

REPORT ON BOILERS.

No. 103801.

Received at London Office

Date of writing Report

19

When handed in at Local Office

19

Port of

Liverpool

No. in Reg. Book.

Survey held at

Birkenhead

Date, First Survey

25th Octr /33.

Last Survey

9th May

1934

on the

Steel Sc. "TULIP"

(Number of Visits 31)

Gross 409
Tons Net 185

Master ☒ Built at Sudbrook (now) By whom built T. A. Walker Yard No. When built 1897
 Engines made at Newbury By whom made Plenty & Sons. Engine No. When made 1897
 Boilers made at Stockton-on-Tees By whom made Riley Bros. Boiler No. When made 1897
 Nominal Horse Power 80 Owners Grayson, Rolfe & Bloom Dock Ltd. Port belonging to Liverpool

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel ☒ (Letter for Record S)Total Heating Surface of Boilers 1307 Is forced draught fitted No Coal or Oil fired OilNo. and Description of Boilers One multitubular cylindrical single-ended Working Pressure 150 lbs.Tested by hydraulic pressure to 225 lbs Date of test 28.11.33 No. of Certificate Can each boiler be worked separately ☒Area of Firegrate in each Boiler 38.5 sq. ft. No. and Description of safety valves to each boiler 2 spring loadedArea of each set of valves per boiler per Rule 11.88 sq. ft. Pressure to which they are adjusted 150 lbs 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 11' 4" Is oil fuel carried in the double bottom under boilers NoSmallest distance between shell of boiler and tank top plating open floor. Is the bottom of the boiler insulated NoLargest internal dia. of boilers 11' 5" Length 10' 1" Shell plates: Material Steel Tensile strength Thickness 1" Are the shell plates welded or flanged No Description of riveting: circ. seams end D.R. lapLong. seams Tribble rivet, double butt Diameter of rivet holes in circ. seams 1 1/16" Pitch of rivets 3"Percentage of strength of circ. end seams plate 64.6 Percentage of strength of circ. intermediate seam plate 64.6Percentage of strength of longitudinal joint plate 86.7 Working pressure of shell by Rules 189 lbs.Thickness of butt straps outer 7/8" No. and Description of Furnaces in each Boiler 2 Plain with Adamson RingMaterial steel Tensile strength Smallest outside diameter 3' 6"Length of plain part top 8' 3" x 8' 3" Thickness of plates 1 1/16" Description of longitudinal joint weldDimensions of stiffening rings on furnace or c.c. bottom none Working pressure of furnace by Rules 169 lbs.End plates in steam space: Material steel Tensile strength Thickness 7/8" Pitch of stays 15 1/4" x 15 1/4"How are stays secured Double nuts & washers Working pressure by Rules 151 lbs.Tube plates: Material front steel Tensile strength Thickness 7/8"Can pitch of stay tubes in nests 10 5/8" Pitch across wide water spaces 13 1/4" Working pressure front 153 lbs.Girders to combustion chamber tops: Material steel Tensile strength Depth and thickness of girderCentre 7' x 2 1/4" Length as per Rule 2' 6" Distance apart 8" No. and pitch of staysEach 2 at 9 3/4" Working pressure by Rules 182 lbs. Combustion chamber plates: Material steelTensile strength Thickness: Sides 3/8" Back 5/8" Top 5/8" Bottom 1 1/16"Pitch of stays to ditto: Sides 9" x 9" Back 8 1/2" x 9" Top 9 1/2" x 8" Are stays fitted with nuts or riveted over nutsWorking pressure by Rules 167 lbs. Front plate at bottom: Material steel Tensile strength Thickness 7/8" Lower back plate: Material steel Tensile strength Thickness 7/8"Pitch of stays at wide water space 11 1/4" x 8 1/2" Are stays fitted with nuts or riveted over nutsWorking Pressure 175 lbs. Main stays: Material steel Tensile strength Diameter At body of stay, 2 5/8" No. of threads per inch 6 Area supported by each stay 15 1/4" x 15 1/4"Working pressure by Rules 203 lbs. Screw stays: Material steel Tensile strength Diameter At turned off part, 1 5/8" No. of threads per inch 9 Area supported by each stay 9 3/4" x 8"

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Working pressure by Rules 195 lb. Are the stays drilled at the outer ends ☒ Margin stays: Diameter { At turned off part, 1 5/8" ☒
No. of threads per inch 9 Area supported by each stay 9 x 10 1/2" Working pressure by Rules 165 lb.
Tubes: Material steel External diameter { Plain 3 1/4" ☒
Stay 3 1/2" ☒ Thickness { 8 W.G. ☒
5/16" ☒ No. of threads per inch 9
Pitch of tubes 4 1/2" x 4 1/4" ☒ Working pressure by Rules 150 lb. G. 250 lb. P. Manhole compensation: Size of opening in
shell plate 12" x 16" ☒ Section of compensating ring 15 1/2" x 7/8" ☒ No. of rivets and diameter of rivet holes 34 x 1 1/16" ☒
Outer row rivet pitch at ends 4 1/2" ☒ Depth of flange if manhole flanged ☒ Steam Dome: Material ☒
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 diameter of
stays ☒ Inner radius of crown ☒ Working pressure by Rules ☒
How connected 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 None Manufacturers of { Tubes ☒
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 easing gear ☒ Working pressure as per
Rules ☒ Pressure to which the safety valves are adjusted ☒ Hydraulic test pressure:
tubes ☒ castings ☒ and after assembly in place ☒ Are drain cocks or 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 as far as applicable. Yes.

The foregoing is a correct description,

Manufacturer.

Dates of Survey { During progress of work in shops -- ☒
while building { During erection on board vessel -- ☒

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

Total No. of visits

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 examined, repaired as found necessary, and found to be satisfactory & in accordance with the approved plan, an additional lower through stay has been fitted between the lower front & back plates as indicated on plan. Boiler examined under hydraulic pressure & under steam & found satisfactory.

See also Rpt. 9.

Survey Fee ... £ : : When applied for, 19

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

H. R. Howells & J. H. Melton

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute LIVERPOOL 11 MAY 1934

Assigned

See accompanying
mach's rpt.



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