

REPORT ON BOILERS.

No. 11806

Received at London Office -3 SEP 1936

Date of writing Report

10

When handed in at Local Office

2nd Sept. 1936

Port of Belfast

Included in E. E. mch. report.

No. in Reg. Book

Survey held at

Belfast

Date, First Survey

Last Survey 31st Aug. 1936

37780 on the

MU. DUNUEGAN CASTLE

(Number of Visits)

Gross Tons
Net

Built at

Belfast

By whom built

Harland & Wolff Ltd

Yard No. 960

When built 1936

Engines made at

Belfast

By whom made

Harland & Wolff Ltd

Engine No. 960

When made 1936

Boilers made at

Belfast

By whom made

Harland & Wolff Ltd

Boiler No. 960

When made 1936

Owners

Union Castle Mail S.S. Co Ltd

Port belonging to

London

VERTICAL DONKEY BOILER.

Made at Belfast

By whom made

Harland & Wolff Ltd

Boiler No. 960

When made 1936

Where fixed Upper Deck ER

Manufacturers of Steel

Colville & Co

Total Heating Surface of Boiler

900^{sq} ft

Is forced draught fitted

No

Coal or Oil fired or Gas

No. and Description of Boilers

One Clarkson Vertical Bagatoo 900

Working pressure 100 lb

Tested by hydraulic pressure to 200 lb

Date of test 26-5-36

No. of Certificate 1020

Area of Firegrate in each Boiler

No. and Description of safety valves to each boiler 2 opening loaded

Area of each set of valves per boiler

per rule 9.8^{sq} ft
as fitted 16.58^{sq} ft

Pressure to which they are adjusted 100 lb

Are they fitted with easing gear Yes

State whether steam from main boilers can enter the donkey boiler

Smallest distance between boiler or uptake and bunkers

or 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 7' 6 1/2"

Height 20'-0"

Shell plates: Material

Steel

Tensile strength

35/32 ton

Thickness

15/32"

Are the shell plates welded or flanged

Welded

Description of riveting: circ. seams

end SR
inter SR

long. seams DR

Dia. of rivet holes in

circ. seams 33/64"
long. seams 33/32"

Pitch of rivets

2 7/8"

Percentage of strength of circ. seams

plate 57.2
rivets 45.5

of Longitudinal joint

plate 72.7
rivets 100.6
combined 93.9

Working pressure of shell by rules

106 lb

Thickness of butt straps

outer 7/16"
inner 7/16"

Shell Crown: Whether complete hemisphere, dished partial spherical, or flat

Yes

Material Steel

Tensile strength

26/30 ton

Thickness

13/16"

Radius 6'-6"

Working pressure by rules 125 lb

Description of Furnace: Plain, spherical, or dished crown

Plain 4m

Material Steel

Tensile strength 26/30 ton

Thickness

7/8"

Internal

External diameter

top 4'-9"
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 4'-0"

Working pressure by rule 151.5 lb

Thickness of Ogee Ring

15/16"

Diameter as per rule

D 7'-6"
a 4'-11 5/8"

Working pressure by rule

Combustion Chamber: Material

Steel

Tensile strength

26/30 ton

Thickness of top plate

7/8"

Radius if dished

Working pressure by rule

Thickness of back plate 1 5/16"

Diameter if circular 4'-9"

Length as per rule

9'-10 3/8"

Pitch of stays

thimbles 8 3/4 UP

Are stays fitted with nuts or riveted over

Diameter of stays over thread

thimbles 4"

9344

Working pressure of back plate by rules

299 lb

Tube Plates: Material

front back

Tensile strength

Thickness

Mean pitch of stay tubes in nests

If comprising shell, Dia. as per rule

front back

Pitch in outer vertical rows

Dia. of tube holes FRONT

stay plain

BACK

stay plain

Is each alternate tube in outer vertical rows a stay tube

Working pressure by rules

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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Lloyd's Register Foundation

W383-0035-1

Date of w

No. in
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37780

Built a

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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 _____ External diameter { plain _____
stay _____ Thickness { _____
No. of threads per inch _____ Pitch of tubes _____ 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 diameter _____
of rivet holes 40 x 35/32" ✓ Outer row rivet pitch at ends 3.3" ✓ Depth of flange if manhole flanged shell man 3 1/8" ✓
Uptake: External diameter 2'-7 1/4" ✓ Thickness of uptake plate 5/8" ✓
Cross Tubes: No. _____ External diameters { _____ Thickness of plates _____
Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with _____

The foregoing is a correct description,
For HARLAND AND WOLFF, LIMITED.
A. J. Marshall, Manufacturer.
Secretary.

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

Is this Boiler a duplicate of a previous case Yes If so, state Vessel's name and Report No. Dunnotter Castle 11767.

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

This boiler was constructed under special survey and in accordance with the approved plan. The materials & workmanship are good. It was tested by hydraulic pressure, efficiently installed on an upper deck in the engine room. The safety valves were adjusted under steam, accumulation tests were satisfactory. The boiler is adapted for oil fuel burning or exhaust gases. In our opinion it is eligible for use on a classed vessel.

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

See Machinery report

Charles J. Hunter & R. Lee Ames.
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE. 8 SEP 1936
Assigned See Det. J.E. 11806

