

# REPORT ON MACHINERY.

NO. 13434

Port of Glasgow

Received at London Office

No. in Survey held at  
Reg. Book.

Date, first Survey

Last Survey

18

on the

S. S. "Barcelona" Supplementary Report II

(Number of Visits)

Tons { Gross  
Net

Master

Built at

By whom built

When built

Engines made at

By whom made

when made

Boilers made at

By whom made

when made

Registered Horse Power

Owners

Port belonging to

Nom. Horse Power as per Section 28

## ENGINES, &c.—

Description of Engines

No. of Cylinders

Diameter of Cylinders

Length of Stroke

Revolutions per minute

Diameter of Screw shaft

as per rule

Diameter of Tunnel shaft

as per rule

Diameter of Crank shaft journals

Diameter of Crank pin

Size of Crank webs

as fitted

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

No. of Donkey Engines

Sizes of Pumps

No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room

In Holds, &c.

No. of bilge injections

sizes

Connected to condenser, or to circulating pump

Is a separate donkey suction fitted in Engine room & size

Are all the bilge suction pipes fitted with roses

Are the roses in Engine room always accessible

Are the sluices on Engine room bulkheads always accessible

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 and all boiler mountings accessible at all times

Are the bilge suction pipes, cocks, and valves arranged so as to prevent any communication 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

Is it fitted with a watertight door

worked from

## BOILERS, &c.—

(Letter for record S.)

Total Heating Surface of Boilers

No. and Description of Boilers One Cylindrical return tubular Working Pressure 80 lbs Tested by hydraulic pressure to 160 lbs

Can this boiler be worked separately yes

Area of fire grate in each boiler 24 sq ft No. and Description of safety valves to

boiler two spring loaded

Area of each valve 4.9 sq in

Pressure to which they are adjusted 80 lbs Are they fitted

with easing gear yes

Smallest distance between boilers or uptakes and bunkers or woodwork 12"

Mean diameter of boilers 14"

Length 8' 6"

Material of shell plates Steel

Thickness 7/32"

Description of riveting: circum. seams lap 2 Rivets long. seams lap 4 Rivets

Diameter of rivet holes in long. seams 1/8"

Pitch of rivets 4 3/8"

Lap of plates or width of butt straps 6 3/4"

Per centages of strength of longitudinal joint

rivets 87.7

plate 80

Working pressure of shell by rules 84 lbs

Size of manhole in shell 12" x 16"

Size of compensating ring 7" x 5/8"

No. and Description of Furnaces in each boiler two plain

Material Steel Outside diameter 18 7/8"

Length of plain part

top 5 1/4"

bottom 5 1/4"

Thickness of plates

circum. 7/16"

bottom 7/16"

Description of longitudinal joint weld

No. of strengthening rings none

Working pressure of furnace by the rules 99 lbs

Combustion chamber plates: Material Steel Thickness: Sides 1/2" Back 9/16" Top 1/2" Bottom 1/2"

Pitch of stays to ditto: Sides 9 3/4"

Back 11 1/8" x 10 3/8"

Top 9 3/4"

If stays are fitted with nuts or riveted heads Nuts

Working pressure by rules 84

Material of stays Steel

Diameter at smallest part 1.22 in

Area supported by each stay 115.54 sq in

Working pressure by rules 84 lbs

End plates in steam space: Material Steel Thickness 7/8"

Material Steel

Thickness 7/8"

Pitch of stays 19"

How are stays secured Nuts

Working pressure by rules 80 lbs

Material of stays Steel

Diameter at smallest part 3.43

Area supported by each stay 19 x 21

Working pressure by rules 80 lbs

Material of Front plates at bottom Steel

Thickness 7/16"

Material of Lower back plate Steel

Thickness 7/8"

Greatest pitch of stays 1 1/8"

Working pressure of plate by rules 109 1/4

Diameter of tubes 3"

Pitch of tubes 4 1/8"

Material of tube plates Steel

Thickness: Front 7/8"

Back 1/6"

Mean pitch of stays 12 3/8"

Pitch across wide water spaces 14"

Working pressures by rules 140, 110 lbs

Girders to Chamber tops: Material Iron

Depth and thickness of girder at centre 5" x 2 1/8"

Length as per rule 22 1/2"

Distance apart 9 3/4"

Number and pitch of Stays in each one

Working pressure by rules 106 lbs

Superheater or Steam chest; how connected to boiler none

Can the superheater be shut off and the boiler worked

separately

Diameter

Length

Thickness of shell plates

Material

Description of longitudinal joint

Diam. of rivet

holes

Pitch of rivets

Working pressure of shell by rules

Diameter of flue

Material of flue plates

Thickness

If stiffened with rings

Distance between rings

Working pressure by rules

End plates: Thickness

How stayed

Working pressure of end plates

Area of safety valves to superheater

Are they fitted with easing gear

GLS 172-0184



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**DONKEY BOILER—** Description

Made at \_\_\_\_\_ By whom made \_\_\_\_\_ When made \_\_\_\_\_ Where fixed \_\_\_\_\_  
Working pressure \_\_\_\_\_ tested by hydraulic pressure to \_\_\_\_\_ No. of Certificate \_\_\_\_\_ Fire grate area \_\_\_\_\_ Description of safety valves \_\_\_\_\_  
No. of safety valves \_\_\_\_\_ Area of each \_\_\_\_\_ Pressure to which they are adjusted \_\_\_\_\_ If fitted with easing gear \_\_\_\_\_ If steam from main boilers can  
enter the donkey boiler \_\_\_\_\_ Diameter of donkey boiler \_\_\_\_\_ Length \_\_\_\_\_ Material of shell plates \_\_\_\_\_ Thickness \_\_\_\_\_  
Description of riveting long. seams \_\_\_\_\_ Diameter of rivet holes \_\_\_\_\_ Whether punched or drilled \_\_\_\_\_ Pitch of rivets \_\_\_\_\_  
Lap of plating \_\_\_\_\_ Per centage of strength of joint <sup>Rivets</sup> \_\_\_\_\_ Thickness of shell crown plates \_\_\_\_\_ Radius of do. \_\_\_\_\_ No. of Stays to do. \_\_\_\_\_  
Dia. of stays \_\_\_\_\_ Diameter of furnace Top \_\_\_\_\_ Bottom \_\_\_\_\_ Length of furnace \_\_\_\_\_ Thickness of furnace plates \_\_\_\_\_ Description of  
joint \_\_\_\_\_ Thickness of furnace crown plates \_\_\_\_\_ Stayed by \_\_\_\_\_ Working pressure of shell by rules \_\_\_\_\_  
Working pressure of furnace by rules \_\_\_\_\_ Diameter of uptake \_\_\_\_\_ Thickness of uptake plates \_\_\_\_\_ Thickness of water tubes \_\_\_\_\_

**SPARE GEAR.** State the articles supplied:—

The foregoing is a correct description,

*Musmair & Jackson* Manufacturer.

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

Certificate (if required) to be sent to

The amount of Entry Fee. . . £	:	:	When applied for,
Special . . . . . £	:	:	.....18.....
Donkey Boiler Fee . . . . £	:	:	When received,
Travelling Expenses (if any) £	:	:	.....18.....

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

Committee's Minute

TUES 11 JUN 1895

Assigned



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Foundation