

THUR, AUG 27 1896

Abn No. 5279
Nuc 33525
Lth. 8220

REPORT ON MACHINERY

Port of Aberdeen

Received at London Office

No. in Survey held at Aberdeen Date, first Survey April 23rd Last Survey Augst 3rd 1896

Reg. Book. on the Screw Steamer "Guardian" (Number of Visits 18)

Master Greenlade Built at Greenock whom built Lammug & Ellis Ton Gross Net When built 1896

Engines made at Aberdeen By whom made Elyne Mitchell & Co when made 1896

Boilers made at South Shields By whom made J. T. Cottingham & Co when made 1896

Registered Horse Power 64 Owners D. W. Bain & Co Port belonging to Penzance

Nom. Horse Power as per Section 28 80

ENGINES, &c. — Description of Engines Compound No. of Cylinders 2

Diameter of Cylinders 18 1/2" x 40" Length of Stroke 30" Revolutions per minute 80 Diameter of Screw shaft as per rule 8 1/8"
 as fitted 8 1/8" Diameter of Crank shaft journals 8 1/8" Diameter of Crank pin 8 1/8" Size of Crank webs 9 1/2" x 6 1/8"

Diameter of Tunnel shaft as fitted 8 1/8" Diameter of Crank shaft journals 8 1/8" Diameter of Crank pin 8 1/8" Size of Crank webs 9 1/2" x 6 1/8"

Diameter of screw 9-0" Pitch of screw 13-6" No. of blades 4 State whether moveable No Total surface 32 sq ft

No. of Feed pumps One Diameter of ditto 2 1/2" Stroke 20" Can one be overhauled while the other is at work -

No. of Bilge pumps One Diameter of ditto 2 1/2" Stroke 20" Can one be overhauled while the other is at work -

No. of Donkey Engines 2 Sizes of Pumps one 4 x 2 1/2" stroke No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room Two 2" one 4 x 5" stroke In Holds, &c. Two 2" Iron Hold

No. of bilge injections one sizes 3 1/2" Connected to condenser, or to circulating pump Yes Is a separate donkey suction fitted in Engine room & size Yes 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 to the hold How are they protected By wooden casing

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? before caulding Is the screw shaft tunnel watertight None

Is it fitted with a watertight door Yes worked from -

BOILERS, &c. — (Letter for record) Total Heating Surface of Boilers 1268 sq ft

No. and Description of Boilers One ordinary type Working Pressure 125 Tested by hydraulic pressure to -

Date of test Yes Can each boiler be worked separately Yes Area of fire grate in each boiler 31 sq ft No. and Description of safety valves to each boiler 2 Spring Area of each valve 7.06 sq in Pressure to which they are adjusted 125 lbs Are they fitted with easing gear Yes Smallest distance between boilers or uptakes and bunkers or woodwork 5-0" Mean diameter of boilers

Length - Material of shell plates - Thickness - Description of riveting: circum. seams - long. seams -

Diameter of rivet holes in long. seams - Pitch of rivets - Lap of plates or width of butt straps -

Per centages of strength of longitudinal joint - Working pressure of shell by rules - Size of manhole in shell -

Size of compensating ring - No. and Description of Furnaces in each boiler - Material - Outside diameter -

Length of plain part - Thickness of plates - Description of longitudinal joint - No. of strengthening rings -

Working pressure of furnace by the rules - Combustion chamber plates: Material - Thickness: Sides - Back - Top - Bottom -

Pitch of stays to ditto: Sides - Back - Top - If stays are fitted with nuts or riveted heads - Working pressure by rules -

Material of stays - Diameter at smallest part - Area supported by each stay - Working pressure by rules - End plates in steam space: -

Material - Thickness - Pitch of stays - How are stays secured - Working pressure by rules - Material of stays -

Diameter at smallest part - Area supported by each stay - Working pressure by rules - Material of Front plates at bottom -

Thickness - Material of Lower back plate - Thickness - Greatest pitch of stays - Working pressure of plate by rules -

Diameter of tubes - Pitch of tubes - Material of tube plates - Thickness: Front - Back - Mean pitch of stays -

Pitch across wide water spaces - Working pressures by rules - Girders to Chamber tops: Material - Depth and thickness of girder at centre - Length as per rule - Distance apart - Number and pitch of Stays in each -

Working pressure by rules - Superheater or Steam chest; how connected to boiler - 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 -

Pitch of rivets - Working pressure of shell by rules - Diameter of flue - Material of flue plates - Thickness -

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 -

