

REPORT ON MACHINERY.

No. 885

No. in Survey held at
Reg. Book.

Sunderland

Date, first Survey *July 12th 1882*

(Received at London Office Rec'd 3rd May 1883)

Last Survey *April 5th 1883*

on the

Screw Steamer

"Torbay"

Tons *1414.14*
920.7

Master *J. Stevens*

Built at

Sunderland

When built

1883

Engines made at

Sunderland

By whom made

J. Dickinson

when made

1883

Boilers made at

Q^o

By whom made

Q^o

when made

d^o

Registered Horse Power

140

Owners

Torbay Shipping Coy

Port belonging to

Brixham

ENGINES, &c.—

Description of Engines

Inverted Compound Surface Condensing

Diameter of Cylinders

31 1/2 x 58

Length of Stroke

36

No. of Rev. per minute

60

Point of Cut off, High Pressure

2 stroke

Low Pressure *2 stroke*

Diameter of Screw shaft

10

Diameter of Tunnel shaft

9 1/2

Diameter of Crank shaft journals

10

Diameter of Crank pin

10

size of Crank webs *12 1/2 x 7*

Diameter of screw

13.11

Pitch of screw

16 6

No. of blades

4

state whether moveable *not* total surface *50 sq ft*

No. of Feed pumps

2

diameter of ditto

3 3/4

Stroke

19

Can one be overhauled while the other is at work

yes

No. of Bilge pumps

2

diameter of ditto

3 3/4

Stroke

19

Can one be overhauled while the other is at work

yes

Where do they pump from

one from the bilges of engine room, aft well & fore hold tanks. other one from the bilges of all Compart

No. of Donkey Engines

two

Size of Pumps

9 x 15 stroke

Where do they pump from *the large one from the bilges of the*

engine room, aft well & fore hold, tanks & Condenser. Small one from the same places, fore well & sea.

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

4 dia

Are they connected to condenser, or to circulating pump

to circulating pump

How are the pumps worked

by levers from the pistons & crosshead of the after engine

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

yes

Are they Valves or Cocks

valves & 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

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

new

Is the screw shaft tunnel watertight

yes

and fitted with a sluice door

yes

worked from *top platform of engine room*

BOILERS, &c.—

Number of Boilers

two

Description

Cylindrical & Multitubular

Working Pressure

80 lbs

Tested by hydraulic pressure to

160 lbs

Date of test

March 7th 1883

Description of ~~superheating apparatus or~~ steam chest

upright dome

Can each boiler be worked separately

yes

Can the superheater be shut off and the boiler worked separately

no superheater

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

38

Description of safety valves

spring by J. Dickinson

No. to each boiler

2

area of each valve

11 sq in

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

9"

Diameter of boilers

12.3

Length of boilers

10.0

description of riveting of shell long. seams

double riv lap

circum. seams

double riv lap

Thickness of shell plates

7/8"

diameter of rivet holes

1 1/4"

whether punched or drilled

drilled

pitch of rivets

4 1/2"

Lap of plating

9"

per centage of strength of longitudinal joint

722

working pressure of shell by rules

81 lbs

Size of manholes in shell

16 x 12

size of compensating rings

neck of dome, double riveted

No. of Furnaces in each boiler

2

outside diameter

3.4

length, top

6.6

bottom

7.0

Thickness of plates

2 x 5 bottom

description of joint

double riv lap

if rings are fitted

none

greatest length between rings

Working pressure of furnace by the rules

80 lbs

Combustion chamber plating, thickness, sides

1/2"

back

1/2"

top

1/2"

Pitch of stays to ditto

sides

8 x 8

back

8 x 8

top

Circular 2 ft rad

If stays are fitted with nuts or riveted heads

nicked heads

working pressure of plating by rules

100 lbs

Diameter of stays at smallest part

1 1/4"

working pressure of ditto by rules

92 lbs

End plates in steam space, thickness

3/4"

pitch of stays to ditto

15 1/2 x 15

how stays are secured

double nuts

Working pressure by rules

84 lbs

diameter of stays at smallest part

2"

working pressure by rules

80 lbs

Front plates at bottom, thickness

3/4"

Back plates, thickness

3/4"

greatest pitch of stays

12 x 8

working pressure by rules

100 lbs

SLD 945-0037

Diameter of tubes $3\frac{1}{2}$ pitch of tubes $4\frac{1}{2} \times 4\frac{1}{2}$ thickness of tube plates, front $\frac{3}{4}$ back $\frac{3}{4}$
How stayed stay tubes pitch of stays $13\frac{1}{2} \times 9$ width of water spaces $1\frac{1}{4}$
Diameter of Superheater or Steam chest $3\frac{1}{2}$ length $8\frac{3}{4}$
Thickness of plates $\frac{3}{8}$ 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 96 lbs Diameter of flue none thickness of plates
If stiffened with rings distance between rings Working pressure by rules
End plates of superheater, or steam chest; thickness $\frac{9}{16}$ How stayed dished to $3\frac{1}{2}$ radius
Superheater or steam chest; how connected to boiler by a neck piece 16 dia $\times \frac{9}{16}$ thick

DONKEY BOILER— Description Vertical water tubes in furnace
Made at Darlington By whom made J. Shewell & Co when made tested 17.1.83
Where fixed in stithole working pressure 140 lbs Tested by hydraulic pressure to 140 lbs No. of Certificate 865
Fire grate area 21 sq ft Description of safety valves spring No. of safety valves one area of each 11 sq ins
If fitted with easing gear yes If steam from main boilers can enter the donkey boiler no
Diameter of donkey boiler 6 ft length 12 ft description of riveting long seams, lap, dble joint &c
thickness of shell plates $\frac{1}{2}$ diameter of rivet holes $\frac{13}{16}$ whether punched or drilled Punched
pitch of rivets $2\frac{3}{4}$ lap of plating $4\frac{1}{4}$ per centage of strength of joint 90%
thickness of crown plates $\frac{1}{2}$ stayed by stay stays $1\frac{1}{2}$ dia
Diameter of furnace, top 4 ft bottom 5 ft length of furnace 6 ft
thickness of plates $\frac{9}{16}$ description of joint Lap single riveted
thickness of furnace crown plates $\frac{1}{2}$ stayed by stay stays $1\frac{1}{2}$ dia
Working pressure of shell by rules $15\frac{1}{2}\text{ lbs}$ working pressure of furnace by rules $42\frac{1}{2}\text{ lbs}$
diameter of uptake 15 thickness of plates $\frac{9}{16}$ thickness of water tubes $\frac{3}{8}$ See Plan.

The foregoing is a correct description,

W. Dickenson

Manufacturer.

Except of the Donkey Boiler

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

The Machinery of this vessel has been constructed under special survey
the Materials and workmanship are good and efficient.

The Engines and Boilers have been tried under steam, and in
my opinion are in good order and safe working condition and
eligible for the distinguishing mark **LLOYD'S M.C. 4.83**
in the Register Book of this Society

The amount of Entry Fee £ 2 : 0 : received by me,

Special £ 21 : 0 :

Certificate (if required) £ — : — : 30 April 1883

To be sent as per margin.

(Travelling Expenses, if any, £)

Committee's Minute

Friday, 4th May, 1883,

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



Lloyd's Register
Foundation