

REPORT ON BOILERS.

No. 18578.

Received at London Office. 6 SEP 1948

of writing Report. 2nd Sept. 48. When handed in at Local Office. 4th Sept. 48. Port of. MIDDLESBROUGH.

Survey held at. MIDDLESBROUGH. Date, First Survey. 5th Dec. 1947. Last Survey. 3rd Aug. 1948.

on the "BRITISH LIBERTY" (Number of Visits... 4.) Tons } Gross... 8589
Net... 1952

Built at. Sunderland By whom built. Wm. Doxford & Sons. Yard No. 765 When built. 1949

Engine No. 765 When made. 1949

Boilers made at. Stockton-on-Tees. By whom made. Stockton C.E. & R.B. Ltd. Boiler No. 7051 When made. 1949.

Owners. British Tanker Co Port belonging to. London

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel. Appleby Frodingham Steel Co. Ltd. (Letter for Record... S)

Total Heating Surface of Boilers. 2020 sq. ft. Is forced draught fitted. Yes Coal or Oil fired. Oil or Exh. Gas.

Description of Boilers. 1 S.E. Multitubular Working Pressure. 150 lbs per sq. in.

Tested by hydraulic pressure to. 275 lbs Date of test. 31.8.48. No. of Certificate. 7250 Can each boiler be worked separately. -

Area of Firegrate in each Boiler. No. and Description of safety valves to each boiler. 3" double high lift. ✓

Pressure to which they are adjusted. 150 Are they fitted with easing gear. Yes.

Is oil fuel carried in the double bottom under boiler. Yes.

Is the bottom of the boiler insulated. Yes.

Shell plates: Material. Steel Tensile strength. 29-33 ✓

Description of riveting: circ. seams { end... DR. Lap
inter... -

Pitch of rivets { 3.187 ✓
7.1/16" ✓

Percentage of strength of circ. intermediate seam { plate... -
rivets... -

Working pressure of shell by Rules. 157 lbs

No. and Description of Furnaces in each Boiler. 2 Deighton Corrugated. ✓

Material. Steel Tensile strength. 26-30 ✓ Smallest outside diameter. 3' 10" ✓

Description of longitudinal joint. Welded ✓

Working pressure of furnace by Rules. 156 lbs

Material. Steel Tensile strength. 26-30 ✓ Thickness. 1" ✓ Pitch of stays. 18" x 17" ✓

Working pressure by Rules. 150 lbs

Material. steel Tensile strength. 26.30 ✓ Thickness. 7/8" 3/4" ✓

Working pressure { front. 159 lbs
back. 180 lbs

Material. Steel Tensile strength. 28.32 ✓ Depth and thickness of girder

Working pressure by Rules. 152 lbs Combustion chamber plates: Material. Steel

Thickness: Sides. 21/32" ✓ Back. 19/32" ✓ Top. 21/32" ✓ Bottom. 21/32" ✓

Working pressure by Rules. 152 lbs Front plate at bottom: Material. Steel Tensile strength. 26.30 ✓

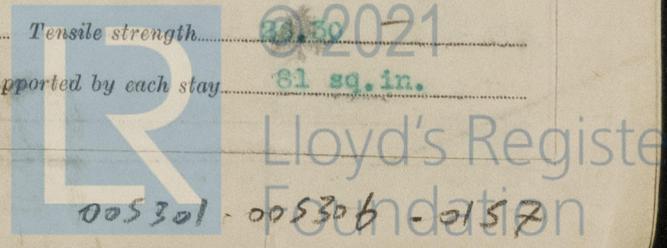
Thickness. 7/8" ✓ Lower back plate: Material. Steel Tensile strength. 26.30 ✓ Thickness. 3/4" ✓

Main stays: Material. Steel Tensile strength. 28.32 ✓

No. of threads per inch. 6 ✓ Area supported by each stay. 306 sq. in.

Working pressure by Rules. 180 lbs Screw stays: Material. Steel Tensile strength. 28.32 ✓

No. of threads per inch. 9 ✓ Area supported by each stay. 81 sq. in.



Working pressure by Rules 155 lbs Are the stays drilled at the outer ends No ✓ Margin stays: Diameter { At turned off part, 1 1/2" ✓
 or Over threads. 1 1/2" ✓
 No. of threads per inch 9 ✓ Area supported by each stay 103.1 sq. in. Working pressure by Rules 176 lbs
 Tubes: Material Seamless Steel External diameter { Plain 2 1/2" ✓ Thickness { 10 S.W.G. ✓ No. of threads per inch 9 ✓
 Stay 2 1/2" ✓
 Pitch of tubes 3 1/2" x 3 1/2" ✓ Working pressure by Rules Main 175 lbs Stay 218 lb Manhole compensation: Size of open
 shell plate 21" x 17" ✓ Section of compensating ring 8 1/2" x 1 1/2" ✓ No. of rivets and diameter of rivet holes 52 - 1.1/16"
 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 _____ Working pressure by Rules _____ Thickness of crown _____ No. and diam
 stays _____ Inner radius of crown _____ Working pressure by Rules _____
 How connected to shell _____ Size of doubling plate under dome _____ Diameter of rivet holes and
 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 o
 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
 Rules _____ Pressure to which the safety valves are adjusted _____ Hydraulic test pr
 tubes _____ forgings and castings _____ and after assembly in place _____ Are drain o
 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 _____

The foregoing is a correct description,

Dates of Survey while building { During progress of work in shops - - } 1947. Dec. 5. 1948. Jan. 20. July. 23. Aug. 31. Are the approved plans of boiler and superheater forwarded herewith 9.2.
 (If not state date of approval.)
 Total No. of visits 4.

Is this Boiler a duplicate of a previous case _____ 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 and in accordance with the Rule Requirements and approved plan.

The materials and workmanship are good, and on completion the boiler was hydraulically tested at 275 lbs per sq. in. and found satisfactory.

This boiler is being forwarded to Sunderland for Wm. Doxford's Contract No. 765.

*This boiler has been securely fixed on board the vessel
 & Safety valves adjusted under steam to working pressure*

For recommendation please see Machinery Rpt.

H. T. Fraser.

Survey Fee ... £ 33 : 12 : 0 } When applied for 4.9.1948.
 Travelling Expenses (if any) £ : : } When received 19.....

W. Roman Stuart.
 Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute _____

FRI, 3 JUN 1948

Assigned _____

In minute see J.E. Rpt.



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