

# REPORT ON BOILERS.

No. 17926.  
10 OCT 1945

Received at London Office

Date of writing Report 5/10/1945 When handed in at Local Office 9/10/1945 Port of Middlesbrough

No. in Survey held at Stockton on Tees Date, First Survey 6<sup>th</sup> June 1944. Last Survey 2<sup>nd</sup> October 1945  
Reg. Book on the VIC 98 A/M S 1070 (Number of Visits 50) Gross Tons Net

Built at Gainsborough By whom built J. Swatson (Gainsborough) L<sup>d</sup> Yard No. 1555 When built 1946

Engines made at Great Yarmouth By whom made Messrs Crabtree (1931) L<sup>d</sup> Engine No. 690 When made

Boilers made at Stockton on Tees By whom made Stockton Chem Eng & Riley Boilers L<sup>d</sup> Boiler No. 6860 When made 1945

Owners Ministry of War Transport Port belonging to Grimsby  
managed by J. Barraclough (Grimsby) L<sup>d</sup>

## VERTICAL DONKEY BOILER.

Made at Stockton on Tees By whom made Stockton C.E. & Riley B<sup>o</sup> L<sup>d</sup> Boiler No. 6860 When made 1945 Where fixed Hull

Manufacturers of Steel Appley Fordingham Steel Co L<sup>d</sup>

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

No. and Description of Boilers 1 - Vertical Multitubular Working pressure 120 lbs. D.

Tested by hydraulic pressure to 230 lbs. D. Date of test 2/10/45 No. of Certificate 7156

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

Area of each set of valves per boiler per rule 4.56 Pressure to which they are adjusted 123 lbs Are they fitted with easing gear Yes  
as fitted 6.28

State whether steam from main boilers can enter the donkey boiler ✓ Smallest distance between boiler or uptake and bunkers

or woodwork 14" Is oil fuel carried in the double bottom under boiler NONE Smallest distance between base of boiler and tank top plating

NONE Is the base of the boiler insulated No Largest internal dia. of boiler 6'-6 7/16" 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 L<sup>d</sup> long. seams DR - DBS  
inter. DR

Dia. of rivet holes in circ. seams 15/16" Pitch of rivets Upper 2-13/16" Percentage of strength of circ. seams plate 56.8 of Longitudinal joint plate 74  
long. seams 12/16" Lower 2-8/16" rivets 47.2 rivets 109  
39/16" combined 105

Working pressure of shell by rules 125 lbs Thickness of butt straps outer 3/8"  
inner 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 lbs

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

Thickness 27/32" External diameter top 5'-10" Length as per rule 2'-9" Working pressure by rules 149 lbs.  
bottom -

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 lbs

Thickness of Ogee Ring 27/32" Diameter as per rule D 6'-6" Working pressure by rule 129 lbs  
a 5'-10"

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

Radius if dished ✓ Working pressure by rule 196 lbs 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 Riveted over

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

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

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" BACK stay 2 1/2"  
back - 7" plain 2 5/16" plain 2 1/4"

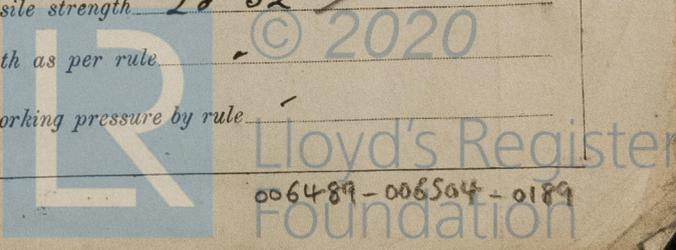
Is each alternate tube in outer vertical rows a stay tube Yes Working pressure by rules front 125 lbs  
back -

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

Depth and thickness of girder at centre 5 1/4" x 7/8" Length as per rule

Distance apart 5 7/8" No. and pitch of stays in each ✓ Working pressure by rule

If not stated whether, and when, one will be sent? In a report also sent on the Hull of the Ship?



Vic 98

**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 body of part~~ 1 3/8 over threads. 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 1/4" stay 2 1/4" Thickness { 10 W.S. 9/16"

No. of threads per inch 9 Pitch of tubes 3 1/2" x 3 1/4" Working pressure by rules 190 lbs

**Manhole Compensation:** Size of opening in shell clear 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 1/2"

**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 Yes

The foregoing is a correct description,  
 Stockton Chemical Engineers & Riley Boilers Ltd.  
 H. G. Ormby Manufacturer.  
 DIRECTOR.

1944 June 6, 12, 28, July 3, 12, 20, Aug 2, 9, 16, 30, Sept. 8, 21, Oct. 5, 13, 19, 23, Nov. 2, 9, 16, 21, 28  
 Dec. 6, 14, 21, 29, 1945 Jan 12, 23, Feb 1, 13, 22, March 1, 6, 13, 23, 28  
 April 4, 12, 25, 30, June 20, July 13, 26, Aug 3, 14, 29, Sept. 7, 13, Oct. 1, 2.

Dates of Survey while building { During progress of work in shops - - } Is the approved plan of boiler forwarded herewith 2575/44 (If not state date of approval.)  
 { During erection on board vessel - - } Total No. of visits 50

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

This Boiler has been constructed under Special Survey & in accordance with the Rule Requirements & approved plan.

The material & workmanship are good & on completion the boiler was hydraulically tested to 230 lbs 0" & found satisfactory.

This boiler has been constructed for contract A/MS/962 Destination unknown

Above boiler installed in 80' steam light 'VIC 98' at Hull by Chas. R. Holmes, examined under steam, safety valves adjusted to 123 lbs (P & 5 1/4") accumulation test held and on completion of all tests the boiler was found satisfactory. W. S. Shields, Hull.

Survey Fee ... .. £ 4 : 4 : } When applied for, 9/10/1945  
 Travelling Expenses (if any) £ : : } When received, ..... 19 .....

for self & C.R. Stuart. SWBos  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 1 FEB 1946  
 Assigned see minute on J.E. R.H.

