

# REPORT ON BOILERS.

No. 12503

Accepted at London Office

Date of writing Report

10

When handed in at Local Office

4 12 1939 Port of Belfast

No. of Survey held at

Belfast

Date, First Survey

11<sup>th</sup> September

Last Survey

28<sup>th</sup> November 1939

Rep. Book

2058 on the *Shell* *Star* *HOELAIDE STAR*

Number of Visits

9

Tons

built at

Copenhagen

By whom built

Kurmeister & Wain

Yard No.

646

When made

Engines made at

By whom made

Engine No.

When made

Boilers made at

By whom made

Boiler No.

When made

Boilers

Port belonging to

## VERTICAL DONKEY BOILER.

Made at

Belfast

By whom made

Harland & Wolff Ltd.

Boiler No.

15189

When made

1939

Where fitted

4<sup>th</sup> Lt. *Star*

Manufacturers of Steel

Colvilles Ltd.

Total Heating Surface of Boiler

775

oil fired 300 ft

ft

sub 820 1495 ft

Is forced draught fitted

Y

oil fired & exhaust gas

No. and Description of Boilers

One *Blackburn Composite*

BATOG/775

Working pressure

80 lbs

Tested by hydraulic pressure to

160 lbs

Date of test

28<sup>th</sup> November 1939

No. of Certificate

1064

Area of Firegrate in each Boiler

No. and Description of safety valves to each boiler

One *Double-Spring*

Area of each set of valves per boiler

per rule

as fitted

Pressure to which they are adjusted

80 lbs

Are they fitted with easing gear

Y

Note whether steam from main boilers can enter the donkey boiler

Smallest distance between boiler or aptaba and bunkers

Woodwork

Is oil fuel carried in the double bottom under boiler

Smallest distance between base of boiler and tank top plating

Is the base of the boiler insulated

Largest internal dia. of boiler

5' 10 7/8"

Height overall

16' 9"

Shell plates: Material

Steel

Tensile strength

28/32 *Immo*

Thickness

7/8"

Are the shell plates welded or flanged

welded at ends of but. joint

Description of riveting: circ. seams

end *D.R.L.*

long. seams *D.R.*, *D.B.S.*

Size of rivet holes in

circ. seams

1 1/4"

Pitch of rivets

3 1/2"

Percentage of strength of circ. seams

plate *64.3*

73.5

Shrinkable tube holes

1 1/2"

Pitch of rivets

4 1/4"

Percentage of strength of circ. seams

plate *66*

82

Working pressure of shell by rules

147 1/2

Thickness of butt straps

outer 9/16"

inner 1/16"

Shell Crown:

Whether complete hemisphere, dished partial, spherical, or flat *dished partly spherical*

Material

Steel

Tensile strength

26/30 *Immo*

Thickness

2 1/32"

Radius

5' 6"

Working pressure by rules

94.5 lbs

Description of Furnace:

Plain, spherical, or dished crown *dished crown*

Material

Steel

Tensile strength

26/30 *Immo*

Thickness

28/32"

External diameter

top 37 9/16"

Length as per rule

7' 0"

Working pressure by rules

111.5 lbs

Pitch of support stays circumferentially

Y

and vertically

Y

Are stays fitted with nuts or riveted over

Y

Diameter of stays over thread

Radius of spherical or dished furnace crown

8' 0"

Working pressure by rule

206 lbs

Thickness of

*bottom dished crown*

3/4"

Diameter as per rule

D

Working pressure by rule

136 lbs

Combustion Chamber: Material

Tensile strength

Thickness of top plate

Radius if dished

Working pressure by rule

Thickness of back plate

Diameter if spherical

Length as per rule

Pitch of stays

Are stays fitted with nuts or riveted over

Diameter of stays over thread

Working pressure of back plate by rules

Shell Plates: Material

front

Tensile strength

Thickness

Mean pitch of stay tubes in nests

Comprising shell, Dia. as per rule

front

Pitch in outer vertical rows

Dia. of tube holes FRONT

stay

BACK

stay

Each alternate tube in outer vertical rows a stay tube

Working pressure by rules

Orders to combustion chamber tops: Material

Tensile strength

Depth and thickness of girder at centre

Length as per rule

Distance apart

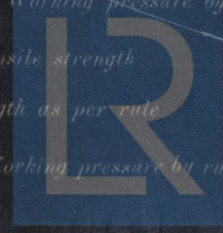
No. and pitch of stays in each

Working pressure by rule

Distance apart

No. and pitch of stays in each

Working pressure by rule



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Diameter } at body of stay,  
or

**Cross 7**

*Is th*

GEN

The

Re

W292-0031 (1/2)

Assigned *No Action*



5.P.N°12503.

own stays: Material \_\_\_\_\_ Tensile strength \_\_\_\_\_ Diameter { at body of stay, \_\_\_\_\_ or \_\_\_\_\_ over threads \_\_\_\_\_

of threads per inch \_\_\_\_\_ Area supported by each stay \_\_\_\_\_ Working pressure by rules \_\_\_\_\_

ew stays: Material \_\_\_\_\_ Tensile strength \_\_\_\_\_ Diameter { at turned off part, \_\_\_\_\_ or \_\_\_\_\_ over threads \_\_\_\_\_ No. of threads per inch \_\_\_\_\_

en supported by each stay \_\_\_\_\_ Working pressure by rules \_\_\_\_\_ Are the stays drilled at the outer ends \_\_\_\_\_

bs: Material *Thimble tubes steel* ✓ External diameter { *3 1/4" outer shell* *2 3/4" inner shell* Thickness *ho 9. 149*

of threads per inch ✓ Pitch of tubes *circ + long { 6"x7" outer shell 6.283"x6" inner shell* Working pressure by rules *as approved.*

nhole Compensation: Size of opening in shell plate *16"x12"* ✓ Section of compensating ring *6"x1 3/8"* ✓ No. of rivets and diameter \_\_\_\_\_

rect holes *36 - 1 1/4"* ✓ Outer row rivet pitch at ends *6.28"* Depth of flange of manhole flanged *awn manhole 3"*

ake: External diameter *21 1/16"* ✓ Thickness of uptake plate *17/32"* ✓

ss Tubes: No. ✓ External diameters \_\_\_\_\_ Thickness of plates ✓

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

The foregoing is a correct description.

HARLAND AND WOLFF, LIMITED  
Secretary

ates { During progress of work in shops - *Sept. 11-20-22 Oct 3-12-27 Nov. 7. 21-28-1939* Is the approved plan of boiler forwarded herewith *Yes*  
urvey { (If not state date of approval.)  
hile {  
lding { During erection on board vessel - - - Total No. of visits *9*

is this Boiler a duplicate of a previous case *Yes* If so, state Vessel's name and Report No. *"Wellington Star" Bel. Rpt. No. 12451*

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)  
*This boiler has been constructed under Special Survey to an approved design. The materials and workmanship are good. It has been tested by hydraulic pressure in accordance with the rules and is eligible, in my opinion, for use on a vessel classed with the Society.*

Survey Fee ... £ *4 : 4* : When applied for, *4. 12. 39*  
Travelling Expenses (if any) £ : : When received, *19*

Committee's Minute  
Signed



w292-0031(2/2)



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