

REPORT ON MACHINERY.

No. 7174

Received at London Office THUR. 29 OCT 1885

No. in Survey held at Glasgow
Reg. Book.

Date, first Survey 1st May

Last Survey Oct 27th 1885

Number of Visits 51

Tons 546.96
228.15

on the

Screw Steamer "Hatter"

Master S. Walton

Built at

Glasgow

By whom built

J. & W. Henderson & Co.

When built 1885

Engines made at

Glasgow

By whom made

" " " "

When made

1885

Boilers made at

"

By whom made

" " " "

When made

1885

Registered Horse Power

105

Owners

Clyde Shipping Coy Port belonging to Glasgow

ENGINES, &c.—

Description of Engines Compound Inverted Direct Acting

Diameter of Cylinders 25" & 30" Length of Stroke 36" No. of Rev. per minute about 40 Point of Cut off, High Pressure .6 Low Pressure .3

Diameter of Screw shaft 9 3/4" Diam. of Tunnel shaft 9 1/4" Diam. of Crank shaft journals 10 1/2" Diam. of Crank pin 10 1/2" size of Crank webs 8" x

Diameter of screw 13" 6" Pitch of screw 18 1/2 to 19" 6" No. of blades 4 state whether moveable yes total surface 40 sq ft

No. of Feed pumps Two diameter of ditto 3 1/2" Stroke 14" Can one be overhauled while the other is at work yes

No. of Bilge pumps Two diameter of ditto 3 1/2" Stroke 14" Can one be overhauled while the other is at work yes

Where do they pump from All Compartments

No. of Donkey Engines Two Size of Pumps Double pumps 6 x 8" stroke Where do they pump from Sea Bilge 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" Are they connected to condenser, or to circulating pump To 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 near to lead line

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 On ship previous to launching

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

BOILERS, &c.—

Number of Boilers Two Description Single ended Cylindrical Whether Steel or Iron Steel

Working Pressure 80 lbs Tested by hydraulic pressure to 160 lbs Date of test 22nd Aug. 1885

Description of superheating apparatus or steam chest None

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 35 sq ft Description of safety valves Direct Spring No. to each boiler Two

Area of each valve 4.068" Are they fitted with easing gear yes No. of safety valves to superheater 4 area of each valve "

Are they fitted with easing gear " Smallest distance between boilers, and bunkers or woodwork About 12" Diameter of boilers 12" 0"

Length of boilers 10' 2" description of riveting of shell long. seams Double lap circum. seams Double lap Thickness of shell plates 1 1/16"

Diameter of rivet holes 1 1/16" whether punched or drilled Drilled pitch of rivets 4" 8" Lap of plating 8"

Per centage of strength of longitudinal joint 45 working pressure of shell by rules 9 1/2 lbs size of manholes in shell 16" x 12"

Size of compensating rings Doubling plates 2' 5" x 2' 1" x 3/4" No. of Furnaces in each boiler Two

Outside diameter 41" length, top 6' 6" bottom 9' 3" thickness of plates 8 1/16" description of joint Welded if rings are fitted none

Greatest length between rings " working pressure of furnace by the rules 80 lbs combustion chamber plating, thickness, sides 8 1/16" back 8 1/16" top 8 1/16"

Pitch of stays to ditto, sides 8" x 8" back 8" x 8" top 8" x 8" If stays are fitted with nuts or riveted heads Nuts working pressure of plating by rules 120 lbs

Diameter of stays at smallest part 1 3/8" working pressure of ditto by rules 138 lbs head plates in steam space, thickness 1 3/16"

Pitch of stays to ditto 16" x 16" how stays are secured By double nuts & washers working pressure by rules 80 lbs diameter of stays at smallest part 2 3/4"

Greatest pitch of stays 12 1/4" x 8" working pressure by rules " Diameter of tubes 3 1/2" pitch of tubes 5" x 4 3/4" thickness of tube plates, front 1 1/16" back 1 1/16"

how stayed By tubes pitch of stays 15" x 9 1/2" width of water spaces 1 1/4" to 6" at back 4" centre

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 "

State if Report is also sent on the H.M.

Lloyd's Register of Shipping

7174 gls
DONKEY BOILER—

Description *Vertical, cross tube*

Made at *Glasgow* by whom made *S & H Henderson & Co* when made *1885* where fixed *In Stoke*

Working pressure *60 lbs* tested by hydraulic pressure to *120 lbs* No. of Certificate *1609* fire grate area *9.17* description

valves *Spring* No. of safety valves *One* area of each *4"* if fitted with easing gear *Yes* if steam from main

enter the donkey boiler *No* diameter of donkey boiler *4 1/4"* length *15' 9"* description of riveting *Double riveted*

Thickness of shell plates *7/16"* diameter of rivet holes *1 3/16"* whether punched or drilled *Drilled* pitch of rivets *2 3/4"* lap of plating

per centage of strength of joint *40* thickness of crown plates *7/16"* stayed by *Four 1 1/2" dia stays*

Diameter of furnace, top *3' 3"* bottom *3' 5"* length of furnace *10' 3"* thickness of plates *7/16"* description of joint *Welded*

Thickness of furnace crown plates *7/16"* stayed by *As above* working pressure of shell by rules

Working pressure of furnace by rules *84 lbs* diameter of uptake *15 1/2"* thickness of plates *7/16"* thickness of water tubes *7/16"*

Six water tubes across furnace + row of stays at centre

SPARE GEAR. State the articles supplied: *Four propeller blades, 1 Eccentric strap,*

Coupling bolts, 6 Piston bolts, 2 valves for air pump bucket, 2

for foot + delivery, 1 feed + 1 bridge valve with check valve + seats, 1

tubes, fire bars, &c

The foregoing is a correct description,

David W Henderson & Co Manufacturer.

General Remarks

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

These Engines and Boilers are of the best workmanship and materials and are in good order and safe working condition and they in my opinion to be noted in the Register Book.

M. C. 10/83

It is submitted that this vessel is eligible to have the notification + £10.85 recorded.

29/10/85

The amount of Entry Fee .. £ *2* : .. received by me, *[Signature]*

Special £ *15* : *15* : ..

Donkey Boiler Fee £ .. : ..

Certificate (if required) .. £ .. : .. *28/10/1885*

To be sent as per margin.

(Travelling Expenses, if any, £ - *8/-*)

Committee's Minute

FRIDAY 30 OCT 1885

James Morrison
Engineer Surveyor to Lloyd's Register of British & Foreign Ships

Clyde District

Lloyd's Register Foundation