

REPORT ON MACHINERY.

No. 3466.

No. in Survey held at Reg. Book.

Barrow

Date, first Survey 30th April 1880 Last Survey 13th October 1881

(Received in London Office 7/11/81)

on the

S.S. "City of Rome"

Tons 5537.91

Master

J. Kennedy

Built at

Barrow.

When built

1881

Engines made at

Barrow

By whom made the Barrow S. B. Co when made 1881

Boilers made at

Barrow

By whom made the Barrow S. B. Co when made 1881

Registered Horse Power

1500 Nom. Owners

The Inman S. S. Co (limited) Port belonging to Liverpool

ENGINES, &c.—

Description of Engines

Compound, Inverted, Direct acting, Surface Condensing.

Diameter of Cylinders

3⁷/₈ 43"

Length of Stroke

6ft

No. of Rev. per minute

56

Point of Cut off, High Pressure Variable, Low Pressure Variable

Diameter of Screw shaft

25

Diameter of Tunnel shaft

24"

Diameter of Crank shaft journals

25"

Diameter of Crank pin

26"

size of Crank webs 45x18"

Diameter of screw

24ft

Pitch of screw

35ft to 40ft

No. of blades

4

state whether moveable Yes total surface

170ft

No. of Feed pumps

4

diameter of ditto

6"

Stroke

36"

Can one be overhauled while the other is at work

Yes

No. of Bilge pumps

4

diameter of ditto

8"

Stroke

24"

Can one be overhauled while the other is at work

Yes

Where do they pump from

Catch compartment

No. of Donkey Engines

6

Size of Pumps

7¹/₂ 3/4

Where do they pump from

From sea to distilling boiler, from distilling boiler to deck.

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

2

and sizes

15"

Are they connected to condenser, or to circulating pump

Centrifugal pump.

How are the pumps worked

Levers and links connected to piston rod crank heads of first & after engines

Are all connections with the sea direct on the skin of the ship

Yes

Are they Valves or Cocks

Valves and 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

Suction to fore compartments

How are they protected

Wood casings

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

On the 7th October in Langton graving dock

Is the screw shaft tunnel watertight

Yes

and fitted with a sluice door

Yes

worked from

Main deck.

BOILERS, &c.—

Number of Boilers

8.

Description

Cylindrical Return tubular fired from both ends.

Working Pressure

90lb.

Tested by hydraulic pressure to

180.

Date of test

4 on the 11-5-81 4 on the 18-6-81.

Description of ~~superheating apparatus~~ steam chest.

Cylindrical, horz.

Can each boiler be worked separately

Yes

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

No.

No. of square feet of fire grate surface in each boiler

135

Description of safety valves

Spring (Adams)

No. to each boiler

3

area of each valve

23.7

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

15"

Diameter of boilers

14' 0"

Length of boilers

19' 0"

description of riveting of shell long. seams

Double R. caps

circum. seams

Double R. caps

Thickness of shell plates

1 1/2"

diameter of rivet holes

1 1/2"

whether punched or drilled

drilled

pitch of rivets

5"

Lap of plating

11"

per centage of strength of longitudinal joint

63%

working pressure of shell by rules

89lb.

Size of manholes in shell

16" x 12"

size of compensating rings

8" x 1 1/2"

No. of Furnaces in each boiler

6

outside diameter

3' 10"

length, top

6' 0"

bottom

8' 8"

Thickness of plates

1/2"

description of joint

Butt strip, ends welded

if rings are fitted

Yes

greatest length between rings

2' 3"

Working pressure of furnace by the rules

87lb.

Combustion chamber plating, thickness, sides

1/2"

back

1/2"

top

1/2"

Pitch of stays to ditto

sides

8 1/2" x 9"

back

8 1/2" x 9"

top

hemispherical 3 small stays

If stays are fitted with nuts or riveted heads

Nuts

working pressure of plating by rules

95lb.

Diameter of stays at smallest part

1.396"

working pressure of ditto by rules

103lb.

