

Rpt. 5a.

REPORT ON BOILERS.

No. 17948

Received at London Office

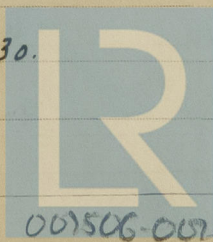
Date of writing Report 22-11-1945 When handed in at Local Office 26-11-1945 Port of Middlesbrough.

No. in Reg. Book. Survey held at Stockton-on-Tees. Date, First Survey 13th July 1945 Last Survey 14th Nov. 1945.

on the **BRITISH MAJOR**
Built at **Sunderland** By whom built **Wm. Hayford & Son Ltd** Yard No. **434** When built **1946**
Engines made at **Sunderland** By whom made **Wm. Dwyer** Engine No. **734** When made **1946**
Boilers made at **Stockton-on-Tees** By whom made **Stockton C.E. & Riley Bolton Ltd** Boiler No. **6924** When made **1945**
Nominal Horse Power Owners **British Tanker Co Ltd** Port belonging to **London**

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel **Appley Frothingham Steel Co. Ltd** ✓ (Letter for Record **S.** ✓)
Total Heating Surface of Boilers **2020** \$ Is forced draught fitted **Yes** ✓
No. and Description of Boilers **1 S.E. Marine** ✓ Working Pressure **150 lb/sq. in.** ✓
Tested by hydraulic pressure to **275 lb/sq. in.** Date of test **4/11/45** No. of Certificate **7157** Can each boiler be worked separately **Yes** ✓
Area of Firegrate in each Boiler No. and Description of safety valves to each boiler **Two imp. high lift** ✓
Area of each set of valves per boiler {per Rule **7.65** ✓ as fitted **14.1** ✓ Pressure to which they are adjusted **150 lb/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 **-**
Smallest distance between boilers or uptakes and bunkers or woodwork **-** Is oil fuel carried in the double bottom under boilers **Yes** ✓
Smallest distance between shell of boiler and tank top plating **-** Is the bottom of the boiler insulated **Yes** ✓
Largest internal dia. of boilers **12'-10 3/16"** Length **11'-6"** ✓ Shell plates: Material **Steel** ✓ Tensile strength **29-33** ✓
Thickness **29/32"** ✓ Are the shell plates welded or flanged **No** ✓ Description of riveting: circ. seams {end **D.R. Lap** ✓ inter. **3-187** ✓
long. seams **TR. D.B.S.** ✓ Diameter of rivet holes in {circ. seams **1 1/16"** ✓ long. seams **1 1/16"** ✓ Pitch of rivets { **7 1/16"** ✓
Percentage of strength of circ. end seams {plate **66.6%** ✓ rivets **48.7%** ✓ Percentage of strength of circ. intermediate seam {plate **-** ✓ rivets **-** ✓
Percentage of strength of longitudinal joint {plate **84.9** ✓ rivets **103** ✓ combined **-** ✓
Thickness of butt straps {outer **23/32"** ✓ inner **27/32"** ✓ No. and Description of Furnaces in each Boiler **2. Deepita Corrugated** ✓
Material **Steel** ✓ Tensile strength **26-30** ✓ Smallest outside diameter **3'-10"** ✓
Length of plain part {top **-** ✓ bottom **-** ✓ Thickness of plates {crown **1/2"** ✓ bottom **-** ✓ Description of longitudinal joint **Welded** ✓
Dimensions of stiffening rings on furnace or c.c. bottom **-** ✓
End plates in steam space: Material **Steel** ✓ Tensile strength **26-30** ✓ Thickness **1"** ✓ Pitch of stays **18" x 17"** ✓
How are stays secured **Double nut & washers - secured into both plates** ✓
Tube plates: Material {front **Steel** ✓ back **Steel** ✓ Tensile strength { **26-30** ✓ Thickness { **7/8"** ✓ **3/4"** ✓
Mean pitch of stay tubes in nests **9 3/8" x 8 1/4"** ✓ Pitch across wide water spaces **13 1/2"** ✓
Girders to combustion chamber tops: Material **Steel** ✓ Tensile strength **28-32** ✓ Depth and thickness of girder **-** ✓
at centre **7" x 20 5/8"** ✓ Length as per Rule **2'-3 1/2"** ✓ Distance apart **9"** ✓ No. and pitch of stays **-** ✓
in each **2-9"** ✓ Combustion chamber plates: Material **Steel** ✓
Tensile strength **26-30** ✓ Thickness: Sides **2 1/32"** ✓ Back **19/32"** ✓ Top **2 1/32"** ✓ Bottom **2 1/32"** ✓
Pitch of stays to ditto: Sides **10" x 9"** ✓ Back **9 1/2" x 8 1/4"** ✓ Top **9" x 9"** ✓ Are stays fitted with nuts or riveted over **Nuts** ✓
Front plate at bottom: Material **Steel** ✓ Tensile strength **26-30** ✓
Thickness **7/8"** ✓ Lower back plate: Material **Steel** ✓ Tensile strength **26-30** ✓ Thickness **3/4"** ✓
Pitch of stays at wide water space **13 1/2"** ✓ Are stays fitted with nuts or riveted over **Nuts** ✓
Main stays: Material **Steel** ✓ Tensile strength **28-32** ✓
Diameter {At body of stay, **2 3/4"** ✓ or **-** ✓ No. of threads per inch **6** ✓
Screw stays: Material **Steel** ✓ Tensile strength **26-30** ✓
Diameter {At turned off part, **1 1/2"** ✓ or **-** ✓ No. of threads per inch **9** ✓



