

REPORT ON MACHINERY.

No. 5392

No. in Survey held at
Reg. Book.

Newfur

Date, first Survey May 4th 80 Last Survey May 24th 1881

(Received in London Office 30/5/87)

on the S. S. "Aranmore"

Tons 832.76
418.81

Master John Hetherington

Built at Newfur

When built 1881

Engines made at Newfur

By whom made W. Simons & Co. when made 8

Boilers made at do

By whom made do when made 6

Registered Horse Power 170

Owners The Clyde Shipping Co.

Port belonging to Glasgow

ENGINES, &c.—

Description of Engines Compound Inverted Surface Condensing.
Diameter of Cylinders 26" & 54" Length of Stroke 48" No. of Rev. per minute 65 Point of Cut off, High Pressure 2 1/4" Low Pressure 2 5/8"
Diameter of Screw shaft 11 3/8" Diameter of Tunnel shaft 10 1/2" Diameter of Crank shaft journals 11 1/2" Diameter of Crank pin 11 3/4" size of Crank webs 13 1/2" x 8 1/2"
Diameter of screw 14" & 6" Pitch of screw 21" 0" No. of blades 4 state whether moveable Yes total surface 41 sq. ft.
No. of Feed pumps 2 diameter of ditto 2 5/8" Stroke 48" Can one be overhauled while the other is at work Yes
No. of Bilge pumps 2 diameter of ditto 2 5/8" Stroke 48" Can one be overhauled while the other is at work Yes
Where do they pump from Bilges of Engine Room and all Compartments of Vessel.
No. of Donkey Engines 2 Size of Pumps 7' x 9' & 4' x 4' Where do they pump from Sea. Tanks. Condenser.
Hotwell. Bilges of Engine Room and all Compartments 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 1 and sizes 4" Are they connected to condenser, or to circulating pump Circulating
How are the pumps worked From Crossheads of both Engines direct.
Are all connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks Stop Valves & Cocks
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 For hold & tank suction. How are they protected by a wooden casing
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 Not been in dry dock
Is the screw shaft tunnel watertight Yes and fitted with a sluice door Yes worked from Top platform of Engine

BOILERS, &c.—

Number of Boilers 2 Description Cylindrical & Multitubular
Working Pressure 95 lb Tested by hydraulic pressure to 190 lb Date of test March 11th 1881
Description of ~~superheating apparatus or~~ steam chest Vertical dome
Can each boiler be worked separately Yes Can the superheater be shut off and the boiler worked separately No superheater
No. of square feet of fire grate surface in each boiler 44 sq. ft. Description of safety valves Direct Spring Valves
No. to each boiler 2 area of each valve 11.04 sq. in. Are they fitted with easing gear Yes
No. of safety valves to superheater none area of each valve none are they fitted with easing gear none
Smallest distance between boilers and bunkers or woodwork 10 inches
Diameter of boilers 13' 4" Length of boilers 11' 2" description of riveting of shell long. seams Quad. Lap. circum. seams Double Lap
Thickness of shell plates 7/8" diameter of rivet holes 1' 0" whether punched or drilled drilled pitch of rivets 4 1/2"
Lap of plating 10 1/2" per centage of strength of longitudinal joint Plate 83 1/2. Per 90 working pressure of shell by rules 109 lb
Size of manholes in shell 16" x 12" size of compensating rings Angle 5" x 4 1/2" x 5/8"
No. of Furnaces in each boiler 2 outside diameter 49" length, top 6' 2" bottom 10' 2"
Thickness of plates 1 1/32" description of joint Welded if rings are fitted Yes greatest length between rings 4' 9"
Working pressure of furnace by the rules 108 lb
Combustion chamber plating, thickness, sides 1/2" back 1/2" top 1/2"
Pitch of stays to ditto sides 8" x 8" back 8" x 7 1/2" top 8" x 8"
If stays are fitted with nuts or riveted heads Nuts working pressure of plating by rules 120 lb
Diameter of stays at smallest part 1 3/8" working pressure of ditto by rules 138 "
End plates in steam space, thickness 1 1/16" pitch of stays to ditto 16" x 16" how stays are secured Double Nut
Working pressure by rules 92 lb diameter of stays at smallest part 2 1/2" working pressure by rules 153 lb
Front plates at bottom, thickness 1 1/16" Back plates, thickness 1 1/16" greatest pitch of stays 13 1/2" x 8" working pressure by rules 94 lb

