

# REPORT ON WATER TUBE BOILERS.

No. 7272

MAY 10 1937

Received at London Office

Date of writing Report 14<sup>th</sup> April 1937 When handed in at Local Office 15<sup>th</sup> April 1937 Port of Philadelphia  
 No. in Survey held at Chester Pa Date, First Survey Dec 21<sup>st</sup> Last Survey March 1<sup>st</sup> 1937  
 Reg. Bk. S S MV TEXAS. SUN. (Number of Visits 14) Tons { Gross  
 Master Chester Pa Built at Chester Pa By whom built Sum SB & DD Co When built 1937  
 Engines made at Chester Pa By whom made Sum SB & DD Co When made "  
 Boilers made at " By whom made " When made "  
 Registered Horse Power 5600 Owners Sum Gil Co Port belonging to Philadelphia

**WATER TUBE BOILERS** Air storage tanks MAIN, AUXILIARY, OR DONKEY. Manufacturers of Steel Dukens Steel Co  
 Letter for Record ( ) Date of Approval of plan Nov 3<sup>rd</sup> 1936 Number and Description of Type (2) Feb 26<sup>th</sup> 37  
 Boilers 3 air storage tanks Working Pressure 600 Tested by Hydraulic Pressure to 1200 Date of Test 1<sup>st</sup> March 37  
 No. of Certificate 693-H 95 Can each boiler be worked separately " Total Heating Surface of Boilers 150 cu ft. each  
 forced draught fitted " Area of fire grate (coal) in each Boiler " Total grate area of boilers in vessel including  
 Main and Auxiliary " No. and type of burners (oil) in each boiler " No. and description of safety valves on  
 each boiler 1 Spring loaded Area of each valve 7834" Pressure to which they are adjusted 700 lb.  
 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 " Height of Boiler " Width and Length 13'6"  
 Steam Drums: Number in each boiler 1 Inside diameter 42" Material of plates Steel Thickness 1 3/16"  
 Range of Tensile Strength 55000 to 65000 lb. Are drum shell plates welded or flanged Union Welded Description of riveting:—  
 Cir. seams Union Welded long. seams Union Welded Diameter of rivet holes in long. seams " Pitch of Rivets "  
 Lap of plate or width of butt straps " Thickness of straps " Percentage strength of long. joint:—Plate 90% Rivet "  
 Diameter of tube holes in drum " Pitch of tube holes " Percentage strength of shell in way of tubes "  
 Drum has a flat side state method of staying " Depth and thickness of girders at centre  
 (fitted) " Distance apart " Number and pitch of stays in each " Working pressure "  
 Rules " **Steam Drum Heads or Ends:**—Material Steel Thickness 1 3/16" Radius or how stayed 30" radius  
 Size of Manhole or Handhole 12" X 16" **Water Drums:**—Number in each boiler " Inside Diameter "  
 Material of plates " Thickness " Range of tensile strength " Are drum shell plates welded  
 flanged " Description of riveting:—Cir. seams " long. seams " Diameter of Rivet Holes in  
 long. seams " Pitch of rivets " Lap of plates or width of butt straps " Thickness of straps "  
 Percentage strength of long. joint:—Plate " Rivet " Diameter of tube holes in drum " Pitch of tube holes "  
 Percentage strength of drum shell in way of tubes " **Water Drum Heads or Ends:**—Material " Thickness "  
 Radius or how stayed " Size of manhole or handhole " **Headers or Sections:**—Number "  
 Material " Thickness " Tested by Hydraulic Pressure to " Material of Stays "  
 Area at smallest part " Area supported by each stay " Working Pressure by Rules " **Tubes:**—Diameter "  
 Thickness " Number " **Steam Dome or Collector:**—Description of Joint to Shell "  
 Percentage strength of Joint " Diameter " Thickness of shell plates " Material "  
 Description of longitudinal joint " Diameter of Rivet Holes " Pitch of Rivets " Working Pressure of shell "  
 Rules " **Crown or End Plates:**—Material " Thickness " How stayed "

**SUPERHEATER.** Type " Date of Approval of Plan " Tested by Hydraulic Pressure to "  
 Date of Test " Is a safety valve fitted to each section of the superheater which can be shut off from the Boiler "  
 Diameter of Safety Valve " Pressure to which each is adjusted " Is easing gear fitted "  
 Is a drain cock or valve fitted at lowest point of superheater " Number, diameter, and thickness of tubes "

**Boiler Gear.** Tubes " Gaskets or joints:—Manhole " Handhole " Handhole plates "

The foregoing is a correct description,

SUN SHIPBUILDING & DRY DOCK CO. Manufacturer.

Dates { During progress of Dec 21. 31. 1936. Jan 26. 28. 29 Feb. 1. 2. 8. 10. 24. 26 April 1. 2. 4. 1937 tanks  
 Survey { work in shops - - - Is the approved plan of boiler forwarded herewith Yes  
 while { During erection on March 16<sup>th</sup> 1937. Total No. of visits 14.  
 building { board vessel - - -

**GENERAL REMARKS** (State quality of workmanship, opinions as to class, &c.) These tanks have been constructed under  
special survey, and in accordance with the approved plans. The workmanship & materials are  
good. After the welding was completed, the tanks were stress relieved, see separate report on welding  
tanks were tested by raising the pressure to 900 lb. and beating them with a 7 lb hammer.  
Pressure was then increased to 1200 lb. found satisfactory. The tanks have now been  
satisfactorily installed on board the vessel.

Survey Fee ... \$90.00

When applied for, 20<sup>th</sup> April 1937

Travelling Expenses (if any) \$5.00

When received, 10. 6 1937
 1/2 fee for tests for  
 fusion welding \$50.00

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

NEW YORK APR 28 1937

Signed See First Entry Rpt. on Oil Eng.

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Foundation