

REPORT ON MACHINERY.

Port of Leith

FRI. JAN 4 1901

No. in Survey held at Leith Date, first Survey 19th Oct. 1899 Last Survey 22nd Dec. 1900
 Reg. Book. on the S.S. "Benclouch" (Number of Visits 59)
 Master A.W.S. Thomson Built at Leith By whom built Ramage + Ferguson Ltd. When built 1900
 Engines made at Leith By whom made Ramage + Ferguson when made 1900
 Boilers made at do By whom made do when made 1900
 Registered Horse Power 324 Owners W. Thomson + Co Port belonging to Leith
 Nom. Hors. Power as per Section 28 324 Is Refrigerating Machinery fitted no Is Electric Light fitted no

Gross 4158.69
 Net 2679.11
 Tons

ENGINES, &c.—Description of Engines Triple expansion No. of Cylinders 3 No. of Cranks 3
 Dia. of Cylinders 25" - 41" - 67" Length of Stroke 45" Revs. per minute 80 Dia. of Screw shaft as per rule 12.99" Lgth. of stern bush 5' 9"
 Dia. of Tunnel shaft as per rule 11.76" Dia. of Crank shaft journals as per rule 12.38" Dia. of Crank pin 13" Size of Crank webs 21 x 9 1/4" Dia. of thrust shaft under collars 13 1/2" Dia. of screw 17' 0" Pitch of screw 17' 6" No. of blades 4 State whether moveable yes Total surface 75 sq
 No. of Feed pumps 2 Diameter of ditto 4" Stroke 24" Can one be overhauled while the other is at work ✓
 No. of Bilge pumps 2 Diameter of ditto 4 1/2" Stroke 24" Can one be overhauled while the other is at work ✓
 No. of Donkey Engines 2 Sizes of Pumps 8 x 6 x 8 - 10 x 12 x 10 No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room Two 3 1/2" In Holds, &c. Two to each hold 3 1/2" one to tunnel well 2" + one to fore end of tunnel 2"
 No. of bilge injections 1 sizes 6 1/2" Connected to ~~compressor~~ circulating pump yes Is a separate donkey suction fitted in Engine room & size Two - 4"
 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 Deck.

BOILERS, &c.— (Letter for record S) Total Heating Surface of Boilers 4966 sq Is forced draft fitted no
 No. and Description of Boilers Two multitubular single ended Working Pressure 180 lb Tested by hydraulic pressure to 360 lb
 Date of test 6/10/00 Can each boiler be worked separately yes Area of fire grate in each boiler 80 sq No. and Description of safety valves to each boiler Two, Spring Area of each valve 8.62 sq Pressure to which they are adjusted 185 lbs Are they fitted with easing gear yes
 Smallest distance between boilers upstays and bunkers or woodwork 12" Mean dia. of boilers 16' 6" Length 10' 6" Material of shell plates Steel
 Thickness 1 1/16" Range of tensile strength 28/32 Are they welded or flanged no Descrip. of riveting: cir. seams Lap. S. Riv. long. seams S.B.S.S. Riv.
 Diameter of rivet holes in long. seams 1 7/16" Pitch of rivets 10" Lap of plates — width of butt straps 22 1/4"
 Percentages of strength of longitudinal joint 91.5 Working pressure of shell by rules 213 lbs Size of manhole in shell 16 x 12
 Size of compensating ring McNeil's No. and Description of Furnaces in each boiler 4 - Brighton's Material Steel Outside diameter 45"
 Length of plain part — Thickness of plates 5/8" Description of longitudinal joint welded No. of strengthening rings ✓
 Working pressure of furnace by the rules 223 lbs Combustion chamber plates: Material Steel Thickness: Sides 1 1/16" Back 2/32" Top 1 1/32" Bottom 1 1/16"
 Pitch of stays to ditto: Sides 9 x 8 1/2" Back 9 1/2 x 8" Top 8 1/4 x 8" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 194 lbs
 Material of stays Steel Diameter at smallest part 1.73 sq Area supported by each stay 76" Working pressure by rules 182 lbs End plates in steam space:
 Material Steel Thickness 1 1/8" Pitch of stays 16 x 15 1/2" How are stays secured S.R. + W. Working pressure by rules 235 lbs Material of stays Steel
 Diameter at smallest part 5.05 sq Area supported by each stay 248 sq Working pressure by rules 203 lbs Material of Front plates at bottom Steel
 Thickness 7/8" Material of Lower back plate Steel Thickness 29/32 Greatest pitch of stays 13" Working pressure of plate by rules 243 lbs
 Diameter of tubes 3 1/4" Pitch of tubes 4 1/2" Material of tube plates Steel Thickness: Front 1" Back 29/32" Mean pitch of stays 11 1/4"
 Pitch across wide water spaces 14 1/4" Working pressures by rules 188 lbs Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 8 x 1 3/4" Length as per rule 29" Distance apart 8 1/4" Number and pitch of Stays in each 2 - 8"
 Working pressure by rules 220 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 steel 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 ✓



