

# REPORT ON WATER TUBE BOILERS.

No. 40909

Date of writing Report 12/3 1941 When handed in at Local Office \_\_\_\_\_ 19\_\_\_\_ Port of NEW YORK  
 Received at London Office 9 JUL 1941

No. in Survey held at NEW YORK Date, First Survey 26 Nov. 1940 Last Survey 17 JAN 1941  
 Reg. Bk. \_\_\_\_\_ on the MS "Atlantic Sun" (Number of Visits 4) Tons { Gross \_\_\_\_\_ Net \_\_\_\_\_

Master \_\_\_\_\_ Built at CHESTER, Pa. By whom built SUN SB&DDC (N° 212) When built \_\_\_\_\_  
 Engines made at \_\_\_\_\_ By whom made \_\_\_\_\_ When made \_\_\_\_\_  
 Boilers made at CARTERET, N.J. By whom made FOSTER-WHEELER CORPORATION When made 1941  
 Registered Horse Power \_\_\_\_\_ Owners \_\_\_\_\_ F.W.B. 462. Port belonging to \_\_\_\_\_

WATER TUBE BOILERS ~~MAIN, AUXILIARY, OR~~ CARGO BOILER DONKEY.—Manufacturers of Steel CARNEGIE STEEL CO.  
 (Letter for Record S. W.T.) Date of Approval of plan 12<sup>th</sup> MARCH, 1940 Number and Description or Type 490 LB. DRUM --- 17/12/40

of Boilers 1 CARGO BOILER (SECTIONAL HEADER TYPE) Working Pressure 245 LB. Tested by Hydraulic Pressure to 365 LB. Date of Test 17/12/40  
 No. of Certificate PHILADELPHIA Can each boiler be worked separately yes. Total Heating Surface of Boilers 5260 SQ. FT.

Is forced draught fitted yes. Area of fire grate (coal) in each Boiler OIL FIRED Total grate area of boilers in vessel including Main and Auxiliary \_\_\_\_\_  
 No. and type of burners (oil) in each boiler 5 No. and description of safety valves on each boiler TWO SPRING LOADED Area of each valve 12.56 SQ. IN. Pressure to which they are adjusted 32.1 for 40,000 lb. evaporator

Are they fitted with easing gear yes. In case of donkey boilers state whether steam from main boilers can enter the donkey boiler MOTOR SHIP, TO CENTRE  
 Smallest distance between boilers or uptakes and bunkers or woodwork \_\_\_\_\_ Height of Boiler 13'-4" TO CENTRE Width and Length 16'-1 3/4" x 12'-8"

Steam Drums:—Number in each boiler ONE Inside diameter 42" Material of plates STEEL Thickness 1 5/16"  
 Range of Tensile Strength 60,000 LB./IN<sup>2</sup> MIN<sup>m</sup> Are drum shell plates welded or flanged FUSION WELDED Description of riveting:—

Cir. seams FUSION WELD long. seams FUSION WELD 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% ALLOWED Rivet \_\_\_\_\_

Diameter of tube holes in drum 4 1/2" Pitch of tube holes 7" Percentage strength of shell in way of tubes 424  
 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 250 LB. Steam Drum Heads or Ends:—Material STEEL Thickness 1 5/16" Radius 42"

Size of Manhole or Handhole 12" x 16" Water Drums:—Number in each boiler NONE 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 \_\_\_\_\_ Headers or Sections:—Number 22  
 Material STEEL Thickness 1 1/16" Tested by Hydraulic Pressure to 368 LB. Material of Stays \_\_\_\_\_

Area at smallest part \_\_\_\_\_ Area supported by each stay \_\_\_\_\_ Working Pressure by Rules \_\_\_\_\_ Tubes:—Diameter 2"  
 Thickness 1/34 Number 748 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 RADIANT Date of Approval of Plan 12/3/40 Tested by Hydraulic Pressure to 368 LB.

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 28, 2", 148"  
 Spare Gear. Tubes \_\_\_\_\_ Gaskets or joints:—Manhole \_\_\_\_\_ Handhole \_\_\_\_\_ Handhole plates \_\_\_\_\_

The foregoing is a correct description,  
 FOSTER WHEELER CORPORATION Manufacturer.  
 J. J. Helms VICE PRESIDENT

Dates of Survey } During progress of 26 + 29<sup>th</sup> Nov. 1940 + 10<sup>th</sup> + 17<sup>th</sup> JAN. 1941. Is the approved plan of boiler forwarded herewith No.  
 while } work in shops - - -  
 building } During erection on } board vessel - - - Total No. of visits 4

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 has 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 Surveyor, the vessel will be eligible, in my opinion, to receive the notation 3 W.T.D.B. (1 SPT) 245 LB.

Survey Fee ... £ see P&S } When applied for, 3<sup>rd</sup> May 1941 (at Phila.)  
 Travelling Expenses (if any) \$ 12.00 } When received, 19

e. macpherson  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute \_\_\_\_\_  
 Assigned See first entry Report attached

NEW YORK MAY 28 1941

