

# REPORT ON MACHINERY.

15841

Port of Sunderland

Received at London Office

MON 27 MA 1889

Survey held at Sunderland

Date, first Survey 18<sup>th</sup> Octr/88 Last Survey 15<sup>th</sup> May 1889.

(Number of Visits 27)

2944

Tons 1410

on the S.S. 'Deddington'

J Wright Built at Sunderland By whom built J Priestman & Co When built 1889

made at Sunderland By whom made George Clark when made 1889.

made at Sunderland By whom made George Clark when made 1889.

indicated Horse Power 180 200 Owners H Samman Port belonging to Hull

Engines, &c.—

Kind of Engines Triple compound  
No. of Cylinders 2 Length of Stroke 39" No. of Rev. per minute 60 Point of Cut off, High Pressure 1/2 stroke Low Pressure 1/2 stroke  
Diam. of Tunnel shaft 10 3/8" Diam. of Crank shaft journals 10 3/8" Diam. of Crank pin 10 7/8" size of Crank webs 2 1/2" x 4 1/2"  
Pitch of screw 15-9" No. of blades 4 state whether moveable not total surface 68 1/2 sq ft

Feed pumps 2 diameter of ditto 3 1/2" Stroke 21" Can one be overhauled while the other is at work yes

Bilge pumps 2 diameter of ditto 4 1/4" Stroke 21" Can one be overhauled while the other is at work yes

Do they pump from Fore hold, fore & main tanks, engine room, after tank, & after well

Donkey Engines two Size of Pumps 8" x 10 1/4" x 3 3/4" x 5" Where do they pump from Sea, hot well, fore hold

Are the bilge suction pipes fitted with roses yes Are the roses always accessible yes Are the sluices on Engine room bulkheads always accessible yes

Are the bilge injections one and sizes 4" Are they connected to condenser, or to circulating pump circulating pump

Are the pumps worked by levers on intermediate engine

Are the connections with the sea direct on the skin of the ship yes Are they Valves or Cocks both

Are the pipes 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 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

Are the pipes carried through the bunkers none How are they protected by a plate

Are the pipes, cocks, valves, and pumps in connection with the machinery accessible at all times yes

Are the pipes, cocks, and valves arranged so as to prevent an unintentional connection between the sea and the bilges yes

Were the stern tube, propeller, screw shaft, and all connections examined in dry dock new vessel

Is the screw shaft tunnel watertight yes and fitted with a sluice door yes worked from top platform

Engines, &c.—  
No. of Boilers 2 Description single ended, ordinary type Whether Steel or Iron Steel, excepting tubes

Working Pressure 160 lbs Tested by hydraulic pressure to 320 lbs Date of test 5-4-89. (4 screw stamp)

Is there any superheating apparatus or steam chest none

Can the boiler be worked separately yes Can the superheater be shut off and the boiler worked separately no superheater

Area of fire grate surface in each boiler 49 sq ft Description of safety valves direct spring No. to each boiler 2

Are they fitted with easing gear yes No. of safety valves to superheater — area of each valve —

Are they fitted with easing gear — Smallest distance between boilers and bunkers or woodwork 13" Diameter of boilers 12-11"

Are the boilers 10-6" description of riveting of shell long. seams treble riv'd butt circum. seams double riv'd lap Thickness of shell plates 1 5/32"

Are the rivet holes 1 3/16" whether punched or drilled drilled pitch of rivets 8 3/4" Lap of plating 1 1/4" straps

Are the joints of strength of longitudinal joint 85-100 working pressure of shell by rules 164 lbs size of manholes in shell 16 x 13"

Are there compensating rings 4 3/4" x 1 3/16" No. of Furnaces in each boiler 3

Are the rings diameter 3-4 3/4" length, top 4-0" bottom 4-0" thickness of plates 9/16" description of joint ribbed if rings are fitted no

Are the rings length between rings — working pressure of furnace by the rules 140 lbs combustion chamber plating, thickness, sides 9/16" back 9/16" top 9/16"

Are the rings stays to ditto, sides 7 3/4" x 7/4" back 7 3/4" x 7/4" top radius 9 1/4" stays are fitted with nuts or riveted heads nuts working pressure of plating by rules 162 lbs

