

## REPORT ON BOILERS.

Sld. No. 32937

Sld. No. 62216

APR 10 1940

Date of writing Report

19

When made in at Local Office

9. 4. 40

Received at London Office

Port of Glasgow

No. in Survey held at  
Reg. Book.

Annan

Date, First Survey

1939 Dec. 28

Last Survey

4-4-

1940

on the M/V "TOWER GRANGE"

(Number of Visits 12)

Gross

5226

Tons

Net

30 1/2.

Built at Sunderland

By whom built

Wm Donford &amp; Sons Ltd

Yard No.

665 660

When built

1940

Boilers made at

Annan

By whom made

Loughran &amp; Co Annan Ltd

Boiler No.

14517

When made

1940

Owners

The Tower Steamship Co Ltd

Port belonging to

London.

## VERTICAL DONKEY BOILER—

No. 1

Description

Donkey Composite

Manufacturers of steel

Boiler 1st

Made at

By whom made

When made

Where fixed

recess

Working pressure 120 lb

tested by hydraulic pressure to

230

Date of test

4-4-40

No. of Certificate

20544

Fire grate area

Description of safety valves

Enclosed spring

No. of safety valves

2

Area of each

7.06 sq ft

Pressure to which they are adjusted

120

If fitted with easing gear

yes

If steam from main boilers can

enter the donkey boiler

Diameter of donkey boiler

8'-0"

Length

17'-9"

Material of shell plates

S

Thickness

13/16" 21/32"

Range of tensile strength

28-32 ksi

Description of riveting long. seams

WR Lap

Diameter of rivet holes

1 1/32"

Whether punched or

drilled

drilled

Pitch of rivets

3-15" 3-13" 3-1/8"

Lap of plating

S

Per centage of strength of joint

Rivets 66.2 53.9

Working pressure of shell by

rules

127

Thickness of shell crown plates

19/32" 1 1/32"

Radius of do.

4'-0"

No. of stays to do.

-

Diameter of stays

Diameter of

furnace—Top

-

Bottom

7'-0"

Length of furnace

Thickness of furnace side plates

23/32"

Description of joint

bevelled

Working

pressure of furnace by rules

144

Thickness of Ogee ring

1 1/32"

Working pressure of Ogee ring by rules

124

Thickness of furnace

crown plates

23/32"

Radius of do.

3'-6"

Stayed by

hemisphere

Diameter of uptake

21 1/2" 25"

Thickness of uptake

plates

9 1/16"

Thickness of tube plates

front 1 1/4"

back 1 1/4"

Mean pitch of stay tubes in nest

8 7/16" 8 3/16" 9 4/16"

Pitch in outer vertical rows

5 1/4" 6 3/4"

Diameter of tube holes

FRONT

stay 2 3/16" 1 1/2"

BACK

stay 2" 1 1/2"

Working pressure of tube plates by rules

2-196 161

Tubes: Material

S

External diameter

stay 2" 1 1/2"

plain 2" 1 1/2"

Thickness

stay 1 1/32"

plain 10 1/16"

No. of threads per inch

9

Pitch of tubes

2 7/8" 2 1/2" 3-13" 3 1/2"

Working pressure by rules

215

Manhole compensation; Size of opening in shell plate

21" x 17"

Section of compensating

ing

9 1/4" x 1 1/32"

No. of rivets and diameter of rivet holes

40 @ 1 1/32"

Outer row pitch at ends

4.03"

The foregoing is a correct description,

L. A. L.

Manufacturer

Dates

During progress of

work in shops

-

1939 Dec. 28, 1940 Jan. 18. 25.

Drawing No.

25112

Survey

During erection on

board vessel

-

Feb. 9, 16, 28, Mar. 8, 14, 21, 29 Apr. 4.

while

building

-

Total No. of visits

12

Is the approved plan of boiler forwarded herewith

yes

## GENERAL REMARKS

(State quality of workmanship, opinions as to class, &amp;c.)

The materials and workmanship are good.

The boiler has been constructed under Special Survey. It will be sent to Pallion yard Sunderland to be fitted in the vessel.

Heating Surface — exhaust gas 515 sq ft. oil fire 538 sq ft.

This boiler has been securely fixed on board the vessel examined under Steam &amp; safety valves adjusted to working pressure in accordance with rule requirements.

For recommendation please see Mech. Rpt.

H. L. L.

Survey Fee

...

...

£

5

:

12

:

:

When applied for

MONTHLY ACCOUNT

19

Travelling Expenses (if any) £

:

:

:

When received

MONTHLY ACCOUNT

19

Committee's Minute

GLASGOW

9 APR 1940

Assigned

TRANSMIT TO LONDON

Engineer Surveyor to Lloyd's Register of Shipping.

W224-0212