

REPORT ON BOILERS.

No. 15485

Received at London Office

24 DEC 1952

Date of writing Report

19

When handed in at Local Office

22. 12. 1952

Port of

BELFAST.

No. in Reg. Book.

Survey held at

BELFAST.

Date, First Survey

18 Feb. 1952.

Last Survey

16 Dec.

1952

912555 on the

M/V.

Blangford

(Number of Visits 42)

Gross

Tons

Net

Master

Built at

Glasgow

By whom built

New Scotland-Wolff La

Yard No. 1454

When built 1953

Engines made at

Glasgow

By whom made

New Scotland-Wolff La

Engine No. 1454

When made 1953

Boilers made at

BELFAST.

By whom made

HARLAND & WOLFF, LTD.

Boiler No. 14546

When made

Nominal Horse Power

Owners

Port belonging to

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

COLVILLE'S LTD.

(Letter for Record S)

Total Heating Surface of Boilers

6228 sq

Is forced draught fitted

yes.

Coal or Oil fired

Oil.

No. and Description of Boilers

2- CYLINDRICAL MULTITUBULAR.

Working Pressure 180 lbs/sq

Tested by hydraulic pressure to

320 lbs/sq

Date of test

28.11.52

No. of Certificate

No. 1514.

Can each boiler be worked separately

yes

Area of Firegrate in each Boiler

No. and Description of safety valves to each boiler

One 2 3/4" C.S. Imp. H.L. Double spring

Area of each set of valves per boiler

per Rule

Pressure to which they are adjusted

185 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

No

Smallest distance between boilers or uptakes and bunkers or woodwork

Boiler flat.

Is oil fuel carried in the double bottom under boilers

Smallest distance between shell of boiler and tank top plating

Is the bottom of the boiler insulated

Largest internal dia. of boilers

15'-6"

Length

12'-0"

Shell plates: Material

STEEL.

Tensile strength

29/33.

Thickness

1 1/4"

Are the shell plates welded or flanged

✓

Description of riveting: circ. seams

end D.R.L.

long. seams

D.R.D.B.S.

Diameter of rivet holes in

circ. seams

1 3/8"

Pitch of rivets

3.501"

Percentage of strength of circ. end seams

plate 60.71.

rivets 53.8.

Percentage of strength of circ. intermediate seam

plate

84.2.

Percentage of strength of longitudinal joint

plate 101.5.

rivets 88.7.

Working pressure of shell by Rules

181.4 lbs/sq

Thickness of butt straps

outer 1"

inner 1 1/8"

No. and Description of Furnaces in each Boiler

3- DEIGHTON.

Material

STEEL.

Tensile strength

26/30.

Smallest outside diameter

3'-9 3/16"

Length of plain part

top ✓

bottom ✓

Thickness of plates

19/32

Description of longitudinal joint

WELD.

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

Working pressure of furnace by Rules

191.2 lbs/sq

End plates in steam space: Material

STEEL.

Tensile strength

26/30.

Thickness

1 1/8"

Pitch of stays

VAR

How are stays secured

DOUBLE NUTS & WASHERS.

Working pressure by Rules

186 lbs/sq

Tube plates: Material

front STEEL.

back STEEL.

Tensile strength

26/30

26/30.

Thickness

7/8"

13/16"

Mean pitch of stay tubes in nests

9.1"

Pitch across wide water spaces

13 3/4"

Working pressure

front 191 lbs/sq

back 198 lbs/sq

Girders to combustion chamber tops: Material

STEEL.

Tensile strength

28/32.

Depth and thickness of girder

at centre

12 1/2" x 1 1/16"

Length as per Rule

3'-1 5/16"

Distance apart

10 3/8"

No. and pitch of stays

in each

WELDED.

Working pressure by Rules

183 lbs/sq

Combustion chamber plates: Material

STEEL.

Tensile strength

26/30.

Thickness: Sides

13/16"

Back

3/4"

Top

13/16"

Bottom

13/16"

Pitch of stays to ditto: Sides

10" x 9 3/4"

Back

10" x 8 1/8"

Top

WELDED

Are stays fitted with nuts or riveted over

WELDED AT C.C. & BACKPLATE

Working pressure by Rules

186 lbs/sq

Front plate at bottom: Material

STEEL.

