

REPORT ON BOILERS.

 L.An. BLR. Rpt.
 No. 31 L.A.

Received at London Office. 24 JUN 1942

(9) Date of writing Report 19 When handed in at London Office 19 Port of LOS ANGELES, CALIFORNIA

No. in Reg. Book. Survey held at LOS ANGELES, CALIFORNIA Date, First Survey 19th Last Survey 29th Nov. 1941

on the BRITISH GOVERNMENT FREIGHTERS $\frac{3}{8}$ " Ocean Venus. (Number of Visits 22) Tons { Gross 7174 Net 4272

Built at Richmond Calif. By whom built Todd-California Shipbuilding Division and No. 12 When built 1941
 Hamilton, Ohio. of the Permanente Metals Corporation.

Engines made at Los Angeles, Calif. By whom made Western Pipe & Steel Co. Engine No. 31 L.A. When made 1941

Boilers made at Los Angeles, Calif. By whom made Western Pipe & Steel Co. Boiler No. When made 1941-42

Nominal Horse Power 505 Owners British Government Port belonging to London.

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Lukens Steel Co., Bethlehem Steel Co., Taylor Pipe & Forge Works (Letter for Record)

Total Heating Surface of Boilers (1) 2380 Sq. Ft. Is forced draught fitted Yes Coal or Oil fired Yes

No. and Description of Boilers one (1) Scotch Type Working Pressure 220 lbs.

Tested by hydraulic pressure to 380 lbs. Date of test 29th Nov. 1941 No. of Certificate 31 L.A. Can each boiler be worked separately

Area of Firegrate in each boiler 43 Sq. Ft. No. and Description of Safety valves to each boiler

Area of each set of valves per boiler { per Rule as fitted Pressure to which they are adjusted Are they fitted with easing gear

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

Smallest distance between shell of boiler and tank top plating Is the bottom of the boiler insulated

Largest internal diameter of boilers 14' 6³/₁₆" Length 11' 6¹⁵/₁₆" Shell plates: Material Steel Tensile strength 65000/75000

Thickness 1¹³/₃₂" Are the shell plates welded or flanged No Description of riveting: circ. seams { end Double zigzag inter. ---

Long. seams T.R.D.B.S. Diameter of rivet holes in { circ. seams 1¹/₂" Pitch of rivets { 4.24" 1¹/₂" 10"

Percentage of strength of circ. end seams { plate 64.7 rivets 47 Percentage of strength of circ. intermediate seam { plate None fitted rivets None fitted

Percentage of strength of longitudinal joint { plate 85.0 rivets 93.4 combined 88.8

Thickness of butt straps { outer 1³/₃₂" inner 1⁷/₃₂" No. and Description of Furnaces in each Boiler Three (3) Morrison Type

Material Steel Tensile strength 58000/68000 Smallest outside diameter 3' 5⁹/₁₆"

Length of plain part { top 9³/₁₆" bottom 9³/₁₆" Thickness of plates { crown 2¹/₃₂" bottom 2¹/₃₂" Description of longitudinal joint Welded

Dimensions of stiffening rings on furnace or c.c. bottom None fitted

End plates in steam space: Material Steel Tensile strength 58000/68000 Thickness 1¹/₃₂" R.D. 1¹/₃₂" Pitch of stays 24¹/₄" x 21"

How are stays secured Double Nuts

Tube plates: Material { front Steel Tensile strength { 58000/68000 Thickness { 1¹/₃₂" F back Steel 58000/68000 1³/₁₆" B

Lean pitch of stay tubes in nests 9⁷/₁₆" Pitch across wide water spaces

Girders to combustion chamber tops: Material Steel Tensile strength 65000/75000 Depth and Thickness of girder

centre 10¹/₄" x 2⁷/₈" Length as per Rule 2' 10" Distance apart 11" No. and pitch of stays

each 3 x 7⁵/₈" Combustion chamber plates: Material Steel

Tensile strength 58000/68000 Thickness: Sides 25¹/₃₂" Back 23¹/₃₂" Top 25¹/₃₂" Bottom 25¹/₃₂"

Pitch of stays to ditto: Sides 9" x 10⁷/₃₂" Back 9" x 9" Top 11" x 7⁵/₈" Are stays fitted with nuts or riveted over Nuts

Front plate at bottom: Material Steel Tensile strength 58000/68000

Thickness 1¹/₃₂" Lower back plate: Material Steel Tensile strength 58000/68000 Thickness 1¹/₃₂"

Pitch of stays at wide water space 15" x 9" Are stays fitted with nuts or riveted over Nuts

Main stays: Material Steel Tensile strength 65000/75000

Diameter { At body of stay 3¹/₂" No. of threads per inch Six (6) or 3³/₄"

Lower stays: Material Steel Tensile strength 58000/68000

Diameter { At turned off part 1⁷/₈" No. of threads per inch Nine (9) or 1³/₄"



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Are the stays drilled at the outer ends No Margin stays: Diameter { At turned off part, 2 1/8" or 2" Over threads 2 1/8" 2"

No. of threads per inch Nine (9)

Tubes: Material Steel Sol. Dr External diameter { Plain 3" Stay 3" Thickness { 5.165" 5 / 16" No. of threads per inch

Pitch of tubes 4 1/4" x 4 1/8" Manhole compensation: Size of opening in

shell plate Section of compensating ring No. of rivets and diameter of rivet holes

Outer row rivet pitch at ends 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 Thickness of crown No. and diameter of

stays Inner radius of crown

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 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 easing gear

Pressure to which the safety valves are adjusted Hydraulic test pressure

tubes forgings and castings and after assembly in place Are drain cocks

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,
WESTERN PIPE & STEEL COMPANY OF CALIFORNIA
by J. M. Muechler Manufacture

Dates of Survey { During progress of work in shops -- 19th Oct. to 29th Nov. 1941 Are the approved plans of boiler and superheater forwarded herewith Approved April 28th 1941
while building { During erection on board vessel --- Total No. of visits 22

Is this Boiler a duplicate of a previous case Yes If so, state Vessel's name and Report No. L.A.N. BLR. Rpt. No.1

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) The boiler, so far as stated above, has been built under Special Survey in accordance with the Rules and approved plans, and the workmanship and material is good. It has been satisfactorily tested to 380 lbs. per sq. inch by hydraulic pressure in the presence of the undersigned. It has been forwarded to Richmond, California, to be fitted on board, and when this has been done in accordance with the Rules, the vessel will be eligible, in my opinion, to receive the notation. *LMC with date, and 220 lbs. and F. D. in the Register Book.

Survey Fee \$ 108.61 : : When applied for, 19
Travelling Expenses (if any) £ : : When received, 19

James Anderson
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute NEW YORK MAY 13 1942
Assigned See Richmond Rpt. No. 12