

# REPORT ON BOILERS.

No. 427.

Received at London Office 19 NOV 1930

Writing Report Nov 17<sup>th</sup> 1930 When handed in at Local Office

Port of Sheffield

Survey held at Sheffield

Date, First Survey 14/10/30

Last Survey November 14<sup>th</sup> 1930

(Number of Visits 4) Gross Tons Net

By whom built ✓

Yard No. ✓

When built ✓

By whom made ✓

Engine No. ✓

When made ✓

By whom made Messrs Davy Bros. Ltd

Boiler Nos. 3541 & 3542 When made 1930

of Messrs Clarkson Thimble Tube Boiler Co. Ltd. Cont. Nos. 416 & 417 Port belonging to  
Messrs Mitsui & Co. Ltd. Tama Yard Ship Nos. 184 & 185

## TICAL DONKEY BOILER.

By whom made Davy Bros. Ltd

Boiler Nos. 3541 & 3542 When made 1930 Where fixed ✓

Manufacturers of Steel The Parkgate Iron & Steel Co. Ltd

Heating Surface of Boiler 250.5

Is forced draught fitted ✓

Coal or Oil fired Oil

Description of Boilers 2. Clarkson Thimble Tube.

Working pressure 100. LBS

by hydraulic pressure to 200 LBS

Date of test 14/11/30

No. of Certificates 530 & 531

Firegrate in each Boiler ✓ No. and Description of safety valves to each boiler 1 1/2 Double Spring.

each set of valves per boiler { per rule 3.25  
as fitted 4.81

Pressure to which they are adjusted ✓

Are they fitted with easing gear ✓

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 4" 0" Height 8" 3 3/8"

Material Steel

Tensile strength 28/32

Thickness 7/16"

shell plates welded or flanged No

Description of riveting: circ. seams { end S.R. lap

long. seams D.R. butt.

rivet holes in { circ. seams 13/16"  
long. seams 13/16"

Pitch of rivets { 3 1/8"  
3.06

Percentage of strength of circ. seams { plate 61%  
rivets 46%

of Longitudinal joint { plate 73%  
rivets 120%  
combined 107%

pressure of shell by rules 185. LBS.

Thickness of butt straps { outer 13/32"  
inner 13/32"

Whether complete hemisphere, dished partial spherical, or flat Flat.

Material Steel

strength 26/30

Thickness 7/16"

Radius ✓

Working pressure by rules 285. LBS.

Form of Furnace: Plain, spherical, or dished crown Dished

Material Steel

Tensile strength 26/30

External diameter { top 3' 1 7/8"  
bottom 3' 1 7/8"

Length as per rule 5' 0"

Working pressure by rules 129 LBS.

support stays circumferentially none and vertically ✓

Are stays fitted with nuts or riveted over ✓

of stays over thread ✓

Radius of spherical or dished furnace crown 3' 0"

Working pressure by rule 144 LBS.

of Ogee Ring none

Diameter as per rule { D ✓  
d ✓

Working pressure by rule ✓

Chamber: Material ✓

Tensile strength ✓

Thickness of top plate ✓

dished ✓ Working pressure by rule ✓

Thickness of back plate ✓

Diameter if circular ✓

per rule ✓ Pitch of stays ✓

Are stays fitted with nuts or riveted over ✓

of stays over thread ✓

Working pressure of back plate by rules ✓

Material { Circular Steel Tensile strength { 26/30

Thickness { 3/4"

Mean pitch of stay tubes in nests ✓

ing shell, Dia. as per rule { front ✓  
back ✓

Pitch in outer vertical rows { Circular 4" 86  
Vertical 3" Dia. of tube holes FRONT { 2 3/4" BACK { 2 3/4"

alternate tube in outer vertical rows a stay tube ✓

Working pressure by rules { Circular 129 LBS

combustion chamber tops: Material ✓

Tensile strength ✓

thickness of girder at centre ✓

Length as per rule ✓

part ✓ No. and pitch of stays in each ✓

Working pressure by rule ✓

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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 Steel External diameter ☒ plain Thimble 2 3/4 Thickness ☒ 9 B.W.G.  
No. of threads per inch ☒ Pitch of tubes 4.86 Circular. 3" Vertical Working pressure by rules ☒  
Manhole Compensation: Size of opening in shell plate 13 x 10 Section of compensating ring McNeil Saddle 1 7/8 No. of rivets and diameter ☒  
of rivet holes 40 of 1 3/16 Outer row rivet pitch at ends 3 1/4 Depth of flange if manhole flanged ☒  
Uptake: External diameter 1 7/8 Thickness of uptake plate 9/16 Thickness of plates ☒  
Cross Tubes: No. ☒ External diameters ☒

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

The foregoing is a correct description.  
**DAVY BROTHERS, LIMITED.**  
C. Astwood Manufacturer.

Dates of Survey while building { During progress of work in shops - 14/10/30 23/10/30 4/11/30 14/11/30. }  
Is the approved plan of boiler forwarded herewith (If not state date of approval.) Yes  
Total No. of visits 4

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) These boilers have been built under Special survey and to the approved plan. The materials have been tested in accordance with the rules and the workmanship is good.  
These boilers have been despatched to Birkenhead for Shipment to Kobe.

Marked 3541 3542  
N<sup>o</sup> 530 531  
LLOYD'S TEST. LLOYD'S TEST.  
200 LBS. 200 LBS.  
W.P. 100 " W.P. 100 "  
R.W.F. 14/11/30 R.W.F. 14/11/30.

Survey Fee ... .. £ 8 : 8 : 7 When applied for, 19  
Travelling Expenses (if any) £ ✓ : ✓ : ✓ When received, 29.11.30

Committee's Minute TUE. 21 JUL 1931  
Assigned See F.E. Rep.

R.W. Fawcett  
Engineer Surveyor to Lloyd's Register of Shipping.