

REPORT ON BOILERS.

No. 11,524

Received at London Office

17 MAY

Date of writing Report

19

When handed in at Local Office

16 May 1935

Port of

BELFAST

Visits included in F.E. machinery report.

Date, First Survey

Last Survey 11 May 1935

No. in Reg. Book

Survey held at

BELFAST

71071 on the

ROTHESAY CASTLE

(Number of Visits)

Gross Tons
Net

Built at Belfast

By whom built Harland & Wolff Ltd.

Yard No. 944

When built 1935

Engines made at Belfast

By whom made Harland & Wolff Ltd.

Engine No. 944

When made 1935

Boilers made at

By whom made

Boiler No.

When made

Owners Union Castle Mail Steamship Co. Ltd.

Port belonging to

London

VERTICAL DONKEY BOILER.

Made at Belfast

By whom made Harland & Wolff Ltd.

Boiler No. 944

When made 1935

Where fixed upper deck motor room

Manufacturers of Steel Bolinder Ltd.

Total Heating Surface of Boiler

725 sq

Is forced draught fitted

No.

Exhaust gas

Coal or Oil fired

Yes

No. and Description of Boilers

One Clarkson - Trundle type Begato 725

Working pressure 100 lbs

Tested by hydraulic pressure to

200 lbs

Date of test

26 March 1935

No. of Certificate 997

Area of Firegrate in each Boiler

none

No. and Description of safety valves to each boiler

Two Spring-loaded

Area of each set of valves per boiler

per rule 9.4 sq
as fitted 9.8 sq

Pressure to which they are adjusted

100 lbs

Are they fitted with easing gear

Yes

State whether steam from main boiler's can enter the donkey boiler

Smallest distance between boiler or uptake and bunkers

or woodwork

Yes

Is oil fuel carried in the double bottom under boiler

Yes

Smallest distance between base of boiler and tank top plating

Yes

Is the base of the boiler insulated

No

Largest internal dia. of boiler

7'-11"

Height

17'-0"

Shell plates: Material

Steel

Tensile strength

28-32 tons

Thickness

15/32"

Are the shell plates welded or flanged

Description of riveting: circ. seams

end Top S.R. Btm. D.R.
inter. S.R.

long. seams D.R.

Dia. of rivet holes in

circ. seams 53/64" - 13/16"
long. seams 25/32"

Pitch of rivets

2" - 2 1/8"
2.839"

Percentage of strength of circ. seams

plate 57.0
rivets 50.9

of Longitudinal joint

plate 72.4
rivets 11.0
combined 100

Working pressure of shell by rules

100 lbs

Thickness of butt straps

outer 7/16"
inner 7/16"

Shell Crown:

Whether complete hemisphere, dished partial spherical, or flat

dished

Material

Steel

Tensile strength

26-30 tons

Thickness

13/16"

Radius

72"

Working pressure by rules

135 lbs

Description of Furnace:

Plain, spherical, or dished crown

dished

Material

Steel

Tensile strength

26-30 tons

Thickness

External diameter

top
bottom

Length as per rule

Working pressure by rules

Pitch of support stays circumferentially

and vertically

Are stays fitted with nuts or riveted over

Diameter of stays over thread

Radius of spherical or dished furnace crown

72"

Working pressure by rule

Thickness of Ogee Ring

15/16"

Diameter as per rule

D
d

Working pressure by rule

135 lbs

Combustion Chamber: Material

Steel

Tensile strength

26-30 tons

Thickness of top plate

3/4" dished

Radius if dished

54"

Working pressure by rule

Thickness of back plate

13/16"

Diameter if circular

60"

Length as per rule

7'-4" 7'-4"

Pitch of stays

Are stays fitted with nuts or riveted over

Diameter of stays over thread

Working pressure of back plate by rules

165 lbs

Tube Plates: Material

front
back

Tensile strength

Thickness

Mean pitch of stay tubes in nests

comprising shell, Dia. as per rule

front
back

Pitch in outer vertical rows

Dia. of tube holes FRONT

stay
plain

BACK

stay
plain

each alternate tube in outer vertical rows a stay tube

Working pressure by rules

front
back

Girders 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

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W4500097

Crown stays: Material _____ Tensile strength _____ Diameter { at body of stay, or over threads. _____
 No. of threads per inch _____ Area supported by each stay _____ Working pressure by rules _____
Screw stays: Material _____ Tensile strength _____ Diameter { at turned off part, or over threads. _____ No. of threads per inch _____
 Area supported by each stay _____ Working pressure by rules _____ Are the stays drilled at the outer ends _____
Tubes: Material Steel External diameter { plain 1 1/2" or thimble 4" Thickness { No. 10 w.g. or No. 9 w.g. ✓
 No. of threads per inch ✓ Pitch of tubes 8 3/4" vert. 7.5368" horiz. Working pressure by rules _____
Manhole Compensation: Size of opening in shell plate 16" x 12" ✓ Section of compensating ring 4 5/8" x 3/4" ✓ No. of rivets and diameters in crown plate _____
 of rivet holes 40 - 5/32" ✓ Outer row rivet pitch at ends 3.3" Depth of flange of manhole flanged 3" ✓
Uptake: External diameter 2'-11 3/4" ✓ Thickness of uptake plate 7/8" ✓
Cross 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,
 For HARLAND AND WOLF, LIMITED

Manufacture

Dates of Survey { During progress of work in shops - - } Is the approved plan of boiler forwarded herewith (If not state date of approval.)
 while building { During erection on board vessel - - } Total No. of visits _____

Is this Boiler a duplicate of a previous case Yes If so, state Vessel's name and Report No. "Realin Castle" Bel. Rpt. No. 11516

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

This Boiler has been constructed under special survey & to an approved plan. The materials & workmanship are good. It has been satisfactorily tested by hydraulic pressure, installed and fastened on an upper deck. The safety valves were adjusted under steam. The accumulation test was satisfactory. In my opinion the Boiler is eligible for use on a classed vessel.

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

Committee's Minute

FRI, 24 MAY 1935

Assigned

See minute on
 F.E. Rpt.

R. Lee Ames + Charles W. Hunter.
 Engineer Surveyor to Lloyd's Register of Shipping.



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