

# REPORT ON BOILERS.

No. 122077

Received at London Office. 12 JAN 1945

Date of writing Report. 1944 When handed in at Local Office. 5 JAN 1945 Port of London

No. in Reg. Book. 1 Survey held at Sytham & Preston Date, First Survey 1/10/43 Last Survey 21/12/1944

on the Steel screw "FRESH TARN" (Number of Visits 51) Tons Gross 888.91  
Net 92.82

Master Sytham Built at Sytham By whom built Sytham S.S. & Co Yard No. 875 When built 1944

Engines made at Sytham By whom made Sytham S.S. & Co Engine No. 555 When made 1944

Boilers made at - do - By whom made - do - Boiler No. 554 When made 1944

Nominal Horse Power 90 Owners The Admiralty Port belonging to London

## MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Steel Screw Co of Scotland, ENDS: BELVIDERE ST. INTERMARIS - BONNETT SON CO (Letter for Record 30/5)

Total Heating Surface of Boilers 1600 sq ft Is forced draught fitted yes Coal or Oil fired coal

No. and Description of Boilers One single ended multitubular cylindrical (heated) type Working Pressure 180 lbs/sq in

Tested by hydraulic pressure to 320 lbs/sq in Date of test 31-8-44 No. of Certificate 2655 Can each boiler be worked separately yes

Area of Firegrate in each Boiler 46.5 sq ft No. and Description of safety valves to each boiler Two - 2 3/4" dia Spring Loaded

Area of each set of valves per boiler per rule 10.25 sq ft as fitted 11.87 sq ft Pressure to which they are adjusted 180 lbs/sq in Are they fitted with easing gear yes

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler no

Smallest distance between boilers or uptakes and bunkers or woodwork 8 1/2" Is oil fuel carried in the double bottom under boilers no

Smallest distance between shell of boiler and tank top plating yes Is the bottom of the boiler insulated no

Largest internal dia. of boilers 12' 9 1/16" Length 10' 6" Shell plates: Material Steel Tensile strength 29-32 tons/in<sup>2</sup>

Thickness 1 1/32" Are the shell plates welded or flanged no Description of riveting: circ. seams D.P.

long. seams T.R. D.R.S. Diameter of rivet holes in 1 3/32" Pitch of rivets 4 3/4"

Percentage of strength of circ. end seams 67% Percentage of strength of circ. intermediate seam 85.8%

Percentage of strength of longitudinal joint 84% Working pressure of shell by Rules 182.2

Thickness of butt straps outer 25/32" inner 29/32" No. and Description of Furnaces in each Boiler Eighteen type 3 Stiller Bourby each end

Material Steel Tensile strength 26-30 tons Smallest outside diameter 33 5/8"

Length of plain part top - bottom yes Thickness of plates crown 7/16" bottom 7/16" Description of longitudinal joint Welded

Dimensions of stiffening rings on furnace or e.c. bottom yes Working pressure of furnace by Rules yes

End plates in steam space: Material Steel Tensile strength 26-30 tons Thickness 1 3/32" Pitch of stays 1 7/8" x 1 7/8"

How are stays secured Double nuts Working pressure by Rules Approved

Tube plates: Material Steel Tensile strength 26-30 tons/in<sup>2</sup> Thickness 7/8"

Mean pitch of stay tubes in nests 9 x 11 3/32" Pitch across wide water spaces 14 1/2" Working pressure front Approved back - do -

Girders to combustion chamber tops: Material Steel Tensile strength 28-32 tons/in<sup>2</sup> Depth and thickness of girder 8 3/8" x 1 5/16" (Double Plates)

Length as per Rule 3 1/2" Distance apart 11" No. and pitch of stays Two at 9 7/8"

Working pressure by Rules Approved Combustion chamber plates: Material Steel

Tensile strength 26-30 tons/in<sup>2</sup> Thickness: Sides 3/4" Back 3/4" Top 3/4" Bottom 3/4"

Pitch of stays to ditto: Sides 10 3/4" x 9 7/8" Back 10 x 9 7/8" Top 11 x 9 7/8" Are stays fitted with nuts or riveted over Nuts

