

REPORT ON BOILERS.

Received at London Office **6 OCT 1947**

Date of writing Report **18th Aug. 1947.** When handed in at Local Office **18th Aug. 1947.** Port of **PHILADELPHIA, PA.**

No. in Reg. Book. **69099** Survey held at **Chester, Pa.** Date, First Survey **24th February,** Last Survey **10th June, 1947.**

on the **Steel Twin Screw Steamer, "ESSO EL SALVADOR", Ex. "Avila"** (Number of Visits **28**) Tons { Gross **1691** Net **948**

Master **D.M.** Built at **Middlesborough** By whom built **Smith's Dock Co. Ltd.** Yard No. - When built **1938 - 8**

Engines made at **Middlesborough** By whom made **Smith's Dock Co. Ltd.** Engine No. - When made **1938 - 8**

Boilers made at **Middlesborough** By whom made **Smith's Dock Co. Ltd.** Boiler No. - When made **1938 - 8**

Nominal Horse Power **231** Owners **Panama Transport Co.** Port belonging to **Panama**

PROPANE TANK - NO.3 -

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Shell Plates - Carnegie Illinois Steel Corp.

Dished ends - Lukens Steel Co.

Manufacturers of Steel Welded Dome Conn. - **Lenape Hydraulic Pressing & Forging Co.** (Letter for Record)

Total Heating Surface of Boilers - Is forced draught fitted - Coal or Oil fired -

No. and Description of Tanks **27'2-3/8" long X 11'-10" ins. diam.** Working Pressure **250#/sq"**

Tested by hydraulic pressure to **425 lbs.** Date of test **28 Mar. '47.** No. of Certificate **794** Can each boiler be worked separately -

Area of Firegrate in each Boiler - No. and Description of safety valves to each boiler **2 valves resilient gasketed type 2-1/8" diam. spring loaded**

Area of each set of valves per boiler { per Rule - as fitted **6.88 sq.in.** Pressure to which they are adjusted **250 lbs.** Are they fitted with easing gear **No**

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 dia. of boilers **11'10"** Length **27'2-3/8"** Shell plates: Material **O.H. Firebox quality** Tensile strength **70,000 lbs.**

Thickness **1-5/16"** Are the shell plates welded or flanged **welded** Description of riveting: circ. seams { end - inter. -

long. seams **welded** Diameter of rivet holes in { circ. seams - long. seams - Pitch of rivets { - -

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

Percentage of strength of longitudinal joint { plate - rivets - combined - Working pressure of shell by Rules

Thickness of butt straps { outer - inner - No. and Description of Furnaces in each Boiler -

Material - Tensile strength - Smallest outside diameter -

Length of plain part { top - bottom - Thickness of plates { crown - bottom - Description of longitudinal joint -

Dimensions of stiffening rings on furnace or c.c. bottom - Working pressure of furnace by Rules

End plates in steam space: Material **Sil. H. T. Fire-box steel** Tensile strength **70,000** Thickness **1-5/16"** Pitch of stays

How are stays secured - Working pressure by Rules

Tube plates: Material { front - back - Tensile strength { Thickness {

Mean pitch of stay tubes in nests - Pitch across wide water spaces - Working pressure { front - back -

Girders to combustion chamber tops: Material - Tensile strength - Depth and thickness of girder

at centre - Length as per Rule - Distance apart - No. and pitch of stays

in each - Working pressure by Rules - Combustion chamber plates: Material

Tensile strength - Thickness: Sides - Back - Top - Bottom

Pitch of stays to ditto: Sides - Back - Top - Are stays fitted with nuts or riveted over

Working pressure by Rules - Front plate at bottom: Material - Tensile strength

Thickness - Lower back plate: Material - Tensile strength - Thickness

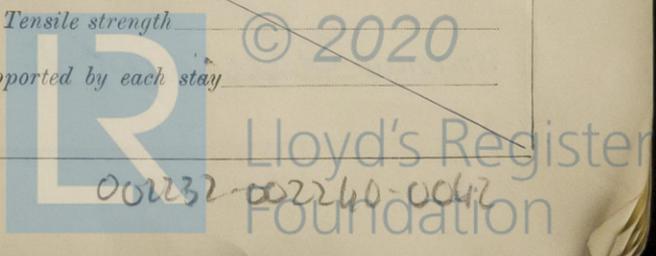
Pitch of stays at wide water space - Are stays fitted with nuts or riveted over

Working Pressure - Main stays: Material - Tensile strength

Diameter { At body of stay, or Over threads - No. of threads per inch - Area supported by each stay

Working pressure by Rules - Screw stays: Material - Tensile strength

Diameter { At turned off part, or Over threads - No. of threads per inch - Area supported by each stay



Working pressure by Rules _____ Are the stays drilled at the outer ends _____ Margin stays: Diameter { At turned off part, _____
 No. of threads per inch _____ Area supported by each stay _____ Working pressure by Rules _____
 Tubes: Material _____ External diameter { Plain _____ Thickness { _____ No. of threads per inch _____
 Pitch of tubes _____ Working pressure by Rules _____ 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 _____
 Internal diameter _____ Working pressure by Rules _____ Thickness of crown _____ No. and diameter of Rivets _____
 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 _____ Manufacturers of { Tubes _____
 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 _____

The foregoing is a correct description,
 SUN SHIPBUILDING & DRY DOCK CO. Manufacturer
J. M. Connelly

Dates of Survey { During progress of work in shops - - } Are the approved plans of boiler and superheater forwarded herewith **yes**
 while building { During erection on board vessel - - } (If not state date of approval.)
 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 tank is of all welded construction all welds being carried out by the "Unionmelt" process using UX-40 rod. All seams being afterward radiographed. Tank was stress relieved at 1200° F and held at that temperature for six hours. The specified physical tests for welding were carried out as per Rule, and found to comply with the Society's requirements for Class A pressure vessels. Tank was tested by hydraulic pressure to 425 lbs. per sq. inch. All seams were hammer tested at 375 lbs. per sq. in., same being found sound and tight under these conditions. The workmanship is good throughout.**

Survey Fee \$ 50.00 : When applied for, 25/8/1947
 Travelling Expenses (if any) \$ 3.50 : When received, 19 _____

J. M. Connelly

J. M. Connelly
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **NEW YORK SEP 17 1947**

Assigned *Transmit to Hudson*