End plates in steam space, thickness

1/2" doubling plate 3/4"

pitch of stays to ditto

16" x 18"

how stays are secured Double nuts & doubling plates

Working pressure by rules

83lb.

diameter of stays at smallest part

2 1/2"

working pressure by rules

223lb.

Front plates at bottom, thickness

1/2"

Back plates, thickness

—

greatest pitch of stays

—

working pressure by rules

—

Diameter of tubes $3\frac{1}{2}$ " pitch of tubes $4\frac{1}{2}$ " thickness of tube plates, front $\frac{3}{4}$ " back $\frac{1}{8}$ "
 How stayed *rule stays* pitch of stays $13\frac{1}{2}$ " width of water spaces $1\frac{1}{2}$ "
 Diameter of ~~superheater~~ or steam chest $4\frac{1}{2}$ " 0" length $13\frac{1}{2}$ " 0"
 Thickness of plates $\frac{7}{8}$ " 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 $9\frac{1}{2}$ lb. Diameter of flue $\frac{1}{2}$ " thickness of plates $\frac{1}{2}$ "
 If stiffened with rings $\frac{1}{2}$ " distance between rings $\frac{1}{2}$ " Working pressure by rules $\frac{1}{2}$ "
 End plates of superheater, or steam chest; thickness $\frac{1}{2}$ " *double lap* How stayed *7 stay rods 2\frac{1}{2}" diam.*
 Superheater or steam chest; how connected to boiler *2 Malleable iron branches \frac{3}{4}" thick.*
Distilling DONKEY BOILER Description *Cylindrical vertical, 3 iron tubes*
 Made at *Barrow* By whom made *B. L. B. Co.* when made *1881*
 Where fixed *Workshop* working pressure *60 lb.* Tested by hydraulic pressure to *120 lb.* No. of Certificates *236*
 Fire grate area *14 ft.* Description of safety valves *2 Weight* No. of safety valves *1* area of each *1.07"*
 If fitted with casing gear *Yes* If steam from main boilers can enter the donkey boiler *No*
 Diameter of donkey boiler *5\frac{1}{2}" 0"* height *11\frac{1}{2}" 6"* description of riveting *D. 11\frac{1}{2}" lap.*
 thickness of shell plates $\frac{3}{8}$ " diameter of rivet holes $\frac{3}{4}$ " whether punched or drilled *punched.*
 pitch of rivets $2\frac{1}{2}$ " lap of plating $4\frac{1}{2}$ " per centage of strength of joint *66\%*
 thickness of crown plates $\frac{3}{8}$ " stayed by *4 stay rods 2" diam.*
 Diameter of furnace, top $3\frac{1}{2}" 9"$ bottom $4\frac{1}{2}" 6"$ length of furnace $4\frac{1}{2}" 4"$
 thickness of plates $\frac{1}{2}"$ description of joint *lap single riveted*
 thickness of furnace crown plates $\frac{7}{8}"$ stayed by *4 stay rods 2" diam.*
 Working pressure of shell by rules *74 lb.* working pressure of furnace by rules *60 lb.*
 diameter of uptake $12"$ thickness of plates $\frac{7}{8}"$ thickness of water tubes $\frac{3}{8}"$

The foregoing is a correct description,

J. M. John Manufacturer.

General Remarks (State quality of workmanship, opinions as to class, &c.) *The material and workmanship is of good quality, and has been constructed under Sp^l Survey in accordance with the requirements of the Rules and to plans approved. The machinery has been tested under steam and found to work satisfactorily. It is of opinion that this vessel is entitled to the notation.*
Lloyd's M.C. 13th October 1881.

The amount of Entry Fee $\pounds 2.8$ received by me.

Special $\pounds 96$

Certificate (if required) $\pounds 5$ 5th Nov^r 1881

To be sent as per margin.

(Collecting Expenses, if any, &c.)

Committee's Minute

Tuesday, November, 8th, 1881.

Lloyd's

Robert Lloyd & Taylor & Son, Printers, 11, Old Street, Golden Square, London, E.C.

J. H. Wigham *A. Stoddart*
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping



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