Working pressure by Rules Approved Front plate at bottom: Material Steel Tensile strength 26-30 tons/in<sup>2</sup>

Thickness 7/8" Lower back plate: Material Steel Tensile strength 26-30 tons/in<sup>2</sup> Thickness 7/8"

Pitch of stays at wide water space 14 3/4" x 10" Are stays fitted with nuts or riveted over Nuts

Working pressure Approved Main stays: Material Steel Tensile strength 28-32 tons/in<sup>2</sup>

Gage diameter At body of stay 2 5/8" No. of threads per inch 6 Area supported by each stay 289 sq in

Over threads 3"

Working pressure by Rules Approved Screw stays: Material Steel Tensile strength 26-30 tons/in<sup>2</sup>

Gage diameter At turned off part 1 7/8" No. of threads per inch 9 Area supported by each stay 1048, 1065

Over threads 1 3/8"

Working pressure by Rules *Approved*. Are the stays drilled at the outer ends *Lo.* Margin stays: Diameter *1.86"* (At turned off part or Over threads)

No. of threads per inch *9* Area supported by each stay *128.75"²* Working pressure by Rules *Approved*

Tubes: Material *London Steel* External diameter *3 1/4"* Thickness *3/16"* No. of threads per inch *9*

Pitch of tubes *4 1/2" x 4 9/16"* Working pressure by Rules *Approved* Manhole compensation: Size of opening *30" @ 3/16"*

shell plate *20" x 16"* Section of compensating ring *2-1 1/2" x 2-1/2" x 1 1/16"* No. of rivets and diameter of rivet holes *30 @ 3/16"*

Outer row rivet pitch at ends *9"* Depth of flange if manhole flanged *3 1/2"* Steam Dome: Material *✓*

Tensile strength *✓* Thickness of shell *✓* Description of longitudinal joint *✓*

Diameter of rivet holes *✓* Pitch of rivets *✓* Percentage of strength of joint *✓*

Internal diameter *✓* Working pressure by Rules *✓* Thickness of crown *✓* No. and diameter of stays *✓*

How connected to shell *✓* Inner radius of crown *✓* Working pressure by Rules *✓*

of rivets in outer row in dome connection to shell *✓* Size of doubling plate under dome *✓* Diameter of rivet holes and pitch of rivets in outer row in dome connection to shell *✓*

Type of Superheater *✓* Manufacturers of *✓*

- Tubes *✓*
- Steel forgings *✓*
- Steel castings *✓*

Number of elements *✓* Material of tubes *✓* Internal diameter and thickness of tubes *✓*

Material of headers *✓* Tensile strength *✓* Thickness *✓* Can the superheater be shut off from the boiler *✓*

the boiler be worked separately *✓* Is a safety valve fitted to every part of the superheater which can be shut off from the boiler *✓*

Area of each safety valve *✓* Are the safety valves fitted with easing gear *✓* Working pressure as per Rules *✓*

Pressure to which the safety valves are adjusted *✓* Hydraulic test pressure *✓*

tubes *✓* forgings and castings *✓* and after assembly in place *✓* Are drain cock valves fitted to free the superheater from water where necessary *✓*

Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with *yes.*

The foregoing is a correct description,  
**THE LUTHAM SHIPBUILDING AND ENGINEERING COMPANY, LIMITED**  
*R. Friedenthal* Manufacturer

Dates of Survey while building *See Machy Rpt.* Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) *✓*

*During progress of work in shops - - -*

*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. *"Greasford" Ser. No. 121446.*

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

*This boiler has been constructed under special survey and in accordance with the approved plan & the Society's rules. The materials & workmanship are sound and good.*

*The boiler has been satisfactorily fitted on board, examined under steam and the safety valves adjusted under steam to the approved working pressure.*

*It is eligible in my opinion to be classed in the Register's Book with notation:-*

*ISB. F.D. - 30P - 180 LB/IN²*

Survey Fee *Included on Machy Report.* When applied for,.....19.....

Travelling Expenses (if any) £ : : When received.....19.....

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

Committee's Minute *LIVERPOOL - 9 JAN 1945*

Assigned *Transmit to Person.*

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