

Rpt. 5b.

REPORT ON BOILERS.

23 MAR 1931

No. 10590

No. 16789

30 JAN 1930

Received at London Office

Date of writing Report 29.1.30 When handed in at Local Office 29.1.30 Port of *Grimby*
 No. in Survey held at *Lincoln* Date, First Survey 6.11.29 Last Survey 22-1-1930
 Reg. Book 92260 on the *STEEL QUAD. OC. REINA DEL PACIFICO* (Number of Visits 10) Gross Tons Not

Built at *Beefast* By whom built *Harland & Wolff Ltd.* Yard No. 852 When built 1931
 Engines made at *Beefast* By whom made *Harland & Wolff Ltd.* Engine No. 852 When made 1931
 Boilers made at *Lincoln* By whom made *Babcock & Wilcox Ltd.* Boiler No. 73/4604 When made 1930
 Owners *Pacific Steam Navigation Co.* Port belonging to *Liverpool*

VERTICAL DONKEY BOILER.

Made at *Lincoln* By whom made *Babcock & Wilcox Ltd.* Boiler No. 73/4604 When made 1930 Where fixed *upper deck of Auxiliary motor room.*
 Manufacturers of Steel *Parkgate S & S Co. Ltd.*

Total Heating Surface of Boiler 250 sq. ft. Is forced draught fitted ☒ Coal or Oil fired *Exhaust gas*
 No. and Description of Boilers *One blacken Thimble Tube Boiler* Working pressure 100 lb. sq. in.
 Tested by hydraulic pressure to 200 lb. sq. in. Date of test 17/1/30 No. of Certificate 281

Area of Firegrate in each Boiler *none* No. and Description of safety valves to each boiler *One, double spring loaded.*
 Area of each set of valves per boiler $\frac{3.26}{\text{sq. ft.}}$ Pressure to which they are adjusted *not adjusted* 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 *yes* Largest internal dia. of boiler 4'-0" Height 7'-9 $\frac{3}{8}$ "
 Shell plates: Material *S. M. steel* Tensile strength 28/32 Tons Thickness 7/16"

Are the shell plates welded or flanged *no* Description of riveting: circ. seams *S. R. Lap* long. seams *D. R. Lap*
 Dia. of rivet holes in $\frac{13}{16}$ " Pitch of rivets $\frac{17}{8}$ " Percentage of strength of circ. seams *57* of Longitudinal joint *69*
 Working pressure of shell by rules 165 lb. sq. in. Thickness of butt straps *outer 5/16" inner 3/16"*

Shell Crown: Whether complete hemisphere, dished partial spherical, or flat *Flat* Material *S. M. steel*
 Tensile strength 26/30 Tons Thickness 9/16" Radius *-* Working pressure by rules 250 lb. sq. in.

Description of Furnace: Plain, spherical, or dished crown *Ribbed* Material *S. M. steel* Tensile strength 26/30 Tons
 Thickness $\frac{11}{16}$ " External diameter $\frac{3}{4}$ Length as per rule 4'-7" Working pressure by rules 120 lb. sq. in.

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 *-* Working pressure by rule *-*
 Thickness of Ogee Ring $\frac{7}{8}$ " Diameter as per rule $\frac{4'-0}{3'-2}$ Working pressure by rule 213 lb. sq. in.

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 *-* Tensile strength *-* Thickness *-* Mean pitch of stay tubes in nests *-*
 If comprising shell, Dia. as per rule *-* Pitch in outer vertical rows *-* Dia. of tube holes FRONT *-* BACK *-*

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 *-*



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 *M. S.* External diameter ☒ { plain *2 3/4 to 2* Thickness ☒ *9 B & 9*

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 ☒

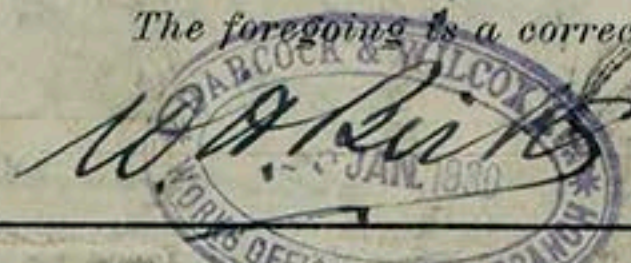
Uptake: External diameter *1'-9 1/8"* Thickness of uptake plate *9/16"*

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.

Annual Survey Request



Manufacturer.

Dates of Survey ☒ During progress of work in shops - *1929 Nov 6, 28 Dec 6, 18, 23 1930 Jan 2, 9, 15, 17, 22* Is the approved plan of boiler forwarded herewith ☒ (If not state date of approval.)

☒ During erection on board vessel - - - Total No. of visits *10*

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 fastened on an upper deck at the forward end of the auxiliary motor room. The safety valves were adjusted under steam to the approved working pressure and an accumulation test while the engines were working at full power showed no rise of pressure. This boiler is heated by exhaust gases only.

Ree Amess
Belfast.

Survey Fee ... £ *4 : 4* When applied for. *23/1/30*

Travelling Expenses (if any) £ *2 : 13/2* When received. *5th June 1930*

W. H. Kinley
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute *TUE. 24 MAR 1931*

Assigned *See F. E. Rep.*