

REPORT ON MACHINERY.

3506

No. 3506

Port of

Belfast

Received at London Office MON 3 DEC 1888

No. in Survey held at Reg. Book.

Belfast

Date, first Survey

15th Aug.

Last Survey

23rd Nov. 1888

317 on the

Iron Screw Steamer

Thursby

(Number of Visits 12)

Tons 316
494
441

Master J. M. Carthy

Built at

Belfast

By whom built

Harland & Wolff

When built

1876

Engines made at

Belfast

By whom made

J. Rowan & Co. Lim.

when made

1876

Boilers made at

Belfast

By whom made

Harland & Wolff (Lim.)

when made

1888

Registered Horse Power

71

Owners

Col. S. J. H. Thursby BA'ort belonging to Flutwood

ENGINES, &c.—

Description of Engines

Compound Inverted direct acting Surface Cond.

Diameter of Cylinders

Length of Stroke

No. of Rev. per minute

Point of Cut off, High Pressure

Low Pressure

Diameter of Screw shaft

Diam. of Tunnel shaft

Diam. of Crank shaft journals

Diam. of Crank pin

size of Crank webs

ter of screw

Pitch of screw

No. of blades

state whether moveable

total surface

f Feed pumps

diameter of ditto

Stroke

Can one be overhauled while the other is at work

f Bilge pumps

diameter of ditto

Stroke

Can one be overhauled while the other is at work

do they pump from

f Donkey Engines

Size of Pumps

Where do they pump from

all the bilge suction pipes fitted with roses

Are the roses always accessible

Are the sluices on Engine room bulkheads always accessible

f bilge injections

and sizes

Are they connected to condenser, or to circulating pump

are the pumps worked

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

Are they Valves or Cocks

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

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

t pipes are carried through the bunkers

How are they protected

all pipes, cocks, valves, and pumps in connection with the machinery accessible at all times

the pipes, cocks, and valves arranged so as to prevent an unintentional connection 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

and fitted with a sluice door

worked from

BOILERS, &c.—

Number of Boilers

One

Description

Circul. Sing. End. Mult.

whether Steel or Iron

Steel

Working Pressure

70 lbs

Tested by hydraulic pressure to

140 lbs

Date of test

3rd November 1888

Description of superheating apparatus or steam chest

None

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

49.5

Description of safety valves

Spring

No. to each boiler

2

Area of each valve

12.56

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

14"

Diameter of boilers

13'-6"

Length of boilers

9'-5"

description of riveting of shell long. seams

to Riv. 10 B.S.

circum. seams

Lap & Riv.

Thickness of shell plates

1/8"

Diameter of rivet holes

7/8"

whether punched or drilled

drilled

pitch of rivets

3.62"

Lap of plating

9" x 2 B.S.

Per centage of strength of longitudinal joint

75.8 plate

working pressure of shell by rules

72 lbs

size of manholes in shell

16" x 12"

Size of compensating rings

Reck. plate 24" x 28" x 1/4" Steel

No. of Furnaces in each boiler

Three

Outside diameter

38"

length, top

6'-6"

bottom

8'-6"

thickness of plates

2

description of joint

double strap

if rings are fitted

no

Greatest length between rings

✓

working pressure of furnace by the rules

70 lbs

combustion chamber plating, thickness, sides

15/32"

back

15/32"

top

17/32"

Pitch of stays to ditto, sides

9"

back

7 1/2" to 9"

top

8" to 10 1/2"

If stays are fitted with nuts or riveted heads

nuttid

working pressure of plating by

rules

78 to 83 lbs

diameter of stays at smallest part

1 1/8" to 1 1/4"

working pressure of ditto by rules

71 lbs

end plates in steam space, thickness

7/8"

Pitch of stays to ditto

18" x 19"

how stays are secured

6 lb nuts & washers

working pressure by rules

46 lbs

diameter of stays at

smallest part

2 1/4"

working pressure by rules

74 lbs

Front plates at bottom, thickness

5/8"

Back plates, thickness

5/8"

Greatest pitch of stays

12"

working pressure by rules

83 lbs

Diameter of tubes

3 1/4"

pitch of tubes

4 1/2" x 4 1/2"

thickness of tube

9/16"

plates, front

5/8"

back

5/8"

how stayed

solid stays

pitch of stays

9" x 12 1/2"

width of water spaces

9/16"

Diameter of Superheater or Steam chest

✓

length

✓

thickness of plates

✓

description of longitudinal joint

✓

diam. of rivet holes

✓

Pitch of rivets

✓

working pressure of shell by rules

✓

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

✓

how stayed

✓

Superheater or steam chest; how connected to boiler

✓

Lloyd's Register

Foundation

BEL55-0154

DONKEY BOILER— Description *Vertical & Cylindrical, Iron*
Made at *Bradford* by whom made *Partington & Co* when made *1888* where fixed *In Stoke*
Working pressure *70 lbs* tested by hydraulic pressure to *140* No. of Certificate *720* fire grate area *11 sq ft* description
valves *Down* No. of safety valves *one* area of each *70 in* if fitted with easing gear *yes* if steam from main boilers can
enter the donkey boiler *no* diameter of donkey boiler *4'-9"* length *10'-2"* description of riveting *Lap joints*
Thickness of shell plates *3/8"* diameter of rivet holes *3/4"* whether punched or drilled *drilled* pitch of rivets *2 1/2"* lap of plating *4"*
per centage of strength of joint *70* thickness of crown plates *7/16"* stayed by *Six stays 1 1/2" dia.*
Diameter of furnace, top *3'-8"* bottom *3'-9"* length of furnace *4'-8"* thickness of plates *1/2"* description of joint *Lap & single rivet*
Thickness of furnace crown plates *1/2"* stayed by *same as above* working pressure of shell by rules *70 lbs.*
Working pressure of furnace by rules *88 lbs.* diameter of uptake *19"* thickness of plates *3/8"* thickness of water tubes *3/8" & 9" dia*

SPARE GEAR. State the articles supplied:— *The above particulars except those underlined were taken from slip sent from Liverpool and attached to this report.*

The foregoing is a correct description,
Robert M. Lloyd Manufacturer of Main Boiler.

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

The Main Boiler of the foregoing Steamer has been constructed and placed on board, in accordance with the approved plan, the Secretary's letter, dated, 5th July, 1888; the Rules of the Society and to the satisfaction of the undersigned.

The steel used was tested in accordance with the Rules and the material & workmanship throughout were good & satisfactory. When finished the boiler was tested under hydraulic and steam pressures, giving satisfaction; the safety valves were adjusted to blow off under steam at 70 + 5 lbs. on main & 65 lbs. on donkey boiler.

A new main steam pipe that was supplied & fitted was tested under hyd. pressure to 140 lbs.

In addition to above, the propeller was taken off, shaft and universal joint with lowering gear overhauled and put in an efficient condition, and all sea connections & fastenings examined.

*The above New Main & Donkey boilers having been constructed and put on board in accordance with the Rules, I would respectfully recommend that the Notification **NB. 88** be recorded in the Register Book.*

No other parts of Machinery were opened out in this port.

It is submitted that this vessel is eligible to have + NB. 88 recorded.

The amount of Entry Fee .. £ : : received by me, *a/Bal*
Special .. £ *4 : 4 : 0*
Donkey Boiler Fee .. £ : :
Certificate (if required) .. £ : : *8/2/88*
To be sent as per margin.

(Travelling Expenses, if any, £ *✓*)

Committee's Minute

TUES 4 DEC 1888

+ NB 88

James Ellaston

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