

REPORT ON MACHINERY.

No. 4524

No. in Survey held at
Reg. Book.

Glasgow

Date, first Survey 23rd Oct^r 1885 Last Survey 24th May 1886

Received at London Office THURS 1 JULY 1886

(Number of Visits 11)

Tons 2464
1619

on the

S.S. Amarpovia

Master Min Built at Greenock By whom built Scott & Co When built 1874

Engines made Greenock By whom made Greenock Foundry Co when made 1874

Boilers made at Dumbarton By whom made Denny & Co when made 1883

Registered Horse Power 300 Owners British & Foreign Steam Navigation Co Port belonging to Glasgow

ENGINES, &c.—

Description of Engines

Diameter of Cylinders Length of Stroke No. of Rev. per minute Point of Cut off, High Pressure Low Pressure

Diameter of Screw shaft Diam. of Tunnel shaft Diam. of Crank shaft journals Diam. of Crank pin size of Crank webs

Diameter of screw Pitch of screw No. of blades state whether moveable total surface

No. of Feed pumps diameter of ditto Stroke Can one be overhauled while the other is at work

No. of Bilge pumps diameter of ditto Stroke Can one be overhauled while the other is at work

Where do they pump from

No. of Donkey Engines Size of Pumps Where do they pump from

Are all the bilge suction pipes fitted with roses Are the roses always accessible Are the sluices on Engine room bulkheads always accessible

No. of bilge injections and sizes Are they connected to condenser, or to circulating pump

How are the pumps worked

Are all connections with the sea direct on the skin of the ship Are they Valves or Cocks

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates Are the discharge pipes above or below the deep water line

Are they each fitted with a discharge valve always accessible on the plating of the vessel Are the blow off cocks fitted with a spigot and brass covering plate

What pipes are carried through the bunkers How are they protected

Are all pipes, cocks, valves, and pumps in connection with the machinery accessible at all times

Are the pipes, cocks, and valves arranged so as to prevent an unintentional connection between the sea and the bilges

When were stern tube, propeller, screw shaft, and all connections examined in dry dock

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

BOILERS, &c.—

Number of Boilers Description Whether Steel or Iron

Working Pressure Tested by hydraulic pressure to Date of test

Description of superheating apparatus or steam chest

Can each boiler be worked separately Can the superheater be shut off and the boiler worked separately

No. of square feet of fire grate surface in each boiler Description of safety valves No. to each boiler

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

Are they fitted with easing gear Smallest distance between boilers and bunkers or woodwork Diameter of boilers

Length of boilers description of riveting of shell long. seams circum. seams Thickness of shell plates

Diameter of rivet holes whether punched or drilled pitch of rivets Lap of plating

Per centage of strength of longitudinal joint working pressure of shell by rules size of manholes in shell

Size of compensating rings No. of Furnaces in each boiler

Outside diameter length, top bottom thickness of plates description of joint if rings are fitted

Greatest length between rings working pressure of furnace by the rules combustion chamber plating, thickness, sides back top

Pitch of stays to ditto, sides back top If stays are fitted with nuts or riveted heads working pressure of plating by

rules Diameter of stays at smallest part working pressure of ditto by rules end plates in steam space, thickness

Pitch of stays to ditto how stays are secured working pressure by rules diameter of stays at

smallest part working pressure by rules Front plates at bottom, thickness Back plates, thickness

Greatest pitch of stays working pressure by rules Diameter of tubes pitch of tubes thickness of tube

plates, front back how stayed pitch of stays width of water spaces

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

7524 *gl*

DONKEY BOILER— Description *Multitubular - Flat sided - Steel*
 Made at *Glasgow* by whom made *Dunsmuir & Jackson* when made *1886* where fixed *On deck*
 Working pressure *145 lb* tested by hydraulic pressure to *90 lb* No. of Certificate *1676* fire grate area *-* description of safety valves *Direct spring* No. of safety valves *Two* area of each *-* if fitted with easing gear *Yes* if steam from main boilers can enter the donkey boiler *No* diameter of donkey boiler *4'-6" x 8'-3"* length *7'-8"* description of riveting *Lap - double*
 Thickness of shell plates *9/16"* diameter of rivet holes *15/16"* whether punched or drilled *Drilled* pitch of rivets *3-3* lap of plating *3/8"*
 per centage of strength of joint *65* thickness of ~~end~~ plates *5/8"* stayed by *1 1/2" straps with washers 10" x 11 1/2" pitch*
 Diameter of furnace top *39"* bottom *-* length of furnace *5'-0"* thickness of plates *1/2"* description of joint *Butt & weld*
 Thickness of ~~furnace crown~~ *comb chan* plates *1/2"* stayed by *Curved straps 1 1/4" dia - pitched 10" x 9 1/2" with nuts* working pressure of shell by rules *145 lb*
 Working pressure of furnace by rules *115 lb* diameter of ~~uptake~~ *tube* *23 1/4"* thickness of ~~uptake~~ *tube* plates *5/8"* thickness of ~~water~~ tubes *Nº 9 B.W.G.*

SPARE GEAR. State the articles supplied:—

The foregoing is a correct description,

Manufacturer.

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

This new donkey boiler has been constructed under special survey & is of good material & workmanship. It has been well fitted on board & tested under steam.

Appended hereto are the Reports on Steel Tests.

It is submitted that this vessel is eligible to remain as classed

Wm 1/7/86

The amount of Entry Fee .. £ .. : .. : received by me,

Special .. £ 1 : 1 : - *29/6/86*

Donkey Boiler Fee .. £ 2 : 2 : - *30/6/86*

Certificate (if required) .. £ .. : .. : 18

To be sent as per margin.

(Travelling Expenses, if any, £ ..)

Committee's Minute

Walter E. Robinson
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.