

REPORT ON MACHINERY.

No. 14210 (New)

No. in Survey held at

Reg. Book.

Date, first Survey 22nd June

Received at London Office

THURSDAY 6

DEC

Last Survey 30th Nov

1883

(Number of Visits 13)

Tons

1579.75

1018.82

on the

Screw Steamer "Western Star"

Master A. Penell

Built at

Lundeland

By whom built

Wm Austin & Sons

When built

1883

Engines made at

Liverpool

By whom made

North Eastern Marine Eng. Co. Ltd

When made

1883

Boilers made at

do

By whom made

do

When made

1883

Registered Horse Power

140

Owners

Johnson Bros

Port belonging to

West. India

ENGINES, &c.

Description of Engines

Vertical acting compound surface condensing

Diameter of Cylinders

31" & 58"

Length of Stroke

3.0"

No. of Rev. per minute

65

Point of Cut off, High Pressure

.5

Low Pressure .5

Diameter of Screw shaft

10 1/4"

Diam. of Tunnel shaft

10"

Diam. of Crank shaft journals

10 1/2"

Diam. of Crank pin

10 1/4"

size of Crank webs 15" x 7 1/2"

Diameter of screw

13.3"

Pitch of screw

16.3" mean

No. of blades

4

state whether moveable

no

total surface

455 sq ft

No. of Feed pumps

2

diameter of ditto

3 1/2"

Stroke

3.0"

Can one be overhauled while the other is at work

yes

No. of Bilge pumps

2

diameter of ditto

3 1/2"

Stroke

3.0"

Can one be overhauled while the other is at work

yes

Where do they pump from

Sinks, holds, bilges & hot well

No. of Donkey Engines

2

Size of Pumps

6" x 9" & 4" x 6"

Where do they pump from

Sinks, holds, & bilges

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

one

and sizes

4"

Are they connected to condenser, or to circulating pump

Circulating pump

How are the pumps worked

Direct from engine crankhead

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

at line

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

never

Is the screw shaft tunnel watertight

yes

and fitted with a sluice door

yes

worked from upper platform

OILERS, &c.

Number of Boilers

One

Description

Cylindrical Single End

Whether Steel or Iron

Iron

Working Pressure

80 lbs

Tested by hydraulic pressure to

160 lbs

Date of test

23.10.83. No. of Cyl. 1466

Description of superheating apparatus or steam chest

no dome

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

72 sq

Description of safety valves

Spring

No. to each boiler

2

Area of each valve

17.72

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

2.0"

Diameter of boilers

16.0"

Length of boilers

11.14

Description of riveting of shell long. seams

lap treble

circum. seams

lap double

Thickness of shell plates

1 3/8"

Diameter of rivet holes

1 3/8"

whether punched or drilled

drilled

pitch of rivets

4 1/2"

Lap of plating

8 1/2" & 6 1/2"

Percentage of strength of longitudinal joint

90%

working pressure of shell by rules

82.2 lbs

size of manholes in shell

16" x 12"

No. of compensating rings

7

length, top

6.9"

bottom

9.6"

thickness of plates

5/8"

Description of joint

A. butt

Greatest length between rings

5.2"

working pressure of furnace by the rules

87 lbs

combustion chamber plating, thickness, sides

1/2"

back

1/2"

top

1/2"

Thickness of stays to ditto, sides

9 1/2" x 9"

back

9 1/2" x 9"

top

Curved

If stays are fitted with nuts or riveted heads

nuts

working pressure of plating by

rules

Diameter of stays at smallest part

1 3/8"

working pressure of ditto by rules

101 lbs

end plates in steam space, thickness

3/8"

working pressure by rules

80.2 lbs

diameter of stays at

smallest part

Greatest pitch of stays

11 1/2"

working pressure by rules

80.6 lbs

Front plates at bottom, thickness

5/8"

Back plates, thickness

5/8"

thickness of tube

5"

width of water spaces

—

Diameter of Superheater or Steam chest

—

length

—

thickness of plates

—

Description of longitudinal joint

—

diam. of rivet holes

—

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

—

—

—

DONKEY BOILER— Description *Vertical three crop tubes*
Made at *Gateshead* by whom made *Charles Chapman & Co* when made *17.8.83* where fixed *Stokehold*
Working pressure *70 lb* tested by hydraulic pressure to *140 lb* No. of Certificate *1382* fire grate area *26 8* description of safety
valves *Spring* No. of safety valves *2* area of each *9.62* if fitted with easing gear *yes* if steam from main boilers can
enter the donkey boiler *no* diameter of donkey boiler *6.9"* length *13.0"* description of riveting *lap double*
Thickness of shell plates *9/16"* diameter of rivet holes *1 1/8"* whether punched or drilled *punched* pitch of rivets *3 3/8"* lap of plating *4.8"*
per centage of strength of joint *72.2%* thickness of crown plates *9/16"* stayed by *6 Stay 1 1/4" diam*
Diameter of furnace, top *5.5"* bottom *5.9 3/4"* length of furnace *5.4"* thickness of plates *9/16"* description of joint *lap single riveted*
Thickness of furnace crown plates *9/16"* stayed by *as above* working pressure of shell by rules *82 lb*
Working pressure of furnace by rules *80 lb* diameter of uptake *1 1/2"* thickness of plates *7/16"* thickness of water tubes *3/8"*

SPARE GEAR. State the articles supplied:— *2 Main bearing bolts & nuts 2 top and 2 bottom end bolts & nuts 1 Set of Coupling bolts & nuts 1 Set of feed & big valves, Set of piston Spring for each piston and a quantity of assorted iron & bolts & nuts*

The foregoing is a correct description,
Wm. L. M. L. 10 10 10

General Remarks (State quality of workmanship, opinions as to class, &c. *The machinery of this vessel has been specially surveyed during construction the material and workmanship good and under the vessel eligible in my opinion to have the notification L. M. C. 11.83 in the Register Book of the Society*

It is submitted that this vessel is eligible to have the notification L. M. C. 11.83 recorded
M. L. 10/12

The amount of Entry Fee .. £ 2 : — :— received by me,
Special £ 21 : — :—
Donkey Boiler Fee £ — : — :—
Certificate (if required) *yes* 3rd Decr. 1883.
To be sent as per margin.
(Travelling Expenses, if any, £ *14.6*)

Committee's Minute

FRIDAY 7 DEC 1883

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

Newcastle
Lloyd's Register
Foundation