

REPORT ON MACHINERY.

No. 5360

(Received in London Office 28/4/81)

No. in Survey held at Glasgow
Reg. Book.

Date, first Survey Sept 10 80 Last Survey April 27 1881

on the S. S. Catania

Tons 2198.48
1429.43

Master M. C. Petersen Built at Glasgow When built 1881

Engines made at Glasgow By whom made A. Stephen & Sons when made "

Boilers made at do By whom made do when made "

Registered Horse Power 2000 Owners Robt. A. Sloman & Co, Hamburg. Port belonging to Hamburg

ENGINES, &c.—

Description of Engines Inverted Compound Surface Condensing
Diameter of Cylinders 35" & 65" Length of Stroke 42 No. of Rev. per minute 60 Point of Cut off, High Pressure 1/2 Low Pressure 1/2
Diameter of Screw shaft 11 1/2" Diameter of Tunnel shaft 11" Diameter of Crank shaft journals 11 1/2" Diameter of Crank pin 11 3/4" size of Crank webs 13 1/4" x 7 1/4"
Diameter of screw 14" 0' Pitch of screw 20" 0' No. of blades 4 state whether moveable Yes total surface 68 sq. ft.
of Feed pumps 2 diameter of ditto 4 1/2" Stroke 23" Can one be overhauled while the other is at work Yes
of Bilge pumps 3 diameter of ditto 4 1/2" Stroke 23" Can one be overhauled while the other is at work Yes
Where do they pump from Sea, Tanks, & Bilges of all Compartments of Vessel
No. of Donkey Engines 2 Ind. Sounding 1 Centrifugal pump 1 Size of Pump 5" x 10" Where do they pump from Feed sounding from Sea, Tanks, & Bilges. Condenser & Hotwell. Centrifugal pump from Sea, Tanks, Bilges & Condenser
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 By Levers attached to both Engines
Are all connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks Stop Valves & Cocks
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 Steam & Hot Water Suction Pipes How are they protected by wooden Casing
Are all pipes, cocks, valves, and pumps in connection with the machinery accessible at all times Yes except in holds when loaded
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 Main Deck

BOILERS, &c.—

Number of Boilers 2 Description Cylindrical & Multitubular
Working Pressure 80 lbs Tested by hydraulic pressure to 160 lbs Date of test 9.2.81
Description of superheating apparatus or steam chest Horizontal none
Can each boiler be worked separately Yes Can the superheater be shut off and the boiler worked separately No Superheater
square feet of fire grate surface in each boiler 46 sq. ft. Description of safety valves Double Spring by A. Stephen & Sons
each boiler 2 area of each valve 15.9 sq. in. Are they fitted with easing gear Yes
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 12 inches Walls covered with felt & sheet Iron
diameter of boilers 13' 0" Length of boilers 11' 0" description of riveting of shell long. seams Double Butt circum. seams Double Lap
thickness of shell plates 1" diameter of rivet holes 1" whether punched or drilled drilled pitch of rivets 3 3/4"
Lap of plating Stays 10 1/2 per centage of strength of longitudinal joint 41 working pressure of shell by rules 90 lbs
Size of manholes in shell 15" x 16" size of compensating rings some Ricks
No. of Furnaces in each boiler 3 outside diameter 3' 4" x 3' 0" length, top 4' 6" bottom 4' 6"
Thickness of plates 1 1/32 description of joint Double Butt if rings are fitted none greatest length between rings none
Working pressure of furnace by the rules 84 lbs
Combustion chamber plating, thickness, sides 4/16" back 4/16" top 4/16"
Pitch of stays to ditto sides 4 3/4" x 4 3/4" back 4 1/4" x 4 1/4" top Circular 21" radius
If stays are fitted with nuts or riveted heads Nuts working pressure of plating by rules 90 lbs per sq. in.
Diameter of stays at smallest part 1 1/8" working pressure of ditto by rules 103 " " "
End plates in steam space, thickness 13/16" pitch of stays to ditto 15 1/4" x 15 1/4" how stays are secured Double Nuts
Working pressure by rules 100 lbs diameter of stays at smallest part 2 3/16" working pressure by rules 96 lbs
Front plates at bottom, thickness 13/16" Back plates, thickness 13/16" greatest pitch of stays 16" x 4 1/4" working pressure by rules 95 lbs

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Diameter of tubes $3\frac{1}{2}$ " pitch of tubes $4\frac{3}{8}" \times 4\frac{3}{4}"$ thickness of tube plates, front $\frac{13}{16}"$ back $11/16"$
How stayed Tube stay pitch of stays $16\frac{1}{8}" \times 9\frac{1}{2}"$ width of water spaces $1\frac{1}{4}" + 1\frac{1}{8}" + 6"$
Diameter of ~~Superheater~~ or Steam chest $3' - 0$ length $8' - 2$
Thickness of plates $\frac{7}{16}"$ description of longitudinal joint double lap diameter of rivet holes $\frac{3}{4}"$ pitch of rivets $2\frac{1}{2}"$
Working pressure of shell by rules 120 lbs 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 $\frac{1}{2}"$ How stayed 1 through stay, 1 1/2 dia effective
~~Superheater~~ or steam chest; how connected to boiler by two flues

DONKEY BOILER— Description Circular Vertical 3 Water Tubes in Furnace
Made at Glasgow By whom made A. Stephen & Son when made Listed 9-2-01
Where fixed In Blonhead working pressure 50 lbs Tested by hydraulic pressure to 100 lbs No. of Certificate 46
Fire grate area 9 sq. ft. Description of safety valves dead spring No. of safety valves 2 area of each 4 sq. ft.
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' - 6 description of riveting Lap double
thickness of shell plates $\frac{7}{16}"$ diameter of rivet holes $\frac{3}{4}"$ whether punched or drilled punched
pitch of rivets $2\frac{3}{4}"$ lap of plating H per centage of strength of joint 72
thickness of crown plates $\frac{7}{16}$ stayed by 6' stays 1 1/2 dia effective
Diameter of furnace, top 4' - 4 bottom 4' - 9 length of furnace 6' - 6
thickness of plates $\frac{7}{16}"$ description of joint lap single riveted
thickness of furnace crown plates $\frac{7}{16}"$ stayed by 6' stays 1 1/2 dia effective
Working pressure of shell by rules 69 lbs working pressure of furnace by rules 60 lbs
diameter of uptake 15" thickness of plates $\frac{7}{16}"$ thickness of water tubes $\frac{3}{8}"$

The foregoing is a correct description,
A. Stephen & Son Manufacturer.

General Remarks (State quality of workmanship, opinions as to class, &c.)
Material and workmanship of good description. Constructed in
Special Survey and Main Rules in accordance with approved
Regulation. Machinery tried under steam and found satisfactory
and is in our opinion eligible for the Notification of Lloyd's
in the Society Register Book

*It is submitted that this vessel
is eligible to have the notification
of Lloyd's MC recorded in the
Register Book
M 28/4/81*

The amount of Entry Fee .. £ 3 : : : received by me,
Special M. J. G. .. £ 30 : : :
Certificate (if required) .. £ : : : 23/4/1881
To be sent as per margin.
(Travelling Expenses, if any, £ : : :)

Committee's Minute Friday, April, 29th 1881

M. J. G. A. J. M.
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Glasgow
Lloyd's Register
Foundation