

REPORT ON MACHINERY.

MONDAY 12 NOV 1883

No. *6314*

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

Date, first Survey *May 29 82*

Received at London Office

Last Survey *Nov 8 83*

on the *Senior Steam "Methven Castle"*

(Number of Vessels)

Tons *2598.10*
1740.31

Master *Jos Doudy*

Built at *Glasgow*

By whom built *Wansley & Co Ltd*

When built *1883*

Engines made at *Glasgow*

By whom made *do*

when made *do*

Boilers made at *Glasgow*

By whom made *do*

when made *do*

Registered Horse Power *270*

Owners *J. Cumie & Co*

Port belonging to *London*

ENGINES, &c.—

Description of Engines *Inverted Compound Surface Condensing*

Diameter of Cylinders *36" & 68"* Length of Stroke *48"* No. of Rev. per minute *65* Point of Cut off, High Pressure *1/2* Low Pressure *1/2*

Diameter of Screw shaft *13"* Diam. of Tunnel shaft *12"* Diam. of Crank shaft journals *13"* Diam. of Crank pin *13"* size of Crank webs *9" x 15"*

Diameter of screw *16" 0"* Pitch of screw *20" 0"* Mean No. of blades *4* state whether moveable *yes* total surface *68 sq ft*

No. of Feed pumps *Two* diameter of ditto *4 1/2"* Stroke *27"* Can one be overhauled while the other is at work *yes*

No. of Bilge pumps *Two* diameter of ditto *4 1/2"* Stroke *27"* Can one be overhauled while the other is at work *yes*

Where do they pump from *Bilges of Engine Room. Stokehold Fall. Compartment*

No. of Donkey Engines *one* Size of Pumps *4" dia x 10" Stroke* Where do they pump from *Sea. Cauds. Bilges*

of Engine Room. Hotwell Fall. Compartment of Vessel

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

How are the pumps worked *The Air pump by Levers. Circulating Pump. Gears 8" piston*

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 *Hold. Suctions* How are they protected *Wood. Casings*

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 *Before Launching*

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

Boilers, &c.—

Number of Boilers *Two* Description *Cylindrical Multitubular* Whether Steel or Iron *(Steel)*

Working Pressure *80 lb* Tested by hydraulic pressure to *160 lbs* Date of test *June 30 1883*

Description of superheating apparatus or steam chest *Cylindrical*

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 *68 ft.* Description of safety valves *direct spring* No. to each boiler *Two*

Area of each valve *14.7 sq in* Are they fitted with easing gear *yes* No. of safety valves to superheater *one* area of each valve *4 sq in*

Are they fitted with easing gear *no* Smallest distance between boilers and bunkers or woodwork *10 inches* Diameter of boilers *12' 3"*

Length of boilers *15' 0"* description of riveting of shell long. seams *rip in Lap.* circum. seams *double in Lap.* Thickness of shell plates *3/4"*

Diameter of rivet holes *1 1/8"* whether punched or drilled *drill* pitch of rivets *4 1/8"* Lap of plating *8 inches*

Percentage of strength of longitudinal joint *76.8%* working pressure of shell by rules *80 lb* size of manholes in shell *15" x 12"*

Size of compensating rings *Flat ring 6" x 3/4"* No. of Furnaces in each boiler *4*

Outside diameter *3' 9"* length, top *5' 9"* bottom *through* thickness of plates *3/16"* description of joint *Compound* if rings are fitted in

Greatest length between rings *no* working pressure of furnace by the rules *110* combustion chamber plating, thickness, sides *1/2"* back *—* top *1/2"*

Pitch of stays to ditto, sides *9 1/4" x 8 1/2" back* — top *9 1/4" x 13 1/4"* If stays are fitted with nuts or riveted heads *Nuts* working pressure of plating by

rules *80* Diameter of stays at smallest part *1 3/8"* working pressure of ditto by rules *103* end plates in steam space, thickness *3/4"*