Are the rings diameter of stays at smallest part 1 1/2" working pressure of ditto by rules 140 lbs end plates in steam space, thickness 3/32"

Are the rings stays to ditto 15" x 14 1/2" how stays are secured nuts working pressure by rules 160 lbs diameter of stays at smallest part 2-28" working pressure by rules 165 lbs Front plates at bottom, thickness 1/16" Back plates, thickness 3/4"

Are the rings pitch of stays 11" working pressure by rules 160 lbs Diameter of tubes 3 3/4" pitch of tubes 4 3/8" x 4 7/16" thickness of tube —

Are the rings front 7/8" back 3/4" how stayed stay tubes pitch of stays 8 3/4" x 8 3/8" width of water spaces 1 3/4" x 1 3/16"

Are there Superheater or Steam chest none length — thickness of plates — description of longitudinal joint — diam. of rivet holes —

Are there stays — working pressure of shell by rules — diameter of flue — thickness of plates — If stiffened with rings —

Are there stays between rings — working pressure by rules — end plates of superheater, or steam chest; thickness — how stayed —

Are there stays Superheater or steam chest; how connected to boiler —

Description of furnaces —

**DONKEY BOILER**— Description *Vertical with four cross tubes*  
 Made at *Newcastle* by whom made *Nicholson Brothers* when made *19-2-89* where fixed *Stokehold*  
 Working pressure *40 lbs* tested by hydraulic pressure to *140 lbs* No. of Certificate *2440* fire grate area *23 sq* description of safety  
 valves *Direct spring* No. of safety valves *2* area of each *9.620* if fitted with easing gear *yes* if steam from main boilers can  
 enter the donkey boiler *no* diameter of donkey boiler *6-3"* length *13-6"* description of riveting *double riv'd lap*  
 Thickness of shell plates *3/8"* diameter of rivet holes *13/16"* whether punched or drilled *drilled* pitch of rivets *2 3/4"* lap of plating *3 3/4"*  
 per centage of strength of joint *40.4%* thickness of crown plates *1/2"* stayed by *6 stays 1 1/2" effective diameter*  
 Diameter of furnace, top *5-0"* bottom *5-8"* length of furnace *4-0"* thickness of plates *9/16"* description of joint *single riv'd lap*  
 Thickness of furnace crown plates *1/2"* stayed by *six stays 1 1/2" diameter* working pressure of shell by rules *40 lbs*  
 Working pressure of furnace by rules *40 lbs* diameter of uptake *16"* thickness of plates *3/8"* thickness of water tubes *3/8"*

**SPARE GEAR.** State the articles supplied:— *Top and bottom end connecting rod bolts, two  
 two main bearing bolts and nuts, one set of coupling bottom nut  
 feed and bilge pump valves, propeller bolts nuts and iron assembly*

The foregoing is a correct description,  
 per *Geo. Blair* Manufacturer of main engine boilers  
*Blair & Co*

**General Remarks** (State quality of workmanship, opinions as to class, &c.)  
*The main steam pipes have been tested by hydraulic pressure to  
 320 lbs per square inch. The machinery has been constructed  
 special survey. the material and workmanship are good and  
 efficient and the engine when tried under steam worked  
 satisfactorily. In my opinion the machinery of this vessel is  
 good order and safe working condition and eligible for the  
 notification in the Register Book of L.M.C. 5-89.*

*It is submitted that  
 the vessel is fit to be  
 used for service  
 + L.M.C. 5-89*

*Blair*

The amount of Entry Fee .. £ *2 : 0* :- *same as before* received by me,  
 (Special *201. 11. 1.*) .. £ ~~24 : 0~~ :  
 Donkey Boiler Fee .. .. £ *30 : 0 : 0*  
 Certificate (if required) .. £ : : *29/5/89* 18  
 To be sent as per margin.  
 (Travelling Expenses, if any, £ \_\_\_\_\_)

Committee's Minute *FRIDAY 31 MAY 1889*  
*+ Emb 5/89*

*Pat R Salmon* © 2021  
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