

## REPORT ON BOILERS.

No. 17716

Received at London Office

5 OCT 1944

Date of writing Report 30<sup>th</sup> Sept. 1944 When handed in at Local Office 4<sup>th</sup> Oct 1944 Port of Middlesbrough.No. in Survey held at Stockton-on-Tees Date, First Survey 28<sup>th</sup> March Last Survey 27<sup>th</sup> Sept. 1944  
Reg. Book "Vic 94" (Number of Visits 21.) Gross Tons NetBuilt at By whom built Yard No. When built  
Engines made at Gt Yarmouth By whom made Messrs Crabtree (1931) Ltd Engine No. 576 When made 1944  
Boilers made at Stockton-on-Tees By whom made Stockton C.E. & Riley, Bls. Ltd Boiler No. 6854 When made 1944.  
Owners Port belonging to

## VERTICAL DONKEY BOILER.

Made at Stockton By whom made Stockton C.E. &amp; Riley, Bls. Ltd Boiler No. 6854 When made 1944 Where fixed

Manufacturers of Steel Appleby Frodingham Steel Co. Ltd

Total Heating Surface of Boiler 525 sq ft Is forced draught fitted No Coal or Oil fired Coal

No. and Description of Boilers 1. Vert. Multitubular. Working pressure 120 lb. sq. in.

Tested by hydraulic pressure to 230 lb. Date of test 27/9/44 No. of Certificate 7125.

Area of Firegrate in each Boiler 25 sq ft No. and Description of safety valves to each boiler 1- 2" CI Donkey

Area of each set of valves per boiler { per rule 4.86 as fitted 6.28 Pressure to which they are adjusted X Are they fitted with easing gear X

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 No Largest internal dia. of boiler 6'-6 1/2" Height 14'-6"

Shell plates: Material Steel Tensile strength 28-32 Thickness Upper 9/16 Lower 15/32.

Are the shell plates welded or flanged No Description of riveting: circ. seams { end SR Lap inter DR Lap long. seams DR - DBS

Dia. of rivet holes in { circ. seams 15/16 Pitch of rivets 2-13/16 Percentage of strength of circ. seams { plate 56.1 rivets 47.2 of Longitudinal joint { plate 78.2 rivets 109.2 combined 105.2

Working pressure of shell by rules 125 lb. Thickness of butt straps { outer 3/8 inner 1/2 + 7/16

Shell Crown: Whether complete hemisphere, dished partial spherical, or flat Yes Material Steel

Tensile strength 26-30 Thickness 27/32 Radius 6'-0" Working pressure by rules 121 lb.

Description of Furnace: Plain, spherical, or dished crown Yes Material Steel Tensile strength 26/30

Thickness 25/32 External diameter { top 5'-10" Length as per rule 2'-7" Working pressure by rules 149 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 27/32 Working pressure by rule 135 lb

Thickness of Ogee Ring 25/32 Diameter as per rule { D 6'-6" Working pressure by rule 129 lb

Combustion Chamber: Material Steel Tensile strength 26-30 Thickness of top plate 21/32

Radius if dished Working pressure by rule 127 lb Thickness of back plate 21/32 Diameter if circular

Length as per rule Pitch of stays 9 1/2 x 8 1/2 Are stays fitted with nuts or riveted over Rivetted over

Diameter of stays over thread 1 3/8 Working pressure of back plate by rules 123 lb

Tube Plates: Material { front Steel back Tensile strength { 26-30 Thickness { 1 1/16 21/32 Mean pitch of stay tubes in nests 10 1/8

If comprising shell, Dia. as per rule { front 6'-4" Pitch in outer vertical rows { 7" Dia. of tube holes FRONT { stay 2 1/2 plain 2 5/16 BACK { stay 2 1/2 plain 2 1/4

Is each alternate tube in outer vertical rows a stay tube Yes Working pressure by rules { front 125 lb back 148 lb

Girders to combustion chamber tops: Material Steel Tensile strength 28-32

Depth and thickness of girder at centre 6" 2 e 7/8 Length as per rule 1-10 3/16

Distance apart 12" No. and pitch of stays in each Working pressure by rule 125 lb



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 Steel Tensile strength 26-30 Diameter { at turned off part, ☒ or over threads. 1 3/8" No. of threads per inch 9

Area supported by each stay 80.75 Working pressure by rules 125.6 Are the stays drilled at the outer ends No

Tubes: Material Hot rolled weldless steel. External diameter { plain 2 1/2" stay 2 1/4" Thickness { 10WG 5/16"

No. of threads per inch 9 Pitch of tubes 3 1/2" x 3 1/2" Working pressure by rules 190 lb

Manhole Compensation: Size of opening in shell plate 16" x 12" Section of compensating ring None No. of rivets and diameter of rivet holes ☒ Outer row rivet pitch at ends ☒ Depth of flange if manhole flanged 3 7/2"

Uptake: External diameter ☒ Thickness of uptake plate ☒

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

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

For and on behalf of  
The foregoing is a correct description,  
STOCKTON ENGINEERS & RILEY BOILERS LTD.

Manufacturer.

1944 March 28, April 19, 26, May 4, 10, 17, 22, June 6, 12, 20, 28,  
Dates of Survey { During progress of work in shops - - } July 3, 12, 20, Aug. 2, 9, 16, 30, Sept. 8, 21, 27.  
while building { During erection on board vessel - - }  
Is the approved plan of boiler forwarded herewith 30/11/43  
(If not state date of approval.)  
Total No. of visits 21

#### GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)

This Boiler has been constructed under Special Survey & in accordance with Rule Requirements & approved plan.  
The material & workmanship are good & on completion the boiler was hydraulically tested to 230 lbs/sq in & found satisfactory.  
The Boiler is being forwarded to Messrs Crabtree (1931) Ltd Gt Yarmouth for their contract. A/M S/M 576.

The above boiler installed in Vic 94 at Thorne by Richard Dunston Ltd.  
Examined under steam, safety valves adjusted to 120 lbs/sq in (Ring sizes 9 1/2 P & S)  
& accumulation test held & found satisfactory on completion of all tests  
See Hull Report No 52977 of July 1943.

J. Dobie.

Survey Fee ... £ 4 : 4 : } When applied for, 14-10-1944  
Travelling Expenses (if any) £ : : } When received, 19

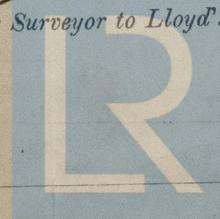
C. H. Stuart

Sh. Bod.

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 20 JUL 1945

Assigned Su F.E. Mackay. rpt.



Lloyd's Register  
Foundation