Tensile strength

26/30.

Thickness

7/8"

Lower back plate: Material

STEEL.

Tensile strength

26/30.

Thickness

7/8"

Pitch of stays at wide water space

13 1/4"

Are stays fitted with nuts or riveted over

WELDED.

Working Pressure

193 lbs/sq

Main stays: Material

STEEL.

Tensile strength

28/32.

Diameter

At body of stay.

3"

No. of threads per inch

6

Area supported by each stay

18 1/8" x 17"

Working pressure by Rules

218 lbs/sq

Screw stays: Material

STEEL.

Tensile strength

26/30.

Diameter

At top of stay.

1 5/8"

No. of threads per inch

9

Area supported by each stay

10 1/8" x 10 1/4" x 10 1/2"

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Working pressure by Rules 225 lbs/sq. in. Are the stays drilled at the outer ends ☒ No Margin stays: Diameter $\frac{1}{4}'' - 2''$
No. of threads per inch **WELDED.** Area supported by each stay $13\frac{1}{4}'' \times 10''$ Working pressure by Rules 192 lbs/sq. in.
Tubes: Material **STEEL.** External diameter $\frac{23}{4}''$ Thickness $\frac{5}{16} - \frac{3}{8} - \frac{7}{16}''$ No. of threads per inch **9**
Pitch of tubes $3\frac{7}{8}'' \times 4''$ Working pressure by Rules **Manhole compensation:** Size of opening in
shell plate $16\frac{1}{2}'' \times 12\frac{1}{2}''$ Section of compensating ring $17'' \times 1\frac{1}{8}''$ No. of rivets and diameter of rivet holes **28- 1\frac{1}{2}''**
Outer row rivet pitch at ends $9\frac{3}{4}''$ Depth of flange if manhole flanged $3\frac{3}{8}''$ **Steam Dome:** Material ☒
Tensile strength ☒ Thickness of shell ☒ Description of longitudinal joint ☒
Diameter of rivet holes ☒ Pitch of rivets ☒ Percentage of strength of joint ☒
Internal diameter ☒ Working pressure by Rules ☒ Thickness of crown ☒ No. and diameter of
stays ☒ Inner radius of crown ☒ Working pressure by Rules ☒
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 **NIL.** 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 ☒ Working pressure as per
Rules ☒ 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 ☒ **YES.**

FOR HARLAND & WOLFF, LIMITED

The foregoing is a correct description,

John V. Spink

Manufacturer.

1952
Feb. 18-21 Apr. 29 May 5-7 June 6-18
Dates of Survey { During progress of work in shops - 14 July 3-9 Aug 6-7 12 15-19 23-28
while building { During erection on board vessel - 21 27 28 Dec 1-2 4-8 9 10 11 15 16 - 42
Are the approved plans of boiler and superheater forwarded herewith **20. 3. 52.**
(If not state date of approval.)
DRG. RETAINED FOR USE ON SISTER VESSELS.
Total No. of visits

Is this Boiler a duplicate of a previous case ☒ **YES.** If so, state Vessel's name and Report No. **M.S. "JANITA" 1920 No 1443. BEL. 15416.**

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) *These Boilers were constructed under Special Survey in accordance with Rules, approved plans and Secretary's Letters. The materials were manufactured at Works approved by the Committee and under the supervision of the Society's Surveyors. The workmanship is satisfactory.*

*The Boilers have now been despatched to Messrs Harland & Wolff, Ltd. Glasgow, for installation on their yard No 14546.
These boilers have now been installed in the vessel, examined under working conditions
The safety valves adjusted to 185 lbs/sq. in. Accumulation tests carried out & found satisfactory
& are eligible in my opinion to have notation D.B.S 5/53.*

Survey Fee £ 91 : 10 : 0 } When applied for, 22. 12. 19 52.
Travelling Expenses (if any) £ : : } When received, 19

Committee's Minute

GLASGOW 9 JUN 1953

Assigned

SEE ACCOMPANYING MACHINERY REPORT

J.B. Small
Engineer Surveyor to Lloyd's Register of Shipping.



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