

# REPORT ON BOILERS.

No. 13354

26 OCT 1942

Date of writing Report

19

When handed in at Local Office

19

Port of

Belfast.

No. in Survey held at

Belfast

Date, First Survey

24 Jan. 1942

Last Survey

19 Oct.

1942

Reg. Book.

(Number of Visits

30

Gross

Tons

Net

on the

M.V. "Empire Traveller"

608459

Built at

Belfast

By whom built

Harland &amp; Wolff Ltd

Yard No.

1189

When built

1943

Engines made at

Glasgow.

By whom made

do

Engine No.

1189

When made

1943

Boilers made at

Belfast

By whom made

Harland &amp; Wolff Ltd

Boiler No.

608459

When made

1942

Nominal Horse Power

Owners

Port belonging to

## MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Colvilles Ltd.

(Letter for Record

5

Total Heating Surface of Boilers

1918 sq ft

Is forced draught fitted

Yes

Coal Oil fired EXHS GAS

No. and Description of Boilers

1 Single ended multitubular

Working Pressure

150 lbs

Tested by hydraulic pressure to

275 lbs

Date of test

27.8.42

No. of Certificate

1198

Can each boiler be worked separately

Yes

Area of Firegrate in each Boiler

No. and Description of safety valves to each boiler

2 1/2" Double Spring Improved H.L.

Area of each set of valves per boiler

(per Rule

3.63 sq inch

Pressure to which they are adjusted

150 lbs

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

well clear

Is oil fuel carried in the double bottom under boilers

No.

Smallest distance between shell of boiler and tank plating

3'-0"

Is the bottom of the boiler insulated

Yes mats

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

end

DR.

long. seams

TR. DBS.

Diameter of rivet holes in

circ. seams

1 3/32"

Pitch of rivets

3-038"

Percentage of strength of circ. end seams

plate

64

rivets

56.1

Percentage of strength of circ. intermediate seam

plate

84.6

Percentage of strength of longitudinal joint

plate

84.6

rivets

106.7

combined

90.5

Working pressure of shell by Rules 154.6 lbs

Thickness of butt straps

outer 1/16"

inner 13/16"

No. and Description of Furnaces in each Boiler

Two Corrugated "Deighton" Section

Material

Steel

Tensile strength

26-30 tons

Smallest outside diameter

42"

Length of plain part

top

Thickness of plates

crown 1/2"

bottom

Description of longitudinal joint

Sine weld

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

End plates in steam space: Material

Steel

Tensile strength

26-30 tons

Thickness

13/16"

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

Thickness

7/8"

Mean pitch of stay tubes in nests

8.54"

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

8'4" x 2' x 3/4"

Length as per Rule

29.94"

Distance apart

11"

No. and pitch of stays

in each

3 @ 7'4"

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

8'4" x 9 3/4"

Back

8' x 9 1/4"

Top

7'4" x 11"

Are stays fitted with nuts or riveted over

haziel and guide stays nutted all others 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

13/16"

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

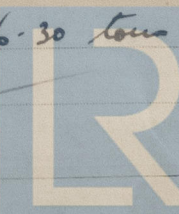
Diameter

At turned off part, or Over threads

1 1/2", 1 5/8", 2"

No. of threads per inch

9



© 2021

Lloyd's Register Foundation

006601-006613-0298



Are the stays drilled at the outer ends

Margin stays: Diameter { At turned off part, or Over threads 15/8

No. of threads per inch

Tubes: Material Steel External diameter { Plain 2 1/2 Stay 2 1/2 Thickness { 10 LSG 1/4, 5/16, 3/8 No. of threads per inch 9

Pitch of tubes 3 3/4 x 3 7/8 Manhole compensation: Size of opening in shell plate 16 1/2 x 12 1/2 Section of compensating ring 2 [10 x 3/4 + 1 x 1] No. of rivets and diameter of rivet holes 28 @ 1 1/32

Outer row rivet pitch at ends 9 Depth of flange if manhole flanged 3 3/8 in front and plate Steam Dome: Material

Tensile strength Thickness of shell Description of longitudinal joint

Diameter of rivet holes Pitch of rivets Percentage of strength of joint { Plate Rivets

Internal diameter Thickness of crown No. and diameter of

stays Inner radius of crown

How connected to shell Size of doubling plate under dome Diameter of rivet holes and pitch of rivets in outer row in dome connection to shell

#### 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 or

valves fitted to free the superheater from water where necessary

Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with

The foregoing is a correct description,

Manufacturer.

#### (Visits on Board)

1942 Jan 24 Feb 20 Mar 10, 17, 24

Dates of Survey { During progress of work in shops - 20, 22, 28 May 1, 12, 15, 26, 28 June 10, 12, 16, 19, 20, 23, 29 Aug 1, 4, 11, 17, 25, 29 Oct 1, 14, 19 = 30

Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) 40 26.5.41

Total No. of visits

Is this Boiler a duplicate of a previous case

If so, state Vessel's name and Report No. 1/606 Belfast Rpt 10 13272

#### GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)

This boiler has been constructed under Special Survey in accordance with the Rules and approved plans.

The materials and workmanship are good, and the boiler has been satisfactorily subjected to hydraulic test

This boiler has been satisfactorily fitted on board, examined under full working conditions and found satisfactory

Safety valves adjusted under steam to 150 lbs per sq. inch (Starboard Boiler) Safety valve Compression washers Port Valve 7/16" Start 3/8" G. E. Murdoch.

Survey Fee ... £ 12 : 15 : - When applied for, 24. 10. 1942

Travelling Expenses (if any) £ : : When received, 19

G. E. Murdoch.

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW

2 NOV 1943

Assigned See accompanying Memo. report (Gls. 67725)



© 2021

Lloyd's Register Foundation