

# REPORT ON MACHINERY.

No. 563

(Received in London Office)

18

No. in Survey held at  
Reg. Book.

Newcastle.

Date, first Survey 3<sup>rd</sup> February Last Survey 28<sup>th</sup> July 1881

2114

Tons 1385

on the

Screw Steamer "Glenmaris."

Master H. b. Holman.

Built at Newcastle

When built

1881

Engines made at Newcastle

By whom made

Palmer's Co

when made

1881

Boilers made at

Do.

By whom made

Do.

when made

1881

Registered Horse Power 260

Owners

Lindsay & Co.

Port belonging to

Leith.

## ENGINES, &c.—

Description of Engines

Inverted Compound Surface Condensing

Diameter of Cylinders 36" & 68" Length of Stroke 4.5 No. of Rev. per minute 65 Point of Cut off, High Pressure 22.5" Low Pressure 23"

Diameter of Screw shaft 12 1/2" Diameter of Tunnel shaft 11 1/2" Diameter of Crank shaft journals 12 3/4" Diameter of Crank pin 12 3/4" size of Crank webs 9 x 11 1/2"

Diameter of screw 17" 0" Pitch of screw 17" 0" No. of blades 4 state whether moveable yes total surface 74 sq. feet.

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

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

Where do they pump from engine space, tunnel well, tanks and sea

No. of Donkey Engines 2 Size of Pumps 12 x 8 & 6 x 4 Where do they pump from engine space,

tunnel well, tanks and sea.

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 1 and sizes 5 Are they connected to condenser, or to circulating pump circulating

How are the pumps worked levers over condenser

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 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 June 1881

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

## BOILERS, &c.—

Number of Boilers 2 Description cylindrical & multitubular.

Working Pressure 80 lbs Tested by hydraulic pressure to 160 lbs Date of test 20.4.81 No. of cert. 584

Description of ~~superheating apparatus~~ steam chest horizontal dome connected by steam pipes

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 55 Description of safety valves spring

No. to each boiler 2 area of each valve 16 sq. ins. 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 1 1/2"

Diameter of boilers 15" 0" Length of boilers 10" 6 description of riveting of shell long. seams lap treble riv. circum. seams double riveted

Thickness of shell plates 1 1/8" diameter of rivet holes 1 3/8" whether punched or drilled drilled pitch of rivets 5 1/8"

Lap of plating 9 3/8" per centage of strength of longitudinal joint 73.3 working pressure of shell by rules 82 lbs.

Size of manholes in dia 16 x 12 end plate size of compensating rings —

No. of Furnaces in each boiler 3 outside diameter 46" length, top 6" 0" bottom 9" 0"

Thickness of plates 5/8" & 7/8" description of joint double butt straps rings are fitted 1/2" ring greatest length between rings 6" 0"

Working pressure of furnace by the rules 81 lbs.

Combustion chamber plating, thickness, sides 5/8" back 7/16" top 7/16"

Pitch of stays to ditto — sides 8 7/8" back 8 1/2" top 23" radius

If stays are fitted with nuts or riveted heads riveted heads. working pressure of plating by rules 82 lbs.

Diameter of stays at smallest part 1 1/4" working pressure of ditto by rules 96 lbs.

End plates in steam space, thickness 3/4" pitch of stays to ditto 15 x 14 how stays are secured d. n. & was —

Working pressure by rules 90 lbs diameter of stays at smallest part 2" working pressure by rules 84 lbs.

Front plates at bottom, thickness 1 1/8" Back plates, thickness 1 1/8" greatest pitch of stays 10 1/2" working pressure by rules 110 lbs.

1100A1

1100A1



Workmanship Are the butts of plating planed or otherwise fitted? *Over Butts & the Ends of Ribs. & Attached*

Diameter of tubes  $3\frac{1}{2}$ " pitch of tubes  $4\frac{3}{4}$ " thickness of tube plates, front  $\frac{3}{4}$ " back  $\frac{3}{4}$ "  
How stayed *tube stays* pitch of stays  $14\frac{1}{2}$ " width of water spaces  $9\frac{1}{2}$ "  
Diameter of ~~Superheater~~ Steam chest  $5\frac{1}{2}$ " length  $5\frac{1}{2}$ "  
Thickness of plates  $\frac{9}{16}$ " description of longitudinal joint *lap & rivet* diameter of rivet holes  $\frac{7}{8}$ " pitch of rivets  $2\frac{1}{2}$ "  
Working pressure of shell by rules  $95$  lbs. Diameter of flue — thickness of plates —  
If stiffened with rings — distance between rings — Working pressure by rules —  
End plates of ~~superheater~~ steam chest; thickness  $\frac{13}{16}$ " How stayed *7, 2 $\frac{1}{2}$  stays.*  
~~Superheater~~ steam chest; how connected to boiler *Steam pipes & stop valves.*

DONKEY BOILER— Description *Cylindrical and vertical*  
Made at *Newcastle* By whom made *Galmer's Co.* when made *July 1881.*  
Where fixed *Stokehole* working pressure *60 lbs.* Tested by hydraulic pressure to *120 lbs.* No. of Certificate *618*  
Fire grate area *30 Sq. ft.* Description of safety valves *Springing* No. of safety valves *1* area of each *12.6 Sq. ins.*  
If fitted with easing gear *yes.* If steam from main boilers can enter the donkey boiler *no.*  
Diameter of donkey boiler *7" 0"* length *13" 0"* description of riveting *long seams double rivet*  
thickness of shell plates  $\frac{7}{16}$ " diameter of rivet holes  $\frac{13}{16}$ " whether punched or drilled *drilled.*  
pitch of rivets *3"* lap of plating *4"* per centage of strength of joint *71*  
thickness of crown plates  $\frac{1}{2}$ " stayed by *6, 1 $\frac{3}{4}$  stays.*  
Diameter of furnace, top *5" 7"* bottom *6" 3"* length of furnace *6" 6"*  
thickness of plates  $\frac{1}{2}$ " description of joint *lap.*  
thickness of furnace crown plates  $\frac{1}{2}$ " stayed by *6, 1 $\frac{3}{4}$  stays.*  
Working pressure of shell by rules *65 lbs.* working pressure of furnace by rules *67 lbs.*  
diameter of uptake *15"* thickness of plates  $\frac{7}{16}$ " thickness of water tubes  $\frac{3}{8}$ "

The foregoing is a correct description,

Manufacturer.

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

The Machinery of this vessel has been specially surveyed during construction, the materials and workmanship good, and render the vessel eligible in my opinion to have the notification *& Lloyd's M. 6.7.81.* recorded in the Society Register Book.

*It is submitted that this vessel  
is eligible to have the  
notification & Lloyd's M.C.  
recorded Aug 24/81*

The amount of Entry Fee  $\pounds 3$  : — : — received by me,

Special ..  $\pounds 33$  : — : —

Certificate (if required)  $\pounds 4$  : — : — 18<sup>th</sup> Aug 1881

To be sent as per margin.

(Travelling Expenses, if any,  $\pounds$  — )

Committee's Minute

Tuesday, August, 23rd 1881.

*+ Lloyd's M.C.*

David Purves.  
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

*N. Shields*