

JAN 1944

# REPORT ON BOILERS.

No. 78.

Received at London Office

68 JAN 1944

Date of writing Report **23-12-43** When handed in at Local Office **4-1-1943** Port of **LEEDS,**

No. in Survey held at **Leeds** Date, First Survey **2-9-43** Last Survey **28-11-1943**

Reg. Book **I.M.C.P.**

on the **Steel Single Screw "Vic 36" A/MS 612.** (Number of Visits **9**) Tons **Gross** **Net**

Built at **Thorne** By whom built **Richard Dunston L<sup>d</sup>.** Yard No. **T412** When built **1944**

Engines made at **Yarmouth** By whom made **Crabtree (1931) L<sup>d</sup>.** Engine No. **643** When made **1**

Boilers made at **Leeds.** By whom made **Clayton, Son & Co. Ltd.** Boiler No. **108** When made **(Claytons B.7594)**

Owners **Ministry of War Transport.** Port belonging to **Admiralty Contract No. C.P. Br.(MS)3500/42**

## VERTICAL DONKEY BOILER.

Made at **Leeds** By whom made **Clayton, Son & Co.** Boiler No. **108** When made **1943** Where fixed **-**

Manufacturers of Steel **South Durham S. & I. Co., Appleby-Frodingham Steel Co.**

Total Heating Surface of Boiler **213** Is forced draught fitted **No** Coal or Oil fired **Coal**

No. and Description of Boilers **Vertical Crosstube Boiler** Working pressure **120 lbs/sq. in.**

Tested by hydraulic pressure to **240 lbs/sq. in.** Date of test **26-11-43** No. of Certificate **108**

Area of Firegrate in each Boiler **24 sq. ft.** No. and Description of safety valves to each boiler **One Double Spring Marine Type**

Area of each set of valves per boiler **per rule 1.97 3.5<sup>3</sup>** Pressure to which they are adjusted **120 lbs/sq. in.** 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 **-** Smallest distance between base of boiler and tank top plating **-**

Is the base of the boiler insulated **-** Largest internal dia. of boiler **6'-3"** Height **14'-6"**

Shell plates: Material **S.M. Steel** Tensile strength **28/32** Thickness **1/2"**

Are the shell plates welded or flanged **No** Description of riveting: circ. seams **end S.R. Lap** long. seams **D.R.B.S.**

Dia. of rivet holes in **circ. seams 13/16"** Pitch of rivets **2"** Percentage of strength of circ. seams **plate 59.38** rivets **42.7** of Longitudinal joint **plate 72.9** rivets **106.8** combined **99.2**

Working pressure of shell by rules **138.3 lbs/sq. in** Thickness of butt straps **outer 1/2"** inner **1/2"**

Shell Crown: Whether complete hemisphere, dished partial spherical, or flat **Dished** Material **S.M. Steel**

Tensile strength **26/30** Thickness **3/4"** Radius **6'-0"** Working pressure by rules **124.5 lbs/sq. in.**

Description of Furnace: Plain, spherical, or dished crown **Dished** Material **S.M. Steel** Tensile strength **26/30**

Thickness **25/32"** External diameter **top 5'-1.1/16"** Length as per rule **2'-9"** Working pressure by rules **127.4 lbs/sq. in.**

Pitch of support stays circumferentially **9"** and vertically **2'-6"** Are stays fitted with nuts or riveted over **Riveted**

Diameter of stays over thread **1 1/2"** Radius of spherical or dished furnace crown **4'-6"** Working pressure by rule **-**

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

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 **front -** Pitch in outer vertical rows **-** Dia. of tube holes FRONT **stay -** BACK **stay -**

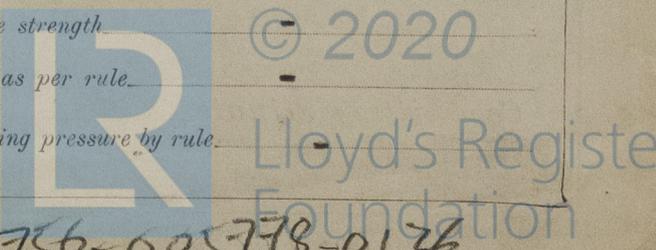
Is each alternate tube in outer vertical rows a stay tube **-** Working pressure by rules **front -** back **-**

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 **-**

065756-005778-0136



**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  External diameter { plain  stay  Thickness {

No. of threads per inch  Pitch of tubes  Working pressure by rules

**Manhole Compensation:** Size of opening in shell plate  $19\frac{1}{2}'' \times 14\frac{1}{2}''$  Section of compensating ring **Flanged 1" thick** No. of rivets and diameter of rivet holes **40 x 25/32" dia** Outer row rivet pitch at ends  Depth of flange if manhole flanged

**Uptake:** External diameter **21"** Thickness of uptake plate **11/16"**

**Cross Tubes:** No. **5** External diameters { **12 1/2"** Thickness of plates **7/16"**

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

The foregoing is a correct description,  
**CLAYTON, SON & CO., LIMITED.**  
*h. Hartley* Manufacturer.  
**DIRECTOR.**

Dates of Survey { During progress of work in shops - - 2/9, 14/9, 29/9, 4/10, 12/10, 19/10, 7/11, 26/11 & 28/11/43. Is the approved plan of boiler forwarded herewith No. plan No. (If not state date of approval.) **B7593/5 approved in Sec. letter dated 15-12-42**

while building { During erection on board vessel - - Total No. of visits

Is this Boiler a duplicate of a previous case. **No** If so, state Vessel's name and Report No.

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

This boiler has been constructed under special survey, of tested materials and in accordance with the Secretary's letters, the approved plans and the requirements of the Rules.

The materials and workmanship are of good quality and the boiler when tested in the shops under an hydraulic pressure of two hundred and forty pounds per square inch, was found sound and tight.

This boiler is, in my opinion, suitable to be fitted on board a vessel classed with this Society and for the purpose intended.

For identification the boiler has been marked on the shell plate close to the manhole door as follows:-

The above boiler installed in  
 Vic 36 at Thorne, examined under  
 steam, safety valves adjusted to 120 lb  
 $P \frac{3}{16} - 5 \frac{7}{32}$ , accumulation test held.  
*W.S. Shields, Hull.*

**N<sup>o</sup> 108**  
**LLOYD'S TEST**  
**240 LBS**  
**W.P. 120 LBS.**  
**DR.W 26-11-43.**

Also near fire door.

**NOTE:** Boiler Mountings tested in accordance with the Rules are fitted.

Survey Fee ... £ **4 : 4** : } When applied for, ..... 19  
 Travelling Expenses (if any) £ : : } When received, ..... 19

See letter.

*D. Halliday*  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute  
 Assigned *W.S. for Blessing*  
*Committee*

