

REPORT ON BOILERS.

No. 17684

Received at London Office

Date of writing Report 26th July 1944 When handed in at Local Office 29th July 1944 Port of Middlesbrough

No. in Survey held at 10th Reg. Book 10th on the 1st Vic 55th MS 959 Date, First Survey 22nd March Last Survey 24th July 1944 (Number of Visits 18) Tons {Gross Net

Built at Gainsborough By whom built J. S. Watson (Gainsborough) Ltd. Yard No. 1553 When built 1945
Engines made at Great Yarmouth By whom made Henry Crabtree (1931) Ltd. Engine No. 574 When made 1944
Boilers made at Stirling & Sons By whom made Stirling C.E. & Riley Mrs L. Boiler No. 6852 When made 1944
Owners Ministry of War Transport. Port belonging to

VERTICAL ~~DONKEY~~ BOILER.

Made at Stirling By whom made Stirling C.E. & Riley Mrs L. Boiler No. 6852. 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 Vertical Multitubular Working pressure 120 lb/sq in

Tested by hydraulic pressure to 230 lb. Date of test 24/7/44 No. of Certificate 7119

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

Area of each set of valves per boiler {per rule 4.86 as fitted 6.28 Pressure to which they are adjusted 123 lb. Are they fitted with easing gear Yes

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

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 Yes 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 5/32"

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" long. seams 13/16" Pitch of rivets {upper 2.136" lower 2.916" Percentage of strength of circ. seams {plate 56.1 rivets 47.2 of Longitudinal joint {plate 74% rivets 109% combined 125%

Working pressure of shell by rules 125 lb/sq in Thickness of butt straps {outer 3/8" inner 1/2"

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" bottom 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 25/32" Working pressure by rule 135 lb.

Thickness of Ogee Ring 25/32" Diameter as per rule {D 6'-6" d 5'-10" Working pressure by rule 129 lb/sq in

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 9'2" x 8'2" 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 lb.

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

If comprising shell, Dia. as per rule {front 6'-4" back Pitch in outer vertical rows {7'-1 7" Dia. of tube holes FRONT {stay 2'2" plain 2'5/8" BACK {stay 2'4" plain 2'4"

Is each alternate tube in outer vertical rows a stay tube Yes Working pressure by rules {front 125.6 lb/sq in back 148 lb/sq in

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

Depth and thickness of girder at centre 6" - 2 @ 5/8" Length as per rule 1' - 10 3/16"

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

Vic 55

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 *125.64* Are the stays drilled at the outer ends *Yes*

Tubes: Material *Hot rolled welded steel* External diameter { plain *2 1/4"* stay *2 1/4"* Thickness { *10 D. 9.* *5/16"*

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 *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 ☒

For and on behalf of

STOCKTON ENGINEERS & BOILER MAKERS
The foregoing is a correct description,

L. W. Riley

Manufacturer.

DIRECTOR.

1944 March 22, 28, April 6, 12, 19, 26, May 4, 10, 17, 22, June 2, 6

Dates of Survey { During progress of work in shops - *12, 20, 28, July 3, 12, 14.*
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 *18.*

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 materials & workmanship are good & on completion the boiler was hydraulically tested to 230 lb per sq in & found satisfactory.

This boiler is being forwarded to Messrs. Frith & Co. (1931) Ltd. per their contract A/M/S/M 574.

This boiler has been fitted on board 'Vic 55' at Hull under Special Survey, tried under steam, safety valves adjusted as overlift (Rings P $\frac{9}{32}$ S $\frac{5}{16}$) accumulation test held and found satisfactory on completion of all tests to S. Shields, Hull.

Survey Fee ... £ 4 : 4 : } When applied for, *31-7-1944*

Travelling Expenses (if any) £ : : } When received, *19*

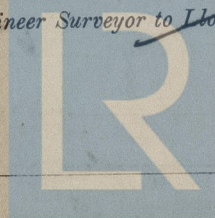
L. W. Riley

Engineer Surveyor to Lloyd's Register of Shipping.

FRI. 9 MAR 1945

Committee's Minute

Assigned *Sir F. E. Machy. apt.*



Lloyd's Register Foundation