

10 MAR 1930 Bel 10,330

REPORT ON BOILERS.

No. 16167

Received at London Office 18 DEC 1928

Date of writing Report 17.12.28 When handed in at Local Office 17.12.28 Port of Grimsby

No. in Reg. Book 1059 Survey held at Lincoln Date, First Survey 19.9.28 Last Survey 7.12.28

on the STEEL TWIN SC. Ulster Prince (Number of Visits 11) Gross Tons Net

Built at Belfast By whom built Harland & Wolff Ltd. Yard No. 697 When built 1930

Engines made at Belfast By whom made Harland & Wolff Ltd. Engine No. 697 When made 1930

Boilers made at Lincoln By whom made Babcock & Wilcox Boiler No. 73/4576 When made 1928

Owners Belfast Steam Ship Co. Ltd. Port belonging to Belfast

VERTICAL DONKEY BOILER.

Made at Lincoln By whom made Babcock & Wilcox Boiler No. 73/4576 When made 1928 Where fixed Upper deck of main motor room.

Manufacturers of Steel Parkgate Works, Steel Co. Scotland

Total Heating Surface of Boiler 580 sq. ft. Is forced draught fitted Coal or Oil fired Oil

No. and Description of Boilers one Clarkson type basketless boiler Working pressure 80 lb.

Tested by hydraulic pressure to 160 lb. Date of test 26th Nov. 1928 No. of Certificate 246

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 8.4 sq. in. as fitted 9.8 sq. in. Pressure to which they are adjusted 80 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 No Smallest distance between base of boiler and tank top plating

Is the base of the boiler insulated Largest internal dia. of boiler 5'-6" Height 16'-6"

Shell plates: Material 1/4" steel Tensile strength 28/32 T Thickness 3/8"

Are the shell plates welded or flanged Description of riveting: circ. seams top S.R. Lap long. seams D.R. Lap

Dia. of rivet holes in circ. seams 13/16 Pitch of rivets 17/8" 22 5/8" Percentage of strength of circ. seams plate 57% rivets 52% of Longitudinal joint plate 69 rivets 87 combined 82 1/2

Working pressure of shell by rules 102 lb. Thickness of butt straps outer inner

Shell Crown: Whether complete hemisphere, dished partial spherical, or flat Flat Material 1/4" steel

Tensile strength 26/30 Thickness 9/16 Radius Working pressure by rules 144 lb.

Description of Furnace: Plain, spherical, or dished crown dished Material 1/4" steel Tensile strength 26/30 T

Thickness 7/8" External diameter top 4'-7 3/4" bottom Length as per rule 7'-6 1/2" Working pressure by rules 161 lb.

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 103 lb.

Thickness of Ogee Ring 7/8" Diameter as per rule D 5'-5 1/4" d 4'-7 3/4" Working pressure by rule 193 lb.

Combustion Chamber: Material Tensile strength Thickness of top plate

Radius if dished Working pressure by rule Thickness of back plate Diameter if circular

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

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

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W132-0162

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 _____ Section of compensating ring _____ No. of rivets and diameter
of rivet holes _____ Outer row rivet pitch at ends _____ Depth of flange if manhole flanged _____

Uptake: External diameter $2' - 11 \frac{3}{8}"$ Thickness of uptake plate $\frac{11}{16}"$

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

Have all the requirements of Sections 14 to 23 inclusive for boilers been complied with _____

The foregoing is a correct description,
BABCOCK & WILCOX, LTD.

[Signature]

Manufacturer.

Annual Survey Request

Dates of Survey { During progress of work in shops - - 1928 - Sep 19 Oct 10 15 19 30 Nov 8 14 22
while building { During erection on board vessel - - - - - Dec 5 7
Is the approved plan of boiler forwarded herewith (If not state date of approval.)
Total No. of visits 11

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) *This boiler has been built under special survey and in accordance with the rules and approved plan. The materials and workmanship are good.*

This boiler has been efficiently installed and fastened on an upper deck platform of the motor room. The safety valves were adjusted under steam. Accumulation tests under oil-burning and waste gas firing conditions verified that the pressure accumulation did not exceed 8 lbs. Gauging gear is fitted.

R. Lee Armes
Belfast

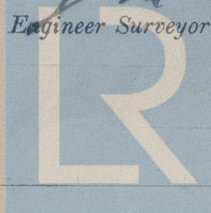
Survey Fee ... £ 4: 4: When applied for, 3/12/28
Travelling Expenses (if any) £ : 15/6 When received, 12. 3. 19 29. See Sec's dt.

Committee's Minute
Assigned

TUE. 18 MAR 1930

See Bel. 2E 10330

[Signature]
Engineer Surveyor to Lloyd's Register of Shipping.



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