

REPORT ON MACHINERY.

No. 4883

(Received in London Office 2/16/80)

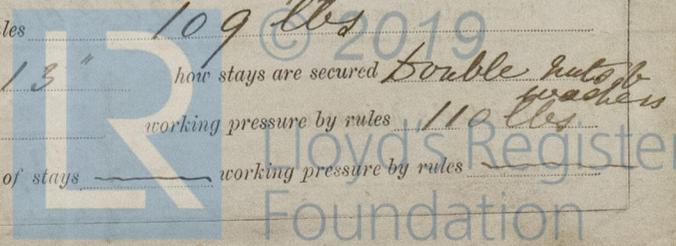
No. in Survey held at Port Glasgow Date, first Survey 31st March Last Survey 16th Oct 1880
 Reg. Book. 1142
 on the Steel screw Steamer "Deak" Tons 448
 Master White Built at Port Glasgow When built 1880
 Engines made at Port Glasgow By whom made Blackwood & Gordon when made 1880
 Boilers made at Port Glasgow By whom made Blackwood & Gordon when made 1880
 Registered Horse Power 120 Owners Burrell & Son Port belonging to Glasgow

ENGINES, &c.

Description of Engines Compound, Inverted, Direct-acting, Surface-condensing
 Diameter of Cylinders 30 & 52 Length of Stroke 36 No. of Rev. per minute 40 Point of Cut-off, High Pressure variable Low Pressure 5/8 stroke
 Diameter of Screw shaft 9 1/4 Diameter of Tunnel shaft 9 1/4 Diameter of Crank shaft journals 9 3/4 Diameter of Crank pin 9 3/4 size of Crank webs 1 1/2 x 4 1/2
 Diameter of screw 13.0 Pitch of screw 16.0 No. of blades 4 state whether moveable Yes total surface 40 sq. ft.
 No. of Feed pumps 2 diameter of ditto 3 1/4 Stroke 18 Can one be overhauled while the other is at work Yes
 No. of Bilge pumps 2 diameter of ditto 3 1/4 Stroke 18 Can one be overhauled while the other is at work Yes
 Where do they pump from Feed pumps from hotwell; bilge pumps from aft
 No. of Donkey Engines 2 Size of Pumps 8" x 9" stroke Where do they pump from Ballast engine from tanks only, feed engine 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 1 and sizes 3" dia. Are they connected to condenser, or to circulating pump Circulating pumps
 How are the pumps worked By levers from main crossheads
 Are all connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks Valves and cocks
 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 Just below
 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 Air pipe from hotwell How are they protected Strong wooden casing
 Are all pipes, cocks, valves, and pumps in connection with the machinery accessible Yes
 Are the pipes, cocks, and valves arranged so as to prevent an accidental connection between the sea and the bilges Yes
 When were stove, propeller, screw shaft, and all connections examined in dry dock near ship, before being launched
 Is the screw shaft tunnel watertight fitted with stuffing box & gland and fitted with a sluice door Yes worked from top of Engine Room

BOILERS, &c.

Number of Boilers One Description Iron, double-ended, Round horizontal
 Working Pressure 75 lbs Tested by hydraulic pressure to 150 lbs Date of test 4th Sept 80
 Description of superheating apparatus or steam chest Longitudinal steam receiver, part in uptake
 Can each boiler be worked separately Yes Can the superheater be shut off and the boiler worked separately No
 No. of square feet of fire grate surface in each boiler 60 Description of safety valves Direct spring
 No. to each boiler 2 area of each valve 14.7 sq. in. Are they fitted with easing gear Yes
 No. of safety valves to superheater None area of each valve None are they fitted with easing gear None
 Smallest distance between boilers and bunkers or woodwork About 16" to bunker side
 Diameter of boilers 12.0 Length of boilers 14.6 Description of riveting of shell long. seams Double strap, circum. seams, double lap.
 Thickness of shell plates 13/16 diameter of rivet holes 1" whether punched or drilled Punched pitch of rivets 5"
 Lap of plating Straps per centage of strength of longitudinal joint 80 working pressure of shell by rules 86 lbs
 Size of manholes in shell 14" x 11" size of compensating rings 3 1/2" x 3/4"
 No. of Furnaces in each boiler 4 outside diameter 3.5 length, top 5.6 bottom 5.6 to T iron
 Thickness of plates 1/2" description of joint Double straps if rings are fitted T iron pad round greatest length between rings 5.6"
 Working pressure of furnace by the rules 99 lbs
 Combustion chamber plating, thickness, sides 1/2" back 1/2" top 1/2"
 Pitch of stays to ditto 9" x 9" sides back 9" x 9" top 8" x 9" (girders)
 If stays are fitted with nuts or riveted heads riveted heads working pressure of plating by rules 79 lbs
 Diameter of stays at smallest part 1 3/8" working pressure of ditto by rules 109 lbs
 End plates in steam space, thickness 1/16" pitch of stays to ditto 13" x 13" how stays are secured Double nuts & washers
 Working pressure by rules 100 lbs diameter of stays at smallest part 2" working pressure by rules 110 lbs
 Front plates at bottom, thickness 1/16" Back plates, thickness 1/16" greatest pitch of stays None working pressure by rules None



