

REPORT ON MACHINERY.

W66

No. 9465

Port of Glasgow

THURS 17 APRIL 1890

No. in Survey held at Reg. Book.

Glasgow

Date, first Survey 18th June 1888 Last Survey 4th April 1890

(Number of Visits 35 2185 Tons 1410

on the S. S. Brunty Down
Master W. J. Shaw Built at Belfast By whom built Workman Clark & Co. Ltd When built 1889
Engines made at Glasgow By whom made W. King & Co when made 1889.
Boilers made at Do By whom made Do when made 1889.
Registered Horse Power 160 Owners Brunty S. S. Co. Ltd W. J. Woodside & Co. May Port belonging to Belfast

ENGINES, &c.—

Description of Engines Inverted Direct Acting - Triple Expansion
Diameter of Cylinders 19"-32"-52" Length of Stroke 42" No. of Rev. per minute 80 Point of Cut off, High Pressure Variable Low Pressure
Diameter of Screw shaft 10 1/2" Diam. of Tunnel shaft 10 1/4" Diam. of Crank shaft journals 10 1/2" Diam. of Crank pin 10 1/2" size of Crank webs Built
Diameter of screw 13-0" Pitch of screw 14-6" No. of blades Four state whether moveable No total surface 60 sq ft.
No. of Feed pumps Two diameter of ditto 3" Stroke 21" Can one be overhauled while the other is at work Yes
No. of Bilge pumps Two diameter of ditto 4" Stroke 21" Can one be overhauled while the other is at work Yes.
Where do they pump from Aft Hold - Engine Room & Fore Hold.
No. of Donkey Engines Two Size of Pumps 16 gals 4 pump x 6 stroke Where do they pump from Northampton Duplex from Sea
Bilges - Tank & Hotwell. Ballast 8" 8" 12" Ballast from Tanks, bilges, Sea & condenser.
Are all the bilge suction pipes fitted with roses Yes Are the roses always accessible Yes Are the sluices on Engine room bulkheads always accessible Yes
No. of bilge injections One and sizes 3 1/2" dia Are they connected to condenser, or to circulating pump Circulating.
How are the pumps worked By lines from Crosshead of L. P. engine.
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 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
When were stern tube, propeller, screw shaft, and all connections examined in dry dock Before launching
Is the screw shaft tunnel watertight Yes and fitted with a sluice door Yes worked from 1 main deck

BOILERS, &c.—

Number of Boilers One Description Cylindrical. Mult. Whether Steel or Iron Steel
Working Pressure 160 lbs. Tested by hydraulic pressure to 320 lbs. Date of test 28th Sept 1889.
Description of superheating apparatus or steam chest None
Can each boiler be worked separately ✓ Can the superheater be shut off and the boiler worked separately ✓
No. of square feet of fire grate surface in each boiler 102. Description of safety valves Direct spring No. to each boiler Two
Area of each valve 14.19 sq ins 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 24" Diameter of boilers 13-0"
Length of boilers 17-8" description of riveting of shell long. seams Butt. three part circum. seams Lap. double. Thickness of shell plates 1 3/16"
Diameter of rivet holes 1 5/16" whether punched or drilled Drilled. pitch of rivets 7 3/4" & 3 3/8" Lap of plating 20 1/4" x 1 1/16"
Per centage of strength of longitudinal joint 83 working pressure of shell by rules 174 lbs size of manholes in shell 16" x 12"
Size of compensating rings Double riveted plate. (McNeill) No. of Furnaces in each boiler Six
Outside diameter 35" length, top 7-0" bottom ✓ thickness of plates 1/2" description of joint Weld. if rings are fitted Annular
Greatest length between rings 9" working pressure of furnace by the rules 170 lbs combustion chamber plating, thickness, sides 9/16" back ✓ top 3/4"
Pitch of stays to ditto, sides 7 3/4" x 7 1/2" back ✓ top ✓ If stays are fitted with nuts or riveted heads Nuts working pressure of plating by
rules 162 lbs. Diameter of stays at smallest part 1 1/2" circum working pressure of ditto by rules 180 lbs end plates in steam space, thickness 1 3/16" Drilling 10" x 1 1/16"
Pitch of stays to ditto 13 1/2" x 13 1/2" how stays are secured Nuts working pressure by rules 160 lbs diameter of stays at
smallest part 2 1/4" circum fine thread working pressure by rules 160 lbs Front plates at bottom, thickness 1 3/16" Back plates, thickness ✓
Greatest pitch of stays - working pressure by rules ✓ Diameter of tubes 3 1/2" pitch of tubes 4 1/2" thickness of tube
plates, front 3/4" back 3/4" how stayed Tubes pitch of stays 15 1/2" x 9" width of water spaces 6"
Diameter of Superheater or Steam chest None length ✓ thickness of plates ✓ description of longitudinal joint - diam. of rivet holes -
Pitch of rivets ✓ working pressure of shell by rules ✓ diameter of flue ✓ thickness of plates ✓ If stiffened with rings -
Distance between rings ✓ working pressure by rules ✓ end plates of superheater, or steam chest; thickness ✓ how stayed ✓
Superheater or steam chest; how connected to boiler -