Pitch of stays to ditto *15 1/4" x 13 1/4"* how stays are secured *Nuts & Washers* working pressure by rules *81 lb* diameter of stays at

smallest part *2 1/8"* working pressure by rules *121 lb* Front plates at bottom, thickness *3/4"* Back plates, thickness *—*

Greatest pitch of stays *—* working pressure by rules *—* Diameter of tubes *3 1/4"* pitch of tubes *4 1/8" x 4 1/2"* thickness of tube

plates, front *3/4"* back *1 1/16"* how stayed *Subs* pitch of stays *13 1/8" x 13 1/2"* width of water spaces *6"*

Diameter of Superheater or Steam chest *9' 8"* length *8' 0"* thickness of plates *3/16"* description of longitudinal joint *Sub Lap* diam. of rivet holes *1"*

Pitch of rivets *4 1/8"* working pressure of shell by rules *80 lb* diameter of flue *6' 6"* thickness of plates *1/16"* If stiffened with rings *yes*

Distance between rings *14"* working pressure by rules *80* end plates of superheater, or steam chest; thickness *3/4"* how stayed *—*

Superheater or steam chest; how connected to boiler *Stop Valves on Boilers*

Connected to superheater by Copper pipes

GLS 148-0317

Foundation

6314-98

DONKEY BOILER— Description *Multitubular. Circular Top & Bottom. Hot Sea.*
Made at *Glasgow* by whom made *Barday Cuthbert & Co* when made *1883* where fixed *on Deck*
Working pressure *35 lb* tested by hydraulic pressure to *70 lb* No. of Certificate *1140* fire grate area *15 sq ft* description of
valves *direct Caudex* No. of safety valves *one* area of each *8.3 in* if fitted with easing gear *yes* if steam from main boiler
enter the donkey boiler *No* diameter of donkey boiler *4' 6"* length *4' 0"* description of riveting *single Riv Lap*
Thickness of shell plates *7/16"* diameter of rivet holes *7/16"* whether punched or drilled *yes* pitch of rivets *2"* lap of plating *2"*
per centage of strength of joint *59%* thickness of ~~main~~ plates *7/16"* stayed by *1 1/2 stays pitched 13 1/2' x 14'*
Diameter of furnace, top *4' 0"* bottom *—* length of furnace *4' 6"* thickness of plates *3/8" & 7/16"* description of joint *single Riv Lap*
Combustion chamber *3/8"* stayed by *1 1/2 stays pitched 10' x 10'* working pressure of shell by rules
Thickness of furnace plates *3/8"*
Working pressure of furnace by rules *70 lb* diameter of uptake *—* thickness of plates *—* thickness of water tubes *—*

SPARE GEAR. State the articles supplied. *The following have been supplied in addn to the requirements of the rules. Viz. 1 Propeller shaft & 4 bla 1/2 Crank shaft. 1 Air pump bucket & rod. 1 Pair Connecting Rod bushes. 12 Motion Gules. 50 Condenser Gules. 2 safety Valve of*
The foregoing is a correct description,
Barday Cuthbert & Co
Manufacturer.

General Remarks (State quality of workmanship, opinions as to class, &c.)
The Above Engine & Motion have been constructed under special survey. The Material and Workmanship are of good description. And are now in good order and safe working condition and in my opinion eligible to be noted in the Society's Register Book *✠ R. Lloyd M.C. 11.83*

This vessel is submitted that this vessel is eligible to have the registration + £m 6 11.83 recorded
12/11/83

The amount of Entry Fee .. £ *2: 0: 0* received by me, *[Signature]*
Special .. £ *33: 10: 0*
Donkey Boiler Fee .. £ *0: 0: 0*
Certificate (if required) .. £ *0: 0: 0* *6/11/1883*
To be sent as per margin.
(Travelling Expenses, if any, £ ..)

Committee's Minute .. *TUESDAY 13 NOV 1883*
+ [Signature]

J. M. C. Gregor
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping
Glyde District