

REPORT ON MACHINERY.

Port of Sunderland

Received at London Office JUN. 24 JUN 1902

No. in Survey held at Sunderland Date, first Survey 29th May, 1901 Last Survey 19th June 1902
 Reg. Book. on the S.S. "Ras Issa" (Number of Visits 27)
 Master Wm. G. Johnson Built at Sunderland By whom built Osbourne, Graham & Co When built 1902
 Engines made at Sunderland By whom made Geo Clark & Co when made 1902
 Boilers made at Sunderland By whom made Geo Clark & Co when made 1902
 Registered Horse Power _____ Owners Graham & Co Port belonging to London
 Nom. Horse Power as per Section 28 348 Is Refrigerating Machinery fitted No Is Electric Light fitted No

ENGINES, &c.—Description of Engines Triple No. of Cylinders 3 No. of Cranks 3
 Dia. of Cylinders 25-42-68 Length of Stroke 48" Revs. per minute 70 Dia. of Screw shaft 13 1/2 as per rule 13 1/2 as fitted 14 1/16 Lgth. of stern bush 4-9
 Dia. of Tunnel shaft 12 3/4 as per rule 12 3/4 as fitted 12 3/4 Dia. of Crank shaft journals 13 3/8 as per rule 13 3/8 as fitted 13 3/8 Dia. of Crank pin 13 1/2 Size of Crank webs 20"x9" Dia. of thrust shaft under
 collars 14 1/4 Dia. of screw 1 1/4-3" Pitch of screw 18 ft No. of blades 4 State whether moceable No Total surface 90 1/2 sq
 No. of Feed pumps 2 Diameter of ditto 3 3/4 Stroke 25 1/2 Can one be overhauled while the other is at work yes
 No. of Bilge pumps 2 Diameter of ditto 4 3/8 Stroke 25 1/2 Can one be overhauled while the other is at work yes
 No. of Donkey Engines 2 Sizes of Pumps 7 3/4 x 9 x 10 7 1/2 x 5 x 6 No. and size of Suctions connected to both Bilge and Donkey pumps
 in Engine Room 3 of 3 1/2 dia In Holds, &c. 2 in each hold 3 1/2 dia
aft hold well 3 1/2
Tunnel well 3 1/2
 No. of bilge injections 1 sizes 6" Connected to condenser, or to circulating pump C.P. Is a separate donkey suction fitted in Engine room & size Yes 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 yes
 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 near vessel Is the screw shaft tunnel watertight yes
 Is it fitted with a watertight door yes worked from top platform

OILERS, &c.— (Letter for record S) Total Heating Surface of Boilers 5398 sq Is forced draft fitted No
 No. and Description of Boilers 2 single end ord marine type Working Pressure 180 lbs Tested by hydraulic pressure to 360
 Date of test 28-4-02 Can each boiler be worked separately yes Area of fire grate in each boiler 79.5 sq No. and Description of safety valves to
 each boiler 2 direct spring loaded Area of each valve 11.04 Pressure to which they are adjusted 180 Are they fitted with edging gear yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 2'-6" Mean dia. of boilers 16' 7 1/2" Length 11' 6" Material of shell plates S
 Thickness 1 1/16 Range of tensile strength 28 1/2-32 Are they welded or flanged end plates flanged Descrip. of riveting: cir. seams D.R.L. long. seams T.R.D.B.
 Diameter of rivet holes in long. seams 1 1/16 Pitch of rivets 8 3/4 width of butt straps 20 1/8
 Per centages of strength of longitudinal joint rivets 87 Working pressure of shell by rules 180 Size of manhole in shell 16x13
 plate 85
 Size of compensating ring 8 3/8 x 1 1/16 No. and Description of Furnaces in each boiler 4 Jols Material S Outside diameter 3-9 1/2
 Length of plain part ✓ Thickness of plates 1 1/16 Description of longitudinal joint welded No. of strengthening rings ✓
 Working pressure of furnace by the rules 193 Combustion chamber plates: Material S Thickness: Sides 1/16 Back 1/16 Top 1/16 Bottom 1/16
 Pitch of stays to ditto: Sides 9"x10 Back 9x10 Top 8 3/8 If stays are fitted with nuts or riveted heads NUTS Working pressure by rules 181
 Material of stays S Diameter at smallest part 1.6 Area supported by each stay 87 Working pressure by rules 188 End plates in steam space:
 Material S Thickness 1 9/32 Pitch of stays 22 3/8 x 17 How are stays secured NUTS Working pressure by rules 183 Material of stays S
 Diameter at smallest part 2-9 1/2 Area supported by each stay 384 Working pressure by rules 186 Material of Front plates at bottom S
 Thickness 3/4 Material of Lower back plate S Thickness 29/32 Greatest pitch of stays 14 Working pressure of plate by rules 182
 Diameter of tubes 3 1/4 Pitch of tubes 4 1/2 Material of tube plates S Thickness: Front 1 1/4 Back 25/32 Mean pitch of stays 9"
 Pitch across wide water spaces 14 1/4 Working pressures by rules 182 Girders to Chamber tops: Material S Depth and
 thickness of girder at center 10 1/2 x 13 1/16 x 2 Length as per rule 3-0 Distance apart 9 1/4 Number and pitch of Stays in each 3-8 3/8
 Working pressure by rules 181 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 casing gear _____