Description of furnaces Annular ribbed.

GLS159-0276

Lloyd's Register Foundation

9765 G/S

DONKEY BOILER— Description *Two boilers - Vertical.*
Made at *Glasgow.* by whom made *W. King & Co* when made *1889* where fixed *Main deck*
Working pressure *80 lbs.* tested by hydraulic pressure to *160 lbs.* No. of Certificate *2465* fire grate area *23.729 sq ft* description of safety
valves *Direct spring.* No. of safety valves *one* area of each *14.19 sq ft* if fitted with easing gear *yes* if steam from main boilers can
enter the donkey boiler *No.* diameter of donkey boiler *6-6"* length *12-6"* description of riveting *Lap - double.*
Thickness of shell plates *7/16"* diameter of rivet holes *13/16"* whether punched or drilled *Drilled* pitch of rivets *3 1/4"* lap of plating *5"*
percentage of strength of joint *73* thickness of crown plates *5/8"* stayed by *Rise stays and end dished.*
Diameter of furnace, top *5-5"* bottom *5-9"* *None some of rising stays.* length of furnace *5-8"* thickness of plates *7/16"* description of joint *Lap.*
Thickness of furnace crown plates *9/16"* stayed by *Rise stays & end dished* working pressure of shell by rules *8*
Working pressure of furnace by rules *80 lbs.* diameter of uptake *15"* thickness of plates *1/2"* thickness of water tubes *7/16"*

SPARE GEAR. State the articles supplied:— *Connecting rod top & bottom end bolts & nuts - 1*
main bearing bolts - one set of coupling bolts - Feed & bilge pump valves
assorted bolts, nuts &c. - One propeller. Air & circulating pump valves.

The foregoing is a correct description,
Pro. WILLIAM KING & CO. LIMITED. Manufacturer.
W. G. Peterson DIRECTOR.

General Remarks (State quality of workmanship, opinions as to class, &c.)

These engines & boilers have been constructed under special survey - they are of good material & workmanship - they have been well fitted on board - satisfactorily tested under steam and I am of opinion they are eligible to be classed + L.M.C. 4-90 in the Register Book.

Appended hereto is one Report on T. engines.

This is submitted that this vessel is eligible to have + L.M.C. 4-90 recorded.
17.4.90

The amount of Entry Fee .. £ *2* : : : received by me,
Special £ *24* : : :
Donkey Boiler Fee £ : : :
Certificate (if required) .. £ : : : *14/4/1890*
To be sent as per margin.
(Travelling Expenses, if any, £)

Committee's Minute *FRIDAY 18 APRIL 1890*
+ L.M.C. 4/90

Walter S. Robison.
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

