

RECEIVED

# REPORT ON BOILERS.

27 MAR 1944

Received at London Office 16 MAR 1944

17 MAR 1944

Date of writing Report 28-2-44 When handed in at Local Office 14-3-44 Port of LEEDS

No. in Survey held at Leeds. Date, First Survey 2-9-43 Last Survey 10-1-1944

Reg. Book on the *Star Single Screw Lighter "VIC 37"* A/M 613. (Number of Visits 10) Tons Gross 95.67 Net 40.82

Built at *Thorne* By whom built *Richard Dunston Ltd.* Yard No. *1413* When built *1944*

Engines made at *Yarmouth* By whom made *Grabbu (1931) L.* Engine No. *644* When made

Boilers made at *Leeds* By whom made *Clayton, Son & Co. Ltd.* Boiler No. *111* When made *1944* (*Claytons B.7595*)

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

## MAIN VERTICAL ~~DONKEY~~ BOILER.

Made at *Leeds* By whom made *Clayton, Son & Co.* Boiler No. *111* When made *1944* 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 *6-1-44.* No. of Certificate *111*

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* as fitted *6.28* 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

*NONE* Is the base of the boiler insulated *-* Largest internal dia. of boiler *6'-3"* Height *14'-0"*

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* inter. *S.R. Lap* long. seams *D.R.B.S.*

Dia. of rivet holes in { circ. seams *13/16"* long. seams *13/16"* Pitch of rivets { *2"* *3"* 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"* bottom *5'-10"* 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 *-* a *-* 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 { front *-* back *-* Tensile strength { *-* Thickness { *-* Mean pitch of stay tubes in nests *-*

If comprising shell, Dia. as per rule { front *-* back *-* Pitch in outer vertical rows { *-* Dia. of tube holes FRONT { stay *-* plain *-* BACK { stay *-* plain *-*

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

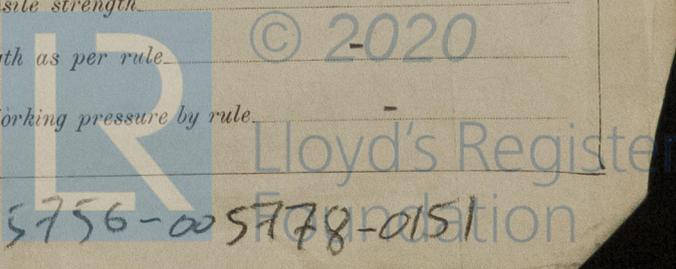
Girders to combustion chamber tops: Material *-* Tensile strength *-*

Depth and thickness of girder at centre *-* Length as per rule *-*

Distance apart *-* No. and pitch of stays in each *-* Working pressure by rule *-*

Is a Report also sent on the Hull of the Ship? If not, state whether, and when, one will be sent.

[Im. 11.37.-Copyable Ink.] (MADE IN ENGLAND.)



**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 19½" x 14½" 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 { 12½" 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 - - } 2-9-43, 14-9, 29-9, 4-10, 19-10, 7-11, 26-11, 14-12-43 & 6-1 & 10-1-44 Is the approved plan of boiler forwarded herewith No. Plan No. B.7593/5 approved in Sec. letter 15-12-42.  
 { During erection on board vessel - - } Total No. of visits - -

Is this Boiler a duplicate of a previous case. Yes If so, state Vessel's name and Report No. 77.

**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:-

No 111  
 LLOYDS TEST  
 240 LBS  
 WP 120 LBS  
 D.R.W. 6-1-44.

Also near fire door.

*Above Boiler installed in Vic 37 at Thorne, examined under steam, safety valves adjusted as overleaf accumulation test held and afterwards found satisfactory on completion of all tests. W.S.S.*

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

Survey Fee ... £ 4 : 4 : 0 When applied for, 21-1-1944  
 Travelling Expenses (if any) £ : 6 : 0 When received, 19

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

Committee's Minute THURS 6 APR 1944  
 Assigned *No action*



Lloyd's Register  
 Foundation