

REPORT ON MACHINERY.

No. 2703

(Received in London Office)

30/8/80

No. in Survey held at *Glasgow & Belfast*
Reg. Book.

Date, first Survey *August 1879* Last Survey *24 August 1880*

on the *S. S. Rosetta*

Tons *3457*
2217

Master *A. C. Barrow*

Built at *Belfast*

When built *1880*

Engines made at *Glasgow*

By whom made *J. Howden & Co.* when made *1880*

Boilers made at *Glasgow*

By whom made *J. Howden & Co.* when made *1880*

Registered Horse Power *700*

Owners *J. & C. S. M. Coy*

Port belonging to *Belfast*

ENGINES, &c.—

Description of Engines *Compound Inverted Direct Acting*

Diameter of Cylinders *54 & 9 1/4* Length of Stroke *60* No. of Rev. per minute *55 to 60* Point of Cut off, High Pressure *Variable* Low Pressure *Variable*

Diameter of Screw shaft *1 7/8* Diameter of Tunnel shaft *16* Diameter of Crank shaft journals *18* Diameter of Crank pin *18* size of Crank webs *2 1/2 x 1 1/4*

Diameter of screw *18 & 10 1/2* Pitch of screw *2 1/4* No. of blades *Four* state whether moveable *Yes* total surface *91 1/2* sq feet

No. of Feed pumps *Two* diameter of ditto *6 1/2* Stroke *30* Can one be overhauled while the other is at work *Yes*

No. of Bilge pumps *Two* diameter of ditto *6 1/2* Stroke *30* Can one be overhauled while the other is at work *Yes*

Where do they pump from *Holds, Moulds & Engine Room*

No. of Donkey Engines *Two* Size of Pumps *7 x 14 & 2 1/2 x 6* Where do they pump from *Large Donkey pumps*

from Sea, Hot well & Bilges. Small Donkey from Sea to feed Donkey Boilers

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 *8" valves* Are they connected to condenser, or to circulating pump *to Circulating Pump*

How are the pumps worked *by Levers from Crosshead*

Are all connections with the sea direct on the skin of the ship *Yes* Are they Valves or Cocks *Valves & 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 *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 inside the Bunkers* 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 *on Slip previous to ship being launched*

Is the screw shaft tunnel watertight *Yes* and fitted with a sluice door *Yes* worked from *Upper Deck*

BOILERS, &c.—

Number of Boilers *Six* Description *Round top & bottom, flat sided Multitubular*

Working Pressure *75 lbs* Tested by hydraulic pressure to *150 lbs* Date of test *9th, 27th & 29th April 1880*

Description of superheating apparatus or steam chest *no Superheater or Steam Chest*

Can each boiler be worked separately *Yes* Can the superheater be shut off and the boiler worked separately *—*

No. of square feet of fire grate surface in each boiler *50* Description of safety valves *Direct Spring*

No. to each boiler *Two* area of each valve *15.9 sq inch* 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 *5"*

Diameter of boilers *12.9* Length of boilers *10.3* description of riveting of shell long. seams *Double riveted* circum. seams *Double Lap joint*

Thickness of shell plates *7/8"* diameter of rivet holes *1 1/4 long 1 1/8* whether punched or drilled *long axis* pitch of rivets *6 1/8"*

Lap of plating *12 1/4 Straps* per centage of strength of longitudinal joint *70.8* working pressure of shell by rules *80.9*

Size of manholes in shell *15 1/2 x 11 1/2* size of compensating rings *3 1/2 x 3 1/2 x 5/8*

No. of Furnaces in each boiler *Three* outside diameter *38 7/8* length, top *7.4* bottom *9.9*

Thickness of plates *7/16"* description of joint *Welded* if rings are fitted *Yes* greatest length between rings *3.7 3/4*

Working pressure of furnace by the rules *120 lbs*

Combustion chamber plating, thickness, sides *7/16"* back *1/2"* top *7/16"*

Pitch of stays to ditto sides *8 x 7 1/2* back *8 1/4 x 8* top *8 1/2 x 8*

If stays are fitted with nuts or riveted heads *Nuts* working pressure of plating by rules *75 lbs for top 79 lbs for back 84 lbs for sides*

Diameter of stays at smallest part *1 1/4* working pressure of ditto by rules *from 111 lbs per inch to 123 lbs*

End plates in steam space, thickness *1 1/16* pitch of stays to ditto *16 x 18* how stays are secured *Double Nuts and*

Working pressure by rules *—* diameter of stays at smallest part *2 7/8"* working pressure by rules *135 lbs*

Front plates at bottom, thickness *3/4"* Back plates, thickness *3/4"* greatest pitch of stays *11 1/2* working pressure by rules *140 lbs*

27886 2m

Diameter of tubes $3\frac{1}{2}$ pitch of tubes $4\frac{3}{4}$ thickness of tube plates, front $\frac{1}{16}$ back $\frac{1}{16}$
How stayed Stay Tubes pitch of stays $1\frac{1}{4} \times 9\frac{1}{2}$ width of water spaces 6"
Diameter of Superheater or Steam chest length
Thickness of plates description of longitudinal joint diameter 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

DONKEY BOILER— Description Round top & bottom flat sided. How situated On the hull
Made at Glasgow By whom made J. Howard & Co when made 1880
Where fixed Main Deck working pressure 50 lbs Tested by hydraulic pressure to 100 No. of Certificate 288
Fire grate area reduced to 14 sq ft by Description of safety valves Direct Spring No. of safety valves one area of each 7 sq in
If fitted with easing gear from 18 sq ft building up the grate with brick which is the owners intention to remove or in the
Diameter of donkey boiler $4\frac{1}{2}$ length 8'6" description of riveting Double & single
thickness of shell plates $\frac{1}{2}$ diameter of rivet holes $\frac{13}{16}$ whether punched or drilled punched
pitch of rivets 3" lap of plating $3\frac{3}{4}$ per centage of strength of joint 69
thickness of crown plates stayed by
Diameter of furnace, top 38 bottom length of furnace 6'1" distance between rings 36"
thickness of plates $\frac{1}{2}$ description of joint welded
thickness of furnace crown plates stayed by
Working pressure of shell by rules 57 lbs working pressure of furnace by rules 194 lbs
diameter of uptake thickness of plates thickness of water tubes

The foregoing is a correct description,

James Howard & Co Manufacturers

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

The Engines & Boilers have been carefully inspected and examined by us. the quality of workmanship is good. and the Machinery & Boilers are now in good order and safe working condition. and are in our opinion eligible to be noted in the Register Book **✠ LLOYD'S. M.C. 8, 80**

This submitted that this vessel is eligible to have the notification of Lloyd's M.C. recorded in the Register Book
J.M. 30/8/85

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The amount of Entry Fee £ 3 : 0 : 0 received by me,
Special .. £ 55 : 0 : 0
Certificate (if required) .. £. Gratia : 20/8 1880
To be sent as per margin.
(Travelling Expenses, if any, £ 9-9-0)

Committee's Minute Tuesday, August 31st 1880

James Morrison
Andrew C. Nelson
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Glyde District
Lloyd's Register Foundation