

REPORT ON BOILERS.

L. An. Blr. Rpt.
No. L.A. 55

Received at London Office - 8 SEP 1942

Survey held at **LOS ANGELES, CALIFORNIA** Date, First Survey **23rd. May** Last Survey **6th June 1942**
on the **BRITISH GOVERNMENT FREIGHTERS "OCEAN VANQUISHER"** (Number of Visits **11**) Tons { Gross **71 74**
Net **42 72**
By whom built **Todd-California Shipbuilding Division of the Permanent Metals Corporation** Ward No. **28** When built **1942**
Engines made at **Hamilton, Ohio** By whom made **General Machinery Corp** Engine No. **6735** When made **1942**
Boilers made at **Los Angeles, Calif.** By whom made **Western Pipe & Steel Co.** Boiler No. **55 L.A.** When made **1942**
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 **S**)
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 **6th June '42** No. of Certificate **55 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 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 { **4.25"**
long. seams **1¹/₂"** { **10"**
Percentage of strength of circ. end seams { plate **64.7** Percentage of strength of circ. intermediate seam { plate **None fitted**
rivets **47** 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"** No. and Description of Furnaces in each Boiler **Three (3) Morrison Type**
inner **1⁷/₃₂"** Material **Steel** Tensile strength **58000/68000** Smallest outside diameter **3' 5⁹/₁₆"**
Length of plain part { top **9³/₁₆"** Thickness of plates { crown **2¹/₃₂"** Description of longitudinal joint **Welded**
bottom **9³/₁₆"** { bottom **2¹/₃₂"**
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" RD 1¹/₃₂"** Pitch of stays **21¹/₄" x 21"**
How are stays secured **Double Nuts**
Tube plates: Material { front **Steel** Tensile strength **58000/68000** Thickness { **1¹/₃₂" F**
back **Steel** Tensile strength **58000/68000** Thickness { **1³/₁₆" B**
Mean pitch of stay tubes in nests **9' 9⁷/₁₆"** Pitch across wide water spaces **14¹/₂" x 8¹/₄"**
Orders to combustion chamber tops: Material **Steel** Tensile strength **65000/75000** Depth and Thickness of girder
centre **10¹/₄"-2x⁷/₈"** 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 **25³/₃₂"** Back **23³/₃₂"** Top **25³/₃₂"** Bottom **25³/₃₂"**
Pitch of stays to ditto: Sides **9"x10⁷/₃₂"** 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"**
Over threads
New stays: Material **Steel** Tensile strength **58000/68000**
Diameter { At turned off part **1⁷/₈"** No. of threads per inch **Nine (9)**
or **1³/₄"**
Over threads



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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 { .165" 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

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 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 from the boiler

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
A. M. Melick ASST. SECRETARY

Dates of Survey { During progress of work in shops - - 23rd. May to 6th June '42 Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) April 28, 1941 Approved

while building { During erection on board vessel - - - Total No. of visits 11

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 square 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 C. Anderson
Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute NEW YORK AUG 26 1942

Assigned See Richmond Rpt. No. 28



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