sup> Dec. 1902 Last Survey 22<sup>nd</sup> July 1903  
 Reg. Book. 532 on the Steel S.S. "Tjilatjap" (Number of Visits 112) Tons { Gross 3858.55  
 Net 2475.36  
 Master H. Koops Built at Middlesbrough By whom built Sir Raylton Dixon & Co. When built 1903  
 Engines made at Hartlepool By whom made Richardsons, Westgarth & Co. When made 1903  
 Boilers made at Hartlepool By whom made Richardsons, Westgarth & Co. When made 1903  
 Registered Horse Power \_\_\_\_\_ Owners Java-China-Japan Lijn Port belonging to Batavia.  
 Nom. Horse Power as per Section 28 3514 Is Refrigerating Machinery fitted No Is Electric Light fitted Yes.

ENGINES, &c.—Description of Engines Triple expansion No. of Cylinders three No. of Cranks three  
 Dia. of Cylinders 23" 37" 64" Length of Stroke 42" Revs. per minute 40 Dia. of Screw shaft 13" Lgth. of stern bush 4' 6"  
 Dia. of Tunnel shaft 11:45" Dia. of Crank shaft journals 12" Dia. of Crank pin 12 1/2" Size of Crank webs 8 1/2" x 2 3/4" Dia. of thrust shaft under collars 13" Dia. of screw 16-3" Pitch of screw 15-6" No. of blades 4 State whether moveable yes Total surface 76 sq ft  
 No. of Feed pumps 2 Diameter of ditto 3" Stroke 24" Can one be overhauled while the other is at work Yes  
 No. of Bilge pumps 2 Diameter of ditto 4" Stroke 24" Can one be overhauled while the other is at work Yes  
 No. of Donkey Engines 2 Sizes of Pumps Feed 6" x 2 1/2" double. Ballast 12" x 10" double. No. and size of Suctions connected to both Bilge and Donkey pumps  
 In Engine Room Four 3 1/2" dia In Holds, &c. Two of 3 1/2" in each hold  
 One of 2 1/2" in tunnel.  
 No. of bilge injections one sizes 8" Connected to condenser, or to circulating pump circ pump 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 none  
 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 See ship report  
 Is it fitted with a watertight door Yes worked from Top grating.

BOILERS, &c.— (Letter for record 12) Total Heating Surface of Boilers 5095 sq ft Is forced draft fitted Yes.  
 No. and Description of Boilers 3 single ended. by Mult. Working Pressure 180 lb Tested by hydraulic pressure to 360 lb  
 Date of test 9.4.03 Can each boiler be worked separately Yes Area of fire grate in each boiler 39.4 sq ft No. and Description of safety valves to each boiler 2 Spring direct Area of each valve 8.29 sq" Pressure to which they are adjusted 183 lbs. Are they fitted with easing gear Yes  
 Smallest distance between boilers or uptakes and bunkers or woodwork 21" Mean dia. of boilers 12-0" Length 12-0" Material of shell plates steel  
 Thickness 1" Range of tensile strength 28-37 Are they welded or stanged no Descrip. of riveting: cir. seams double long. seams triple  
 Diameter of rivet holes in long. seams 1 1/32" Pitch of rivets 4 1/4" Lap of plates or width of butt straps 15 1/2"  
 Per centages of strength of longitudinal joint rivets 86.1 Working pressure of shell by rules 181.3 lbs. Size of manhole in shell 13" x 14"  
 Size of compensating ring 28 1/2" x 21 1/2" x 1 1/2" No. and Description of Furnaces in each boiler 2 Morrison Material steel Outside diameter 47 1/2"  
 Length of plain part 4-1" Thickness of plates crown 9" bottom 8" Description of longitudinal joint weld No. of strengthening rings ✓  
 Working pressure of furnace by the rules 189 lbs. Combustion chamber plates: Material steel Thickness: Sides 9/16" Back 9/16" Top 9/16" Bottom 3/4"  
 Pitch of stays to ditto: Sides 7 1/8" x 7 3/8" Back 4 1/4" Top 7 1/8" x 7 1/8" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 182 lbs.  
 Material of stays iron Diameter at smallest part 1 1/2" Area supported by each stay 600" Working pressure by rules 221 lbs. End plates in steam space:  
 Material steel Thickness 1" Pitch of stays 16" x 14" How are stays secured Pin washers Working pressure by rules 180 lbs. Material of stays steel  
 Diameter at smallest part 2 1/2" Area supported by each stay 2720" Working pressure by rules 180 lbs. Material of Front plates at bottom steel  
 Thickness 1" Material of Lower back plate steel Thickness 1" Greatest pitch of stays 14" Working pressure of plate by rules 240 lbs.  
 Diameter of tubes 2 3/4" Pitch of tubes 3 3/4" Material of tube plates steel Thickness: Front 1" Back 3/4" Mean pitch of stays 11 5/8"  
 Pitch across wide water spaces 14 3/4" Working pressures by rules 188 lbs. Girders to Chamber tops: Material steel Depth and thickness of girder at centre 8 1/2" x 2" Length as per rule 36" Distance apart 4 1/2" Number and pitch of Stays in each 2 - 7 1/8"  
 Working pressure by rules 185 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 ✓

If not, state whether, and when, one will be sent  
In a Report also sent on the Hull of the Ship



