

REPORT ON BOILERS.

No. 13305

19 AUG 1942

Received at London Office

Date of writing Report

19

When handed in at Local Office

19

Port of

Belfast.

No. in Survey held at

Belfast.

Date, First Survey

Last Survey

19

Reg. Book.

on the

M.V. "EMPIRE FLETCHER"

(Number of Visits)

Gross 8194
Net 4776.

Built at

Belfast.

By whom built

Harland & Wolff Ltd

Yard No. 1081

When built 1942

Engines made at

Glasgow

By whom made

Harland & Wolff Ltd

Engine No. 8108

When made 1942

Boilers made at

Belfast.

By whom made

Harland & Wolff Ltd

Boiler No. 1081

When made 1942

Nominal Horse Power

490

Owners

Ministry of War Transport

Port belonging to

Belfast.

MULTITUBULAR BOILERS ~~MAIN, AUXILIARY, OR~~ DONKEY.

Manufacturers of Steel

Colville Ltd

(Letter for Record)

5

Total Heating Surface of Boilers

3836 sq ft

Is forced draught fitted

yes

Oil fired. EXHST GAS

No. and Description of Boilers

Two Single Ended Multitubular

Working Pressure

150 lbs sq

Tested by hydraulic pressure to

275 lbs sq

Date of test

13.2.42

No. of Certificate

1165

Can each boiler be worked separately

yes

Area of Firegrate in each Boiler

No. and Description of safety valves to each boiler

2-2 1/4 dia Improved high lift

Area of each set of valves per boiler

per Rule 7.26 sq in

as fitted 7.96 sq in

Pressure to which they are adjusted

150 lbs sq

Are they fitted with easing gear

yes

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler

Smallest distance between boilers or uptakes and bunkers or woodwork

Is oil fuel carried in the double bottom under boilers

Smallest distance between shell of boiler and tank top plating

Boiler flat.

Is the bottom of the boiler insulated

yes

Largest internal dia. of boilers

12'-6"

Length

11'-0"

Shell plates: Material

Steel

Tensile strength

29-33 tons

Thickness

7/8"

Are the shell plates welded or flanged

no

Description of riveting: circ. seams

D.R.

long. seams

TR DBS

Diameter of rivet holes in

circ. seams

1 3/32

long. seams

1 1/32

Pitch of rivets

3-0 3/8"

6 1/16"

Percentage of strength of circ. end seams

plate

64

rivets

56.1

Percentage of strength of circ. intermediate seams

plate

84.6

rivets

106.7

combined

90.5

Percentage of strength of longitudinal joint

Working pressure of shell by Rules 154.6 lbs sq

Thickness of butt straps

outer

11/16"

inner

13/16"

No. and Description of Furnaces in each Boiler

Two Corrugated "Brighton" Section

Material

Steel

Tensile strength

26-30 tons

Smallest outside diameter

42"

Length of plain part

top

bottom

Thickness of plates

circum

1/2"

Description of longitudinal joint

Five weld

Dimensions of stiffening rings on furnace or c.c. bottom

End plates in steam space: Material

Steel

Tensile strength

26-30 tons

Thickness

5/16"

Pitch of stays

various

How are stays secured

Nuts and washers inside and outside.

Tube plates: Material

front

Steel

back

Steel

Tensile strength

26-30 tons

Tensile strength

26-30 tons

Thickness

7/8"

13/16"

Mean pitch of stay tubes in nests

8.54"

9.47"

Pitch across wide water spaces

13 1/2"

Girders to combustion chamber tops: Material

Steel

Tensile strength

28-32 tons

Depth and thickness of girder

at centre

8 1/4 x 2 x 3/4

Length as per Rule

29.94"

Distance apart

11"

No. and pitch of stays

in each

3 @ 7 1/4"

Combustion chamber plates: Material

Steel

Tensile strength

26-30 tons

Thickness: Sides

3/4"

Back

3/4"

Top

3/4"

Bottom

3/4"

Pitch of stays to ditto: Sides

8 1/4 x 9 3/4"

Back

8 x 9 1/4"

Top

7 1/4 x 11"

Are stays fitted with nuts or riveted over

Marginal and girder stays riveted all other riveted over.

Front plate at bottom: Material

Steel

Tensile strength

26-30 tons

Thickness

7/8"

Lower back plate: Material

Steel

Tensile strength

26-30 tons

Thickness

5/16"

Pitch of stays at wide water space

13"

Are stays fitted with nuts or riveted over

Riveted over

Main stays: Material

Steel

Tensile strength

28-32 tons

Diameter

At body of stay,

or

Over threads

2 1/2"

No. of threads per inch

6

Screw stays: Material

Steel

Tensile strength

26-30 tons

Diameter

At turned off part,

or

Over threads

1 1/2"

1 7/8"

2"

No. of threads per inch

9

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Type of Superheater _____ *Manufacturers of* _____ *Tubes* _____
 _____ *Steel forgings* _____
 _____ *Steel castings* _____

Number of elements _____ *Material of tubes* _____ *Internal diameter and thickness of tubes* _____

Material of headers _____ *Tensile strength* _____ *Thickness* _____ *Can the superheater be shut off and*
the boiler be worked separately _____ *Is a safety valve fitted to every part of the superheater which can be shut off from the boiler* _____

Area of each safety valve _____ *Are the safety valves fitted with easing gear* _____

Pressure to which the safety valves are adjusted _____ *Hydraulic test pressure* _____

tubes _____ *forgings and castings* _____ *and after assembly in place* _____ *Are drain cocks*
valves fitted to free the superheater from water where necessary _____

yes.

THE MARSHALL AND WOLFF, LIMITED.

The foregoing is a correct description,

W. Marshall, Manufacturer

Secretary,

Is this Boiler a duplicate of a previous case yes If so, state Vessel's name and Report No. EMERZ CHAPMAN. Belfast Let 17th 1924

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) These boilers have been constructed under Special Survey in accordance with the Rules and approved plans. The materials and workmanship are good. The boilers have been efficiently installed on board the vessel, all safety valves adjusted under steam and accumulation test carried out with satisfactory results.

E. Shaw.
Engineer Surveyor to Lloyd's Register of Shipping.

TUE 25 AUG 1942

See Bel. 7E. 13305

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