

REPORT ON MACHINERY.

1665

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

Received at London Office 18

(Number of Visits 35) 2185

on the S. S. County Down

Tons 1410

Master Mr. 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 County S.S. Co. Ltd Mr. 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 *Build*

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 yds 4 pump x 6 stroke* Where do they pump from *Northampton Duplex from Sea*

Bilges *Yank & Holwell* Ballast *8" 8" 12"* Ballast from *Yanks, 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 levers 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 rows 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 1/2"*

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 *hemispherical* 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 ins* working pressure of ditto by rules *180 lbs.* end plates in steam space, thickness *13/16* *Dublin 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 ins fine thread* working pressure by rules *160 lbs.* Front plates at bottom, thickness *13/16"* 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 *✓*

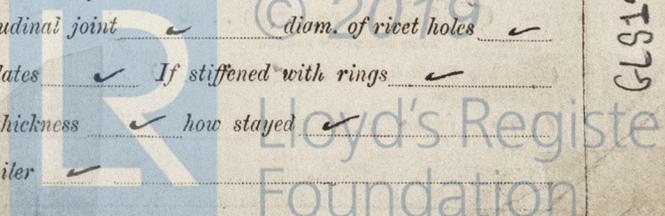
Distance between rings *✓* working pressure by rules *✓* end plates of superheater, or steam chest; thickness *✓* how stayed *✓*

Superheater or steam chest; how connected to boiler *✓*

State if Report is also sent on the Hull of the Ship

Annular Ribbed. Description of furnaces

GLS159-0276



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"* full whether punched or drilled *Drilled* pitch of rivets *3 1/4"* lap of plating *5"*
 per centage 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 rows 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 - Fed & 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. Tetlow 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.

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

Lloyd's Register Foundation