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Are the stays drilled at the outer ends ho. ✓ Margin stays: Diameter { At turned off part, or Over threads 1 3/4" ✓

No. of threads per inch 9. ✓

Tubes: Material Hot finished seamless steel External diameter { Plain 2 1/2" ✓ Stay 2 1/2" ✓ Thickness { 10 SWG ✓ 3/16" ✓ No. of threads per inch 9. ✓

Pitch of tubes 3 3/4" - 3 3/4" ✓

Manhole compensation: Size of opening 21" x 7" ✓

Section of compensating ring 8 3/4" x 1 1/8" ✓ No. of rivets and diameter of rivet holes 52 - 1 1/4" ✓

Outer row rivet pitch at ends 7 1/16" ✓ Depth of flange if manhole flanged ✓

Steam Dome: Material NONE. ✓

Tensile strength _____ Thickness of shell _____ Description of longitudinal joint _____

Diameter of rivet holes _____ Pitch of rivets _____ Percentage of strength of joint { Plate _____ Rivets _____

Internal diameter _____ Thickness of crown _____ No. and diameter of _____

stays _____ Inner radius of crown _____

How connected to shell _____ Size of doubling plate under dome _____

of rivets in outer row in dome connection to shell _____ Diameter of rivet holes and pitch _____

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 and _____

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 casing gear _____

Pressure to which the safety valves are adjusted _____

tubes _____ forgings and castings _____ and after assembly in place _____ Hydraulic test pressure _____

valves fitted to free the superheater from water where necessary _____ Are drain cocks on _____

Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with _____

For and on behalf of
The foregoing is a correct description
Stockton Chemical Engineers & Shipbuilders Ltd.

Dates of Survey { During progress of work in shops - - 1945 July 13, 26, Aug 3, 14, 29, Sept 7, 13, Oct. 9, 19, 31, Nov. 14. ✓

while building { During erection on board vessel - - - _____

Are the approved plans of boiler and superheater forwarded _____ (If not state date of approval.)

Total No. of visits 11.

Is this Boiler a duplicate of a previous case ho. ✓ If so, state Vessel's name and Report No. Approved 9/2/45.

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 275 lb/sq in & found satisfactory.

This boiler is being despatched to Sunderland for Wm Dunsford's Contract No. 734.

This boiler has been securely fixed on board the vessel. Fitted to burn oil fuel (S.P. above 150°F). Safety valves adjusted to working pressure as above.

In recommendation please see Machinery Rpt.

W. J. Hasw.

Survey Fee ... £ 20 : 5 : 0 When applied for, 28-11-1945

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

C. Norman Smith
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 10 MAY 1946

Assigned Lee J. E. Machey rpt