

# REPORT ON BOILERS.

Received at London Office 4 JUN 1942

#1200

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 6th Sept. 1941 Last Survey 8th Jan. 1942

on the BRITISH GOVERNMENT FREIGHTERS <sup>5/5</sup> Ocean Venus (Number of Visits 25) Tons {Gross 7174 Net 4272

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

Engines made at Hamilton, Ohio. By whom made General Machinery Corp. Engine No. 6536 When made 1941

Boilers made at Los Angeles, Calif. By whom made Western Pipe & Steel Co. Boiler No. L.A. 22 When made 1941

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 5)

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 8th Jan. '42 No. of Certificate 22 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' 6 3/16" Length 11' 6 15/16" Shell plates: Material Steel Tensile strength 65000/75000

Thickness 1 13/32" 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 1 1/2" Pitch of rivets {4.25" 10" long. seams 1 1/2"

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 1 3/32" inner 1 7/32" No. and Description of Furnaces in each Boiler Three (3) Morrison Type

Material Steel Tensile strength 58000/68000 Smallest outside diameter 3' 5 9/16"

Length of plain part {top 9 3/16" bottom 9 3/16" 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 1 1/32" R.D. 1 1/32" Pitch of stays 21 1/4" x 21"

How are stays secured Double Nuts

Tube plates: Material {front Steel Tensile strength {58000/68000 Thickness {1 1/32" F back Steel Tensile strength {58000/68000 Thickness {13/16" B

Mean pitch of stay tubes in nests 9 7/16" Pitch across wide water spaces 14 1/2" x 8 1/4"

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

at centre 10 1/4" - 2 x 7/8 Length as per Rule 2' 10" Distance apart 11" No. and pitch of stays

each 3 x 7 5/8" Combustion chamber plates: Material Steel

Tensile strength 58000/68000 Thickness: Sides 25/32" Back 25/32" Top 25/32" Bottom 25/32"

Pitch of stays to ditto: Sides 9" x 10 7/32" Back 9" x 9" Top 11" x 7 5/8" Are stays fitted with nuts or riveted over Nuts

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

Thickness 1 1/32" Lower back plate: Material Steel Tensile strength 58000/68000 Thickness 1 1/32"

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 3 1/2" No. of threads per inch Six (6) or Over threads 3 3/4"

crew stays: Material Steel Tensile strength 58000/68000

Diameter {At turned off part 1 7/8" 1 3/4" No. of threads per inch Nine (9) or Over threads



Are the stays drilled at the outer ends No Margin stays: Diameter { At turned off part, or 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 { 3/8" 5/16" No. of threads per inch Nine (9)

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 of 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. Muelich ASST. SECRETARY

Dates of Survey while building { During progress of work in shops - - - } 6th Sept. '41 to 8th Jan. '42 Are the approved plans of boiler and superheater forwarded herewith Approved April 28th, 1942  
(If not state date of approval.)  
{ During erection on board vessel - - - } Total No. of visits 25

Is this Boiler a duplicate of a previous case Yes If so, state Vessel's name and Report No. L.An. 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.