

## REPORT ON WATER TUBE BOILERS.

No. 8291

Received at London Office

Date of writing Report 16 Oct 1942 When handed in at Local Office 16 Oct 1942 Port of New York & Philadelphia  
 No. in Survey held at Barteret NJ & Chester Pa Date, First Survey April 20 Last Survey Sept 24 1942  
 Reg. Bk. on the S/S GULF MARACAIBO Hull 233 (Number of Visits 18) Tons { Gross 7306  
 Built at Chester Pa By whom built Sum SRS & DD Co. When built 1942  
 Engines made at Carrington Pa By whom made Westinghouse E.M. Co When made "  
 Boilers made at Carrington NJ By whom made Foster Wheeler Corp FNB 710.11. When made "  
 Nominal Horse Power 900 Owners Gulf Oil Co Port belonging to Philadelphia

WATER TUBE BOILERS MAIN, ~~AUXILIARY, OR DONKEY~~ Manufacturers of Steel Lukens Steel Co

Date of Approval of plan June 25 1941 Number and Description or Type June 25 1942  
 of Boilers 2 Foster Wheeler Water Tube Boilers Working Pressure 500 lb Tested by Hydraulic Pressure to 750 Date of Test Aug 14 42  
 No. of Certificate 741 Can each boiler be worked separately Yes Total Heating Surface of Boilers 4857  
 Is forced draught fitted Yes Area of fire grate (coal) in each Boiler 3030 sq ft Economiser  
 No. and type of burners (oil) in each boiler 3. Todd No. and description of safety valves on 5.82 for 144 lbs including superheater  
 each boiler 2. 2" Spring loaded. High lift Area of each set of valves per boiler { per rule 5.82 as fitted 6.28 Pressure to which they 20-2 1/2"  
 are adjusted 500 lb Are they fitted with easing gear Yes In case of donkey boilers state whether steam from main boilers can enter the donkey boiler Yes Height of boiler 20-2 1/2"  
 Width and Length 11' 8 1/4" - 17' 3 1/4" Steam Drums:—Number in each boiler 6 one Inside diameter 42"  
 Thickness of plates 1 13/32" Range of Tensile Strength 70000 minimum Are drum shell plates welded Yes  
 or flanged Fusion Welded If fusion welded, state name of welding firm Foster Wheeler Corporation Have all the requirements of the rules for Class I vessels been complied with Yes Description of riveting:—Cir. seams Yes long. seams Yes  
 Diameter of rivet holes in long. seams 1 1/4" Pitch of rivets 2 1/4" Thickness of straps 2 1/4" Percentage strength of long. joint:—Plate 48.7% Rivet 54.8% Diameter of tube holes in drum 1 9/32" Pitch of tube holes 2 1/4"  
 Percentage strength of shell in way of tubes 48.7% + 54.8% Steam Drum Heads or Ends:—Range of tensile strength 65000 min  
 Thickness of plates 1 1/4" Radius or how stayed Ellipsoidal Size of manhole or handhole 12" X 16" Water Drums:—Number in each boiler 1 Inside Diameter 32" Thickness of plates 1 1/16" Range of tensile strength 70000 min Are drum shell plates welded or flanged Fusion Welded If fusion welded, state name of welding firm Foster Wheeler Corporation Have all the requirements of the rules for Class I vessels been complied with Yes Description of riveting:—Cir. seams Yes long. seam Yes  
 Diameter of rivet holes in long. seams 1 1/4" Pitch of rivets 2 1/4" Thickness of straps 2 1/4" Percentage strength of long. joint:—Plate 48.7% Rivet 54.8% Diameter of tube holes in drum 1 9/32" Pitch of tube holes 2 1/4"  
 Percentage strength of drum shell in way of tubes 48.7% + 54.8% Water Drum Heads or Ends:—Range of Tensile strength 65000 lb min  
 Thickness of plates 1 1/32" Radius or how stayed Ellipsoidal Size of manhole or handhole 12" X 16"  
 Headers or Sections:—Number 1 1/4" - 2" - 3" Material STEEL Thickness 12 & 10 BWG resp Number 586 Tested by Hydraulic Pressure to 750  
 Tubes:—Diameter 1 1/4" - 2" - 3" Thickness 12 & 10 BWG resp Number 586 Steam Dome or Collector:—Description of Joint to Shell Yes Inside diameter 10 3/4" Range of tensile