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Diameter of tubes $3\frac{1}{4}"$ pitch of tubes $5\frac{1}{4}" + 4\frac{3}{4}"$ thickness of tube plates, front $\frac{1}{16}"$ back $\frac{1}{16}"$
 How stayed *Sub Stay* pitch of stays $10\frac{1}{2} \times 9"$ width of water spaces $6" 2" + 1\frac{1}{2}"$
 Diameter of Superheater or Steam chest $2' 0"$ length $3' 9"$
 Thickness of plates $5/8"$ description of longitudinal joint *Double Riveted* diameter of rivet holes $1"$ pitch of rivets $1\frac{1}{2}"$
 Working pressure of shell by rules 250 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 $5/8"$ How stayed *Not Stayed*
 Superheater or steam chest; how connected to boiler *Flanged Double Riveted*

DONKEY BOILER— Description *Circular Vertical 3 Water Tubes per Furnace*
 Made at *Newport* By whom made *W. Simons & Co* when made *11th March 1881 (tested)*
 Where fixed *on deck* working pressure 50 *lb* Tested by hydraulic pressure to 100 *lb* No. of Certificate *486*
 Fire grate area 14.59 *sq ft* Description of safety valves *Direct Spring* No. of safety valves *one* area of each 4 *sq in*
 If fitted with easing gear *Yes* If steam from main boilers can enter the donkey boiler *No*
 Diameter of donkey boiler $5' 6"$ length $12' 0"$ description of riveting *Double Lap*
 thickness of shell plates $\frac{1}{16}"$ diameter of rivet holes $\frac{7}{8}"$ whether punched or drilled *drilled*
 pitch of rivets $5\frac{1}{8}"$ lap of plating $1\frac{1}{2}"$ per centage of strength of joint 90%
 thickness of crown plates $\frac{1}{2}"$ stayed by *6 Stay 1 1/2" dia effective*
 Diameter of furnace, top $4' 3"$ bottom $4' 4"$ length of furnace $4' 2"$
 thickness of plates $\frac{1}{16}"$ description of joint *Single Lap*
 thickness of furnace crown plates $\frac{1}{16}"$ stayed by *6 Stay 1 1/2" dia effective*
 Working pressure of shell by rules 49 *lb* working pressure of furnace by rules 60 *lb per sq in*
 diameter of uptake $15"$ thickness of plates $\frac{1}{2}"$ thickness of water tubes $\frac{1}{16}"$

The foregoing is a correct description,

Manufacturer. *S*

Wm Simons & Co

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

*Material and Workmanship of good description.
 Constructed under special survey and found satisfactory
 when tried under steam.
 In our opinion the Machinery of the vessel is in good order
 and safe working condition and eligible for the notification
 * Lloyd's M.C. in the Society Register*

*It is submitted that this
 vessel is eligible to have
 the notification for Lloyd's
 recorded*
MC 30/5/81

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

Special .. £ 25 : 10 : "

Testing Steel .. £ 4 : 4 : "

Certificate (if required) .. £ " : " : "

To be sent as per margin.

(Travelling Expenses, if any, £ 2 : 2 : 0)
 " " on Ship Testing £ 1 : 1 : 0)

Committee's Minute

Tuesday, May, 21st 1881.

M. Chignell & Andrew L. R.
 Engineer Surveyor to Lloyd's Register of British & Foreign

Clyde District

Lloyd's Register
 Foundation