

# REPORT ON WATER TUBE BOILERS.

No. 40552

Date of writing Report 22<sup>nd</sup> Oct 1940 When handed in at Local Office 19 Port of New York Received at London Office FEB 17 1941

No. in Survey held at NEW YORK Date, First Survey 5/8 Last Survey 4/10 1940  
 Reg. Bk. on the M.V. "AMERICA SUN" (Number of Visits 4) Tons Gross 11,355  
Net 6891  
 Master Built at CHESTER, PA. By whom built SUN SB & D.D. Co (N<sup>o</sup> 196) When built 1940  
 Engines made at By whom made When made 1940  
 Boilers made at CARTERET, N.J. By whom made FOSTER WHEELER CORP. (W.H.B. 190) When made 1940  
 Registered Horse Power Owners Port belonging to

**WATER TUBE BOILERS** EXHAUST-GAS HEATED MAN AUXILIARY OR DONKEY.—Manufacturers of Steel BETHLEHEM STEEL Co.  
 (Letter for Record S.) Date of Approval of plan 8<sup>th</sup> AUGUST, 1940 Number and Description or Type of Boilers ONE W.T. (WASTE-HEAT) FOSTER WHEELER Working Pressure 245 LB Tested by Hydraulic Pressure to 490 LB. Date of Test 24-9-40  
 No. of Certificate NONE ISSUED Can each boiler be worked separately  Total Heating Surface of Boilers 3150 Sq. Ft. ✓  
 Is 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 NONE No and description of safety valves on each boiler 2 SPRING LOADED ✓ Area of each valve 1.77 INS<sup>2</sup> ✓ 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 NO WOODWORK Height of Boiler 15' 1" O/A Width and Length 8' 6" x 11' 3"  
 Steam Drums:—Number in each boiler ONE Inside diameter 36" Material of plates STEEL Thickness 3/4"  
 Range of Tensile Strength 65,000 LB. MINIMUM ✓ Are drum shell plates welded or flanged FUSION WELDED Description of riveting:—  
 Cir. seams FUSION WELDED long. seams FUSION WELD Diameter of rivet holes in long. seams ✓ Pitch of Rivets ✓  
 Lap of plate or width of butt straps BUTT WELD Thickness of straps ✓ Percentage strength of long. joint:—Plate 90% ALLOWED Rivet ✓  
 Diameter of tube holes in drum 2 1/32" ✓ Pitch of tube holes 4 7/8" ✓ Percentage strength of shell in way of tubes 58.3 ✓  
 If Drum has a flat side state method of staying NO FLAT SIDE ✓ Depth and thickness of girders at centre (if fitted) ✓ Distance apart ✓ Number and pitch of stays in each ✓ Working pressure by rules 311 LB./IN<sup>2</sup> ✓  
 Steam Drum Heads or Ends:—Material STEEL Thickness 1 9/32 + 2 2/32" Radius or how stayed ELLIPSOIDAL ✓  
 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 or 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 WATER DISTRIBUTION Headers or Sections:—Number 2 x 6 5/8" O/DIA ✓  
 Material STEEL Thickness 1/2" Tested by Hydraulic Pressure to 368 LB. Material of Stays ✓  
 Area at smallest part ✓ Area supported by each stay ✓ Working Pressure by Rules 435 LB. Tubes:—Diameter 2" ✓  
 Thickness .148" ✓ Number 140 ✓ Steam Dome or Collector:—Description of Joint to Shell NONE ✓  
 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 by Rules ✓  
 Crown or End Plates:—Material ✓ Thickness ✓ How stayed ✓

**SUPERHEATER.** Type NONE 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 ✓  
**Spare Gear.** Tubes  Gaskets or joints:—Manhole  Handhole  Handhole plates

The foregoing is a correct description,  
 FOSTER WHEELER CORPORATION Manufacturer.  
 J. S. Heck VICE PRESIDENT  
 Is the approved plan of boiler forwarded herewith ✓  
 Total No. of visits 4

Dates of Survey } During progress of work in shops - - } 5/8, 23/8, 24/9, 4/10/40  
 while building } During erection on board vessel - - - }

**GENERAL REMARKS** (State quality of workmanship, opinions as to class, &c.) The Fusion Welded Drum for this boiler has been built & tested in accordance with the approved plan & Rules for Fusion Welded Pressure Vessels & the workmanship & material are good. For particulars of tests please see report attached hereto. This drum have been forwarded to Chester, Pa., to be fitted on board & when this has been done in accordance with the Rules & to the satisfaction of the Surveyors, the vessel will be eligible, in our opinion, to receive the notation 3WTD.B. (1SPT) 245 LB.

Survey Fee ... £ 150.00 : : } When applied for, 4. JAN. 1941 AT PHIL.  
 Travelling Expenses (if any) £ 86.00 : : } When received, 19

John S. Heck C. Macpherson  
 Engineer Surveyors to Lloyd's Register of Shipping.

Committee's Minute NEW YORK JAN 8 - 1941  
 Assigned See attached Report Pl. No. 7969.

