

REPORT ON MACHINERY.

9830.

THURS 15 MAY 1890

No. 9830

Port of Glasgow

Received at London Office

No. in Survey held at Glasgow

Date, first Survey 28th Oct. 1889 Last Survey 8th May 1890

Reg. Book.

on the Twin Screw Steamer "Bute No 2."

(Number of Visits 28)

Tons { Gross 140
Net 31

Master John Buie Built at Bowling By whom built Scott & Co

When built 1890.

Engines made at Glasgow By whom made William Kemp

when made 1890.

Boilers made at Glasgow By whom made Anderson & Ryall

when made 1890.

Registered Horse Power 50 Owners J. Rodger

Port belonging to Glasgow

ENGINES, &c.—

Description of Engines Compound Inverted Twin Screw No. of Cylinders 2 each set

Diam. of Cylinders $12\frac{1}{2}$ " & $12\frac{3}{4}$ " Length of Stroke 18" Rev. per minute 120. Point of Cut off, High Pressure Low Pressure

Diameter of Screw shaft $4\frac{1}{2}$ " Diam. of Tunnel shaft $4\frac{1}{2}$ " Diam. of Crank shaft journals $4\frac{3}{4}$ " Diam. of Crank pin $4\frac{3}{4}$ " size of Crank webs $3\frac{3}{8}$ " x $6\frac{1}{2}$ "

Diameter of screw $5\frac{1}{2}$ " Pitch of screw 11" 0" No. of blades 3. state whether moveable no total surface $7\frac{3}{4}$ sq ft

No. of Feed pumps One diameter of ditto 2" Stroke 9" Can one be overhauled while the other is at work —

No. of Bilge pumps One diameter of ditto 2" Stroke 9" Can one be overhauled while the other is at work —

Where do they pump from All compartments

No. of Donkey Engines One Size of Pumps $5\frac{1}{2}$ " x $6\frac{1}{2}$ " x $2\frac{1}{2}$ " Where do they pump from Sea & bilges

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 2" Are they connected to condenser, or to circulating pumps Yes

How are the pumps worked by levers

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 about

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 in stocks before launching

Is the screw shaft tunnel watertight None and fitted with a sluice door — worked from —

BOILERS, &c.—

No. of Boilers One Description Multitubular Material Steel Letter (for record) S.

Working Pressure 90 lbs. Tested by hydraulic pressure to 180 lbs. Date of test April 17th 1890.

Description of superheating apparatus or steam chest —

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 $28\frac{1}{2}$ " Description of safety valves Direct Spring No. to each boiler two

Area of each valve 7" 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 6' 0" (stokehold) Diameter of boilers 10' 3"

Length of boilers 9' 6" description of riveting of shell long. seams Lap joint 3 rows circum. seams Lap joint 2 rows Thickness of shell plates $2\frac{1}{32}$ "

Diameter of rivet holes 1" whether punched or drilled drilled pitch of rivets $4\frac{1}{2}$ " x $2\frac{1}{8}$ " Lap of plating $7\frac{1}{2}$ " x $4\frac{3}{4}$ "

Per centage of strength of longitudinal joint 75% working pressure of shell by rules 92 lbs. size of manholes in shell 15" x 11"

Size of compensating rings $5\frac{1}{2}$ " x $1\frac{1}{8}$ " No. of Furnaces in each boiler Two Description of Furnaces Plain

Outside diameter 37" length 6' 6" thickness of plates $\frac{1}{2}$ " description of joint D. butt strap joint if rings are fitted —

Greatest length between rings — working pressure of furnace by the rules 93 lbs combustion chamber plating, thickness, sides $\frac{7}{16}$ " back $\frac{7}{16}$ " top $\frac{7}{16}$ "

Pitch of stays to ditto, sides 8" x 8" back 8" x 8" top 8" x 9" If stays are fitted with nuts or riveted heads Nuts working pressure of plating by rules 90 lbs

Diameter of stays at smallest part $1\frac{1}{8}$ " working pressure of ditto by rules 120 lbs and plates in steam space, thickness $\frac{1}{16}$ "

Pitch of stays to ditto $15\frac{1}{2}$ " x $15\frac{1}{2}$ " how stays are secured D. nut & wash working pressure by rules 90 lbs diameter of stays at smallest part $1\frac{7}{8}$ " working pressure by rules 107 lbs

Greatest pitch of stays — working pressure by rules — Diameter of tubes $3\frac{1}{2}$ " pitch of tubes $4\frac{3}{16}$ " x $4\frac{1}{16}$ " thickness of tube plates, front $\frac{1}{16}$ " back $\frac{1}{16}$ " how stayed S. Tubes pitch of stays $9\frac{1}{8}$ " x $1\frac{1}{16}$ " width of water spaces $5\frac{1}{2}$ " x $8\frac{1}{2}$ "

Diameter of Superheater or Steam chest — 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 —

GLS159-0365

State of Report on the Machinery of the Ship

Lloyd's Register Foundation

9830 *gls*

DONKEY BOILER—

Description

*Vertical with cross tubes*Made at *Gateshead* by whom made *Clark Chapman & Co* when made *1890* where fixed *Stokehold*Working pressure *70 lbs.* tested by hydraulic pressure to *140 lbs.* No. of Certificate *3188.* fire grate area *7.* description of safetyvalves *direct spring* No. of safety valves *2.* area of each *3.14* if fitted with easing gear *yes* if steam from main boilersenter the donkey boiler *no* diameter of donkey boiler *3'-6"* length *4'-6"* description of riveting *single & double*Thickness of shell plates *3/8"* diameter of rivet holes *3/4"* whether punched or drilled *d.* pitch of rivets *2 3/4"* lap of plating *3 5/8"*per centage of strength of joint *72 7/8* thickness of crown plates *1/2"* stayed by *three stays 1 1/8" dia"*Diameter of furnace, top *2'-8 1/4"* bottom *2'-11"* length of furnace *36"* thickness of plates *7/16* description of joint *lap*Thickness of furnace crown plates *3/8"* stayed by *as shell crown* working pressure of shell by rules *128 1/6*Working pressure of furnace by rules *103 lbs.* diameter of uptake *9"* thickness of plates *3/8"* thickness of water tubes *3/8"*

SPARE GEAR. State the articles supplied:—

Top and bottom end bolts, Main bearing bolts, Coupling bolts, Feed and bilge pump valves, Bolts, nuts & iron assorted.

The foregoing is a correct description,

Manufacturer.

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

*The above mentioned**engines and boilers have been built under Special Survey and are now completed on board in a satisfactory manner and the machinery is now in our opinion eligible to the notation of: **L.M.C. 5.90.****It is submitted that this vessel is eligible to have + L.M.C. 5.90 recorded*
*15.5.90*The amount of Entry Fee .. £ *1* : *0* : *0* received by me,Special .. £ *8* : *0* : *0*Donkey Boiler Fee .. £ *0* : *0* : *0*Certificate (if required) .. £ *0* : *0* : *0* *13/5/1890*

To be sent as per margin

(Travelling Expenses, if any, £)

Committee's Minute *TUES 20 MAY 1890**+ L.M.C. 5.90**11 SEP 1891*

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

*Glasgow*Lloyd's Register
Foundation