

# REPORT ON BOILERS.

No. 15609 A.

Received at London Office

17 NOV 1927

Date of writing Report 19 When handed in at Local Office 19 Port of Grimby

No. in Reg. Book Lincoln Survey held at Lincoln Date, First Survey 21st June 1927 Last Survey 8th Nov. 1927

on the Donkey Boiler for Yard No. 626 (Number of Visits 14) Tons Gross Net

Built at Glasgow By whom built Fairfield & Co. Ltd. Yard No. 626 When built 1928.8

Engines made at do. By whom made do. Engine No. 626 When made 1928.8

Boilers made at Lincoln By whom made Babcock & Wilcox, Ltd. Boiler No. 38/4507 When made 1927-11

Owners Messrs. Shaw, Saville & Albion Co. Ltd. Port belonging to London Southampton

## VERTICAL DONKEY BOILER.

Made at Lincoln By whom made Babcock & Wilcox, Ltd. Boiler No. 38/4507 When made 1927 Where fixed ✓

Manufacturers of Steel Frodingham & Co. Ltd. Parkgate & Co. Ltd.

Total Heating Surface of Boiler 200 ft<sup>2</sup> Is forced draught fitted no Coal or Oil fired both

No. and Description of Boilers One Clarkson Patent Water Heated Thimble Tube Type Working pressure 100 lb

Tested by hydraulic pressure to 200 lb Date of test 1st Nov. 1927 No. of Certificate 222

Area of Firegrate in each Boiler none No. and Description of safety valves to each boiler Two 1 1/2" dia. Spring loaded

Area of each set of valves per boiler per rule 3.534 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 ✓

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 3'-9 3/4" Height 7'-4"

Shell plates: Material S. M. steel Tensile strength 26/32 Tons Thickness 13/32"

Are the shell plates welded or flanged at bottom Description of riveting: circ. seams single lap long. seams D.R. D.B. straps

Dia. of rivet holes in circ. seams 13/16" Pitch of rivets 17/8" Percentage of strength of circ. seams plate 56.8% of Longitudinal joint plate 72%

Working pressure of shell by rules 164 lb Thickness of butt straps outer 3/8" inner 3/8"

Shell Crown: Whether complete hemisphere, dished partial spherical, or flat Flat Material S. M. steel

Tensile strength 26/32 Tons Thickness 9/16" Radius ✓ Working pressure by rules 175 lb

Description of Furnace: Plain, spherical, or dished crown Rished Material S. M. steel Tensile strength 26/30 Tons

Thickness 5/8" External diameter top 2'-10 1/2" bottom 2'-10 1/2" Length as per rule 4'-7 3/4" Working pressure by rules 104 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 2'-6" Working pressure by rule 169 lb

Thickness of Ogee Ring ✓ Diameter as per rule D Working pressure by rule ✓

Combustion Chamber: Material ✓ Tensile strength ✓ Thickness of top plate ✓

Dia. 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 ✓

Boiler Plates: Material front Tensile strength ✓ Thickness ✓ Mean pitch of stay tubes in nests ✓

Comprising shell, Dia. as per rule front Pitch in outer vertical rows ✓ Dia. of tube holes FRONT stay BACK stay

each alternate tube in outer vertical rows a stay tube ✓ Working pressure by rules front back ✓

Boilers to combustion chamber tops: Material ✓ Tensile strength ✓

Thickness 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 *S. h. steel* ☒ External diameter { plain *2 3/4"* ☒ stay ☒ Thickness { *9 B.W.G.* ☒  
No. of threads per inch ☒ Pitch of tubes *3" Vertical* ☒ Working pressure by rules ☒  
Manhole Compensation: Size of opening in shell plate ☒ Section of compensating ring ☒ No. of rivets and diam ☒  
of rivet holes ☒ Outer row rivet pitch at ends ☒ Depth of flange if manhole flanged ☒  
Uptake: External diameter *1-5"* ☒ Thickness of uptake plate *1/2"* ☒  
Cross Tubes: No. ☒ External diameters { ☒ Thickness of plates ☒  
Have all the requirements of Sections 14 to 23 inclusive for boilers been complied with *yes*

The foregoing is a correct description,

Annual Boiler Request.

Dates of Survey { During progress of work in shops - - } *1927 - Jun. 21, 28, Jul. 6, 15, 21, Aug. 5, 18, Sep. 14, 28, Oct. 3, 10, 20, 28, Nov. 1, 8.* Is the approved plan of boiler forwarded herewith *copy of plan*  
while building { During erection on board vessel - - } *Oct. 20, 28, Nov. 1, 8.* (If not state date of approval.) *APP. 3/5/28*  
Total No. of visits *14.*

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) *This Donkey Boiler has been built under Special Survey and in accordance with the approved plans. The materials and workmanship are good. This boiler is eligible for notation with date when fitted in the above vessel.*

Survey Fee ... £ *4 : 4 : 0* When applied for, *4th May 1927*  
Travelling Expenses (if any) £ *1 : 16 : 4* When received, *11/11/28*  
*per hon. Secy. Messrs.*

Committee's Minute *TUE. 4 SEP 1928*  
Assigned *See Gls. Rpt. 48326*

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