Diameter of tubes $3''$ pitch of tubes $4\frac{1}{4}''$ thickness of tube plates, front $5\frac{1}{8}''$ back $5\frac{1}{8}''$
 How stayed *Tubes* pitch of stays $16\frac{1}{2}'' \times 8''$ & $15'' \times 8''$ width of water spaces $12''$ between tubes, $6''$ at heads
 Diameter of Superheater or Steam chest $3' 9''$ length $14' 6''$
 Thickness of plates $7\frac{1}{16}''$ description of longitudinal joint *Double lap* diameter of rivet holes $3\frac{1}{4}''$ pitch of rivets $2\frac{1}{2}''$
 Working pressure of shell by rules 102 lbs 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 $7\frac{1}{16}''$ How stayed *Three gusset stays each end*
 Superheater or steam chest; how connected to boiler *Two beds flanged & riveted, 15' diam. (holes in shell 15' x 15' x 15')*

DONKEY BOILER— Description *Round vertical, cross tubes.*
 Made at *Port Glasgow* By whom made *Blackwood & Gordon* when made *1880*
 Where fixed *In stowhead* working pressure 50 lbs Tested by hydraulic pressure to 100 lbs No. of Certificate *23*
 Fire grate area 14 sq ft. Description of safety valves *Direct spring* No. of safety valves *One* area of each 7 sq in
 If fitted with easing gear *Yes* If steam from main boiler can enter the donkey boiler *By opening valve*
 Diameter of donkey boiler $5' 2''$ length $12' 0''$ description of riveting *Double lap*
 thickness of shell plates $3\frac{3}{8}''$ diameter of rivet holes $3\frac{1}{4}''$ whether punched or drilled *Flashed*
 pitch of rivets $2\frac{1}{2}''$ lap of plating $5''$ per centage of strength of joint 70
 thickness of crown plates $7\frac{1}{16}$ (steel) stayed by *Bished & four stays, also uptake*
 Diameter of furnace, top $4' 2''$ bottom $4' 7''$ length of furnace $5' 0''$
 thickness of plates $7\frac{1}{16}$ "base (steel) description of joint *Laps*
 thickness of furnace crown plates $7\frac{1}{16}$ " (steel) stayed by *Bished, vertical stays and uptake*
 Working pressure of shell by rules 65 lbs working pressure of furnace by rules 56 lbs *not taking into account*
 diameter of uptake $15''$ thickness of plates $7\frac{1}{16}$ " (steel) thickness of water tubes $3\frac{1}{8}''$

The foregoing is a correct description,

Pro Blackwood & Gordon Manufacturers.

General Remarks (State quality of workmanship, opinions as to class, &c. *Workmanship and materials good*
No Engine and Boilers have been carefully inspected & no striking construction; they are in good and efficient condition, eligible in my opinion to be classed "LLOYD'S M.C." and to be rated "10.80"

It is submitted that this vessel is eligible to have the notification of Lloyd's M.C. recorded in the Register Book
J.M. 27/10/80

Large blue scribbled signature or stamp.

The amount of Entry Fee .. £ $2: 0: 0$ received by me, *[Signature]*
 Special .. £ $18: 0: 0$
 Certificate (if required) .. £ $0: 0: 0$ 19th Oct 1880
 To be sent as per margin. $520: 0: 0$
 (Travelling Expenses, if any, £ ..)

Alfred H. [Signature]
 Engineer Surveyor to Lloyd's Register of British & Foreign

Committee's Minute *Friday, October 22nd 1880*
Lloyd's M.C. 10.80