

REPORT ON MACHINERY.

Port of WEST HARTLEPOOL

MON. 7 JUL 1902

No. in Survey held at *Hartlepool* Date, first Survey *21st Mch. 1901* Last Survey *4th July 1902*
 Reg. Book. *1151* on the *Steel S.S. "Gomo"* (Number of Visits *102*)
 Master *W. Hartlepool* Built at *H. Hartlepool* By whom built *Furness Withy & Co. Ltd.* When built *1902*
 Engines made at *Hartlepool* By whom made *Richardsons, Westgarth & Co. Ltd.* when made *1902*
 Boilers made at *Hartlepool* By whom made *Do. Do.* when made *1902*
 Registered Horse Power *490* Owners *British Maritime Trust Ltd.* Port belonging to *London & W. Hartlepool*
 Nom. Horse Power as per Section 28 *489* Is Refrigerating Machinery fitted *No* Is Electric Light fitted *✓*

ENGINES, &c.—Description of Engines *Triple expansion* No. of Cylinders *three* No. of Cranks *three*
 Dia. of Cylinders *28" - 46" - 44"* Length of Stroke *48"* Revs. per minute *40* Dia. of Screw shaft *as per rule 15"* Lgth. of stern bush *5' - 4 1/2"*
 Dia. of Tunnel shaft *as per rule 13 1/2"* Dia. of Crank shaft journals *as per rule 14 1/2"* Dia. of Crank pin *14 1/2"* Size of Crank webs *9 1/2" x 23 1/2"* Dia. of thrust shaft under collars *15"* Dia. of screw *18' - 0"* Pitch of screw *14' - 0" to 20' - 0"* Adj. No. of blades *4* State whether moveable *Yes* Total surface *90 sq. ft.*
 No. of Feed pumps *2* Diameter of ditto *3 3/4"* Stroke *27"* Can one be overhauled while the other is at work *Yes*
 No. of Bilge pumps *2* Diameter of ditto *4 1/2"* Stroke *24"* Can one be overhauled while the other is at work *Yes*
 No. of Donkey Engines *2* Sizes of Pumps *1 1/2" x 10" & 1" x 9"* No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room *Three 3 1/2" dia.* In Holds, &c. *Thirteen. One 2 1/2" dia. to 700 Peak, two 3 1/2" dia. to No. 1 hold, two 3 1/2" dia. to No. 2 hold, two 3 1/2" dia. to No. 3 hold, two 3 1/2" dia. to No. 4 hold, two 3 1/2" dia. to Off hold, + 2 1/2" peak to Off hold*
 No. of bilge injections *one size 4"* Connected to condenser, or to circulating pump *Yes* Is a separate donkey suction fitted in engine room of 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 *Yes*
 Is it fitted with a watertight door *Yes* worked from *upper platform*

BOILERS, &c.—(Letter for record *5*) Total Heating Surface of Boilers *8140 sq. ft.* Is forced draft fitted *No*
 No. and Description of Boilers *4 Single ended. byf. Mult.* Working Pressure *180 lbs.* Tested by hydraulic pressure to *360 lbs.*
 Date of test *11.4.02* Can each boiler be worked separately *Yes* Area of fire grate in each boiler *54 sq. ft.* No. and Description of safety valves to each boiler *2 Spring direct.* Area of each valve *4.06 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 *34"* Mean dia. of boilers *14' - 6"* Length *10' - 6"* Material of shell plates *steel*
 Thickness *1 1/2"* Range of tensile strength *28 - 32* Are they welded or flanged *no* Descrip. of riveting: cir. seams *treble* long seams *treble*
 Diameter of rivet holes in long. seams *1 1/2"* Pitch of rivets *9"* Lap of plates or width of butt straps *19 1/4"*
 Per centages of strength of longitudinal joint *85.2* Working pressure of shell by rules *207 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 *4' - 5 1/2"* Thickness of plates *9"* 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 *5/8"* Back *5/8"* Top *5/8"* Bottom *4/8"*
 Pitch of stays to ditto: Sides *7 3/8"* Back *7 3/8"* Top *7 3/8"* If stays are fitted with nuts or riveted heads *nuts.* Working pressure by rules *217 lbs.*
 Material of stays *steel* Diameter at smallest part *1 3/8"* Area supported by each stay *62 sq. in.* Working pressure by rules *190 lbs.* End plates in steam space:
 Material *steel* Thickness *1 5/16"* Pitch of stays *13 3/4" x 15 1/4"* How are stays secured *D. N. 44.* Working pressure by rules *197 lbs.* Material of stays *steel*
 Diameter at smallest part *2 1/4"* Area supported by each stay *202 sq. in.* Working pressure by rules *211 lbs.* Material of Front plates at bottom *steel*
 Thickness *1 3/16"* Material of Lower back plate *steel* Thickness *25/32"* Greatest pitch of stays *12 5/8"* Working pressure of plate by rules *190 lbs.*
 Diameter of tubes *3 1/2"* Pitch of tubes *4 5/8"* Material of tube plates *steel* Thickness: Front *1 1/2"* Back *25/32"* Mean pitch of stays *9 1/4"*
 Pitch across wide water spaces *14 1/2"* Working pressures by rules *194 lbs.* Girders to Chamber tops: Material *steel* Depth and thickness of girder at centre *7" x 15 1/8"* Length as per rule *29"* Distance apart *7 1/4"* Number and pitch of Stays in each *2 - 7 3/8"*
 Working pressure by rules *180 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 *✓*

