

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

No. in Reg. Book 37750 on the MU DUNUEGAN CASTLE

Included in W.E. mchng. report. Date, First Survey Last Survey 31st Aug. 1936

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

RETAIN

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} Is forced draught fitted No Coal or Oil fired or Gas gas.

No. and Description of Boilers One Clarkson Vertical Begato 900 Working pressure 100 lbs

Tested by hydraulic pressure to 200 lbs 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" as fitted 16.58" Pressure to which they are adjusted 100 lbs 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 25/32 ton Thickness 15/32

Are the shell plates welded or flanged End butt strap ends Description of riveting: circ. seams end SR long. seams DR

Dia. of rivet holes in circ. seams 33/64 Pitch of rivets 2" Percentage of strength of circ. seams plate 5.73 rivets 4.5.5 of Longitudinal joint plate 7.27 rivets 100.6 combined 93.9

Working pressure of shell by rules 106 lbs 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 lbs

Description of Furnace: Plain, spherical, or dished crown Yes 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 lbs

Thickness of Ogee Ring 15/16" Diameter as per rule D 7'-6" 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 3/16" Diameter if circular 4'-9"

Length as per rule 9'-10 3/8" Pitch of stays thimbles 8 3/4 VP. Are stays fitted with nuts or riveted over

Diameter of stays over thread thimbles 4" 934 WC Working pressure of back plate by rules 299 lbs

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 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

© 2020 Lloyd's Register Foundation W383-0035.1

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 16×12 " ✓ Section of compensating ring $4 \frac{5}{8} \times \frac{3}{4}$ " ✓ No. of rivets and diameter _____
 of rivet holes $40 \times \frac{35}{32}$ " ✓ Outer row rivet pitch at ends 3.3 " ✓ Depth of flange if manhole flanged shell $3 \frac{1}{8}$ " ✓

Uptake: External diameter $2' - 7 \frac{1}{4}"$ ✓ Thickness of uptake plate $\frac{5}{8}"$ ✓

Cross Tubes: No. _____ External diameters { _____ Thickness of plates _____

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

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

669

Dates of Survey { During progress of work in shops - - } Is the approved plan of boiler forwarded herewith *Yes*.
 while building { During erection on board vessel - - } (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 James
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute *TUE, 8 SEP 1936*
 Assigned *See Bel. J.E. 11806*

