

REPORT ON MACHINERY.

9024
MON 20 FEB 1889

Port of *Glasgow*

No. *9024*

No. in Survey held at *Glasgow*

Date, first Survey *1st June 1888* Last Survey *15th Feb 1889.*

Reg. Book.

(Number of Visits *46*)

1339
Tons *858*

49 on the *S. S. "Abydos."*

Master *Smith* Built at *Glasgow* By whom built *Robt & Co Ltd* When built *1871.*

Engines made at *Glasgow* By whom made *Robt & Co Ltd* when made *1871*

Boilers made at *Glasgow* By whom made *James Howden & Co* when made *1888-9*

Registered Horse Power *150.* Owners *Racburn Vessel* Port belonging to *London.*

ENGINES, &c.—

Description of Engines *Compound Inverted*

Diameter of Cylinders *28 1/2" x 54"* Length of Stroke *33"* No. of Rev. per minute _____ Point of Cut off, High Pressure — Low Pressure —

Diameter of Screw shaft *9"* Diam. of Tunnel shaft *8 3/4"* Diam. of Crank shaft journals *9 1/4"* Diam. of Crank pin *9 1/4"* size of Crank webs *6 1/4" x 11 1/2"*

Diameter of screw — Pitch of screw *about 14 ft.* No. of blades *4* state whether moveable, *sol.* total surface —

No. of Feed pumps *2.* diameter of ditto *4 3/4"* Stroke *10 1/2"* Can one be overhauled while the other is at work *yes*

No. of Bilge pumps *2.* diameter of ditto *5 3/8"* Stroke *9"* Can one be overhauled while the other is at work *yes*

Where do they pump from *all compartments*

No. of Donkey Engines *One* Size of Pumps *5" by 8" stroke* 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 *7 1/4"* Are they connected to condenser, or to circulating pump *yes*

How are the pumps worked *by levers worked off HP crosshead.*

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 *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 *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 *14th January 1889.*

Is the screw shaft tunnel watertight *yes* and fitted with a sluice door *yes* worked from *platform*

BOILERS, &c.— *Howden's Patent forced draught arrangement.*

Number of Boilers *One* Description *Multitubular* Whether Steel or Iron *Steel*

Working Pressure *80 lbs.* Tested by hydraulic pressure to *160 lbs.* Date of test *10th December 1888.*

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 *40* Description of safety valves *direct spring* No. to each boiler *two*

Area of each valve *8.3"* 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 *12"* Diameter of boilers *12'-10 1/2"*

Length of boilers *10'-0"* description of riveting of shell long. seams *treb riv. lap* circum. seams *d. riv. lap* Thickness of shell plates *23/32*

Diameter of rivet holes *1 3/16"* whether punched or drilled *drilled* pitch of rivets *5"* Lap of plating *8 7/8"*

Per centage of strength of longitudinal joint *76%* working pressure of shell by rules *89 lbs.* size of manholes in shell *12" x 16"*

Size of compensating rings *forged ring d. riv. to boiler shell* No. of Furnaces in each boiler *Three*

Outside diameter *36 7/8"* length, top *7'-2 1/2"* bottom *9'-4"* thickness of plates *7/16"* description of joint *welded* if rings are fitted *yes*

Greatest length between rings *43"* working pressure of furnace by the rules *94 lbs.* combustion chamber plating, thickness, sides *7/16"* back *7/16"* top *7/16"*

Pitch of stays to ditto, sides *9"* back *9"* top *9"* If stays are fitted with nuts or riveted heads *nuts.* working pressure of plating by

rules *80 lbs.* Diameter of stays at smallest part *1 1/2"* working pressure of ditto by rules *95 lbs.* end plates in steam space, thickness *7/16" x 5/8" strap*

Pitch of stays to ditto *20" x 20"* how stays are secured *d. nuts.* working pressure by rules *80 lbs.* diameter of stays at

smallest part *2 1/2" steel bars* working pressure by rules *85 lbs.* Front plates at bottom, thickness *7/16"* Back plates, thickness *9/16"*

Greatest pitch of stays — working pressure by rules — Diameter of tubes *2 1/2"* pitch of tubes *3 3/4"* thickness of tube

plates, front *7/16"* back *7/16"* how stayed *stubs* pitch of stays *11 1/4"* width of water spaces *6"*

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 —

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DONKEY BOILER— Description *Cochran's Patent*
Made at *Birkenhead* by whom made *Cochrane & Co* when made *1888* where fixed *Stokehold*
Working pressure *60 lbs* tested by hydraulic pressure to *120 lbs* No. of Certificate *732* fire grate area *20 sq ft* description of safety
valves *d. Spring* No. of safety valves *one* area of each *8.3* 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'-4 1/2"* description of riveting *Lap joints*
Thickness of shell plates *3/8"* diameter of rivet holes *1 3/16"* whether punched or drilled *pun.* pitch of rivets *2 1/2"* lap of plating *4 1/4"*
per centage of strength of joint *40%* thickness of crown plates *3/8"* stayed by *Hemispherical*
Diameter of furnace, top *5'-4"* bottom *—* length of furnace *2'-8"* thickness of plates *1/2"* description of joint *Single riv. lap.*
Thickness of furnace crown plates *1/2"* stayed by *Hemispherical* working pressure of shell by rules *68 lbs*
Working pressure of furnace by rules *84 lbs* diameter of uptake *—* thickness of plates *—* thickness of water tubes *—*
SPARE GEAR. State the articles supplied:— *Bolts, nuts, brasses. feed valves &c*

The foregoing is a correct description,
Manufacturer.

General Remarks (State quality of workmanship, opinions as to class, &c. *The above mentioned vessel has been fitted with new boilers, which have been built under special survey and are now completed on board in a satisfactory manner. A liner has been fitted in the high pressure cylinder reducing its size to 28 1/2 ins - and all other parts of engines have been overhauled and examined. The vessel has also been placed in dry dock at which time the sea cocks were altered and the propeller shaft drawn in and on examination found in fair order. I am of opinion that this vessel's machinery is now in good working order and eligible to the notations: **F.N.B. 89. & M.S. 2.89.***

It is submitted that this vessel is eligible to have LMC 2.89 & N.B. 89 recorded

*Ad
25.2.89*

The amount of Entry Fee £ *—* received by me,
Special £ *3 : 3 : —*
Main Donkey Boiler Fee £ *5 : 5 : —*
Certificate (if required) £ *—* : : *19/28/2/1889*
To be sent as per margin.
(Travelling Expenses, if any, £ *—*)

Committee's Minute **TUES 26 FEB 1889**
LMC 2/89 + N.B. 89

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

Lloyd's Register Foundation