

REPORT ON BOILERS.

No. 78.

Received at London Office

66 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 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 Ld. Yard No. T412 When built 1944

Engines made at Yarmouth By whom made Crabtree (1931) Ld. 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 3.53 as fitted 0.28 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 -

Is the base of the boiler insulated - Largest internal dia. of boiler 0'-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 inter. S.R. Lap long. seams D.R.B.S.

Dia. of rivet holes in {circ. 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" 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 {front - 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 -

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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 - 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 $40 \times 25/32"$ 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 { $12\frac{1}{2}"$ 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.
while building { During erection on board vessel - - (If not state date of approval.) B7593/5 approved in
Sec. letter dated 15-12-42
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^o 108
LLOYD'S TEST
240 LBS
W.P. 120 LBS.
DR.W 26-11-43.

Also near firedoor.

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

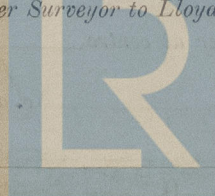
See letter.

Committee's Minute

Assigned

W.S. for Blanning
Committee

D. Hallam
Engineer Surveyor to Lloyd's Register of Shipping.



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