

REPORT ON MACHINERY.

No. 6083

No. in Survey held at Glasgow
Reg. Book.

Date, first Survey April 12 1882 Last Survey April 26 1883

(Received at London Office Rec'd 30th April 1883)

on the Screw Steamer "Iona"

Tons 1149
646

Master J. Raison

Built at Glasgow

When built 1882-3

Engines made at Glasgow

By whom made James & Co. Glasgow when made 1882-3

Boilers made at "

By whom made " " " " when made 1882-3

Registered Horse Power 300

Owners London & Edinburgh Shipping Co.

Port belonging to Leith

ENGINES, &c.—

Description of Engines Compound Inverted Direct acting

Diameter of Cylinders 38" + 40" Length of Stroke 48" No. of Rev. per minute " Point of Cut off, High Pressure 36" Low Pressure 26"

Diameter of Screw shaft 18 1/2" Diameter of Tunnel shaft 12 3/4" Diameter of Crank shaft journals 1 1/4" Diameter of Crank pin 1 1/4" size of Crank webs 9 1/2" x 16"

Diameter of screw 15 1/2" Pitch of screw 2 1/4" No. of blades Four state whether moveable Yes total surface 45 sq ft

No. of Feed pumps Two diameter of ditto 6" Stroke 24" Can one be overhauled while the other is at work Yes

No. of Bilge pumps Two diameter of ditto 5" Stroke 24" 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 10 1/2" P. 5 1/4" x 10 1/2" Where do they pump from Sea Pipe & Hotwell

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 4 1/2" Are they connected to condenser, or to circulating pump Lo circulating

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 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 Main Steam How are they protected Casing (iron)

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 being launched

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

BOILERS, &c.—

Number of Boilers Two Description Round Horizontal (Steel) Tricing appended

Working Pressure 90 lbs Tested by hydraulic pressure to 180 lbs Date of test 30/1/83

Description of superheating apparatus or steam chest Steam Receiver on each Boiler

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 115 sq ft Description of safety valves Direct Spring

No. to each boiler Two area of each valve 28.24" 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 4 feet to bunkers 2 ft from sides of vessel

Diameter of boilers 13' 5 3/4" Length of boilers 16 ft description of riveting of shell long. seams Double riveted circum. seams Double

Thickness of shell plates 1 1/4" diameter of rivet holes 1" whether punched or drilled Drilled pitch of rivets 4 7/16"

Lap of plating 1 7/8" x 3 1/2" x 3 1/2" per centage of strength of longitudinal joint 82 working pressure of shell by rules 110 lbs

Size of manholes in shell 16" x 12" size of compensating rings Angle iron ring

No. of Furnaces in each boiler Six outside diameter 3' 5 3/4" length, top 6 ft bottom Through Furnace

Thickness of plates 8 1/16" description of joint Corrugated if rings are fitted " greatest length between rings "

Working pressure of furnace by the rules 142 lbs

Combustion chamber plating, thickness, sides 8 1/16" back " top 8 1/16"

Pitch of stays to ditto, sides 9" x 8 1/2" back " top 9" x 7 1/2"

If stays are fitted with nuts or riveted heads Nuts working pressure of plating by rules 110 lbs

Diameter of stays at smallest part 1 1/4" working pressure of ditto by rules 110 lbs

End plates in steam space, thickness 1 3/16" pitch of stays to ditto 16" x 14 1/2" how stays are secured By double nuts riveted washers

Working pressure by rules 112 lbs diameter of stays at smallest part 2" working pressure by rules 110 lbs

Front plates at bottom, thickness 1 1/4" Back plates, thickness " greatest pitch of stays " working pressure by rules "

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Foundation

Diameter of tubes 3" pitch of tubes 4 3/8" x 4 1/4" thickness of tube plates, front 1 1/16" back 1 1/16"
How stayed By Tubes pitch of stays 13" x 13" width of water spaces 6 **6083 gls**
Diameter of Superheater or Steam chest 3' 9" length 12' 6 1/4"
Thickness of plates 1 1/16" description of longitudinal joint Double riveted diameter of rivet holes 3 1/4" pitch of rivets 1 1/8"
Working pressure of shell by rules 110 lbs Diameter of flue no flue thickness of plates —
If stiffened with rings — distance between rings — Working pressure by rules —
End plates of ~~superheater~~ steam chest; thickness 1 1/16" How stayed Off stayed no stays
Superheater or steam chest; how connected to boiler By neck piece 18" dia
DONKEY BOILER— Description Flat sided Horizontal
Made at Glasgow By whom made James & George Thomson when made 1882-
Where fixed On upper deck working pressure 40 lbs Tested by hydraulic pressure to 90 lbs No. of Certificate 948
Fire grate area 12 ft² Description of safety valves Direct spring No. of safety valves Two area of each 7"
If fitted with easing gear Yes If steam from main boilers can enter the donkey boiler no
Diameter of donkey boiler 4' 0 3/8" height 9 ft description of riveting Double riveted
thickness of shell plates 1 1/16" diameter of rivet holes 1 1/8" whether punched or drilled Drilled
pitch of rivets 3 1/16" lap of plating 4 3/4" per centage of strength of joint 72
thickness of ~~cover~~ plates 1 1/16" stayed by Bar & Gussset plates 12" x 10" pitch
Diameter of furnace top 3 ft 0 3/4" bottom — length of furnace 4' 9"
thickness of plates 1 1/16" description of joint Double butt straps
thickness of ~~furnace crown~~ Combustion Chamber plates 1 1/16" stayed by 1 1/2" screw stays 9" x 10" pitch
Working pressure of shell by rules 111 lbs working pressure of furnace by rules 43 lbs
diameter of uptake — thickness of plates — thickness of water tubes —

The foregoing is a correct description,

James & George Thomson Manufacturer.

General Remarks (State quality of workmanship, opinions as to class, &c. These Engines and Boilers
are of good workmanship and are now in good order &
safe working condition and eligible in our opinion to be
noted in the Register Book Lloyd's Register M.C. 4/88

The amount of Entry Fee £ 3 : 0 : 0 received by me,

Special £ 35 : 0 : 0

Certificate (if required) £ gratis 25/4/83

To be sent as per margin.

(Travelling Expenses, if any, £)

Committee's Minute

Tuesday 1st May 1883

James Morrison John Sanderson
Engineer Surveyors to Lloyd's Register of British & Foreign Shipping.

