

# REPORT ON MACHINERY.

Port of *Dundee*

THUR. 14 JUN 1900

Received at London Office

No. in Survey held at *Dundee* Date, first Survey *15<sup>th</sup> Nov, 1899* Last Survey *11<sup>th</sup> June 1900*  
 Reg. Book. on the *Steel Screw Steamer Faithful* (Number of Visits *46*) Tons { Gross *782.9*  
 Net *334.5*  
 Master *J. Davis* Built at *Dundee* By whom built *Dundee Ship Coy* When built *1900*  
 Engines made at *Dundee* By whom made *Messrs Cooper & Greig* when made *1900*  
 Boilers made at *Dundee* By whom made *Messrs Cooper & Greig* when made *1900*  
 Registered Horse Power  Owners *J. H. Powell & Coy* Port belonging to *Liverpool*  
 Is Electric Light fitted *yes on RYLE BUTE 11.9.35*  
 Nom. Horse Power as per Section 28 *123* Is Refrigerating Machinery fitted *no*

ENGINES, &c.—Description of Engines *Direct acting Triple Expansion* No. of Cylinders *3* No. of Cranks *3*  
 Dia. of Cylinders *16 1/2 - 27 3/4 - 45* Length of Stroke *30* Revs. per minute *90* Dia. of Screw shaft as per rule *8.67* Lgth. of stern bush *40*  
 Dia. of Tunnel shaft as per rule *7.84* Dia. of Crank shaft journals as per rule *8.26* Dia. of Crank pin *8 1/2* Size of Crank webs *16 x 5 1/2* Dia. of thrust shaft under collars *8 3/4* Dia. of screw *11'-6"* Pitch of screw *13'-6"* No. of blades *4* State whether moveable *no* Total surface *52 sq*  
 No. of Feed pumps *2* Diameter of ditto *3"* Stroke *15"* Can one be overhauled while the other is at work *yes*  
 No. of Bilge pumps *2* Diameter of ditto *3"* Stroke *15"* Can one be overhauled while the other is at work *yes*  
 No. of Donkey Engines *2* Sizes of Pumps *Ballast 9 x 9 x 12* No. and size of Suctions connected to both Bilge and Donkey pumps  
 In Engine Room *Two = 2 1/4"* In Holds, &c. *Main hold two = 2 1/4"*  
 No. of bilge injections *1* sizes *5"* Connected to ~~condenser~~ or to circulating pump *yes* Is a separate donkey suction fitted in Engine room & size *yes - 3"*  
 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 *hold suction* How are they protected *wood ceiling*  
 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 launching* Is the screw shaft tunnel watertight *none*  
 Is it fitted with a watertight door  worked from

BOILERS, &c.— (Letter for record *(S)*) Total Heating Surface of Boilers *1900* Is forced draft fitted *no*  
 No. and Description of Boilers *One cylindrical Single Ended* Working Pressure *180* Tested by hydraulic pressure to *360*  
 Date of test *9.5.00* Can each boiler be worked separately  Area of fire grate in each boiler *55.6 sq* No. and Description of safety valves to each boiler *Two Spring* Area of each valve *7.07* Pressure to which they are adjusted *182 lbs* Are they fitted with easing gear *yes*  
 Smallest distance between boilers or uptakes and bunkers or ~~woodwork~~ *6 ft* Mean dia. of boilers *179"* 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 *Lap. Riv long. seams 5 Rivets per pitch*  
 Diameter of rivet holes in long. seams *1 1/16"* Pitch of rivets *8 3/4"* Lap of plates or width of butt straps *20 1/4"*  
 Per centages of strength of longitudinal joint rivets *90.6* Working pressure of shell by rules *180* Size of manhole in shell *16 x 12*  
 Size of compensating ring *McNeill* No. and Description of Furnaces in each boiler *3 corrugated* Material *steel* Outside diameter *43"*  
 Length of plain part top  bottom  Thickness of plates crown *3/16"* Description of longitudinal joint *Welded* No. of strengthening rings *8*  
 Working pressure of furnace by the rules *188* Combustion chamber plates: Material *steel* Thickness: Sides *5/8"* Back *3/8"* Top *5/8"* Bottom *7/8"*  
 Pitch of stays to ditto: Sides *8 1/4 x 8 1/2* Back *8 3/8 x 8 1/2* Top *8 1/4 x 8 1/2* If stays are fitted with nuts or riveted heads *nuts* Working pressure by rules *181*  
 Material of stays *steel* Diameter at smallest part *1 1/2"* Area supported by each stay *72.18* Working pressure by rules *189* End plates in steam space: Material *steel* Thickness *3/4"* Pitch of stays *19 x 16"* How are stays secured *All nuts* Working pressure by rules *184* Material of stays *steel*  
 Diameter at smallest part *2.86* Area supported by each stay *304* Working pressure by rules *211* Material of Front plates at bottom *steel*  
 Thickness *4/6"* Material of Lower back plate *steel* Thickness *5/8"* Greatest pitch of stays *12"* Working pressure of plate by rules *190*  
 Diameter of tubes *3 1/4"* Pitch of tubes *4 1/2"* Material of tube plates *steel* Thickness: Front *3/4"* Back *3/4"* Mean pitch of stays *9"*  
 Pitch across wide water spaces *14 7/8"* Working pressures by rules *193* Girders to Chamber tops: Material *steel* Depth and thickness of girder at centre *8 3/4 x 1 1/2"* Length as per rule *29"* Distance apart *8 3/4"* Number and pitch of Stays in each *2 = 8 1/2"*  
 Working pressure by rules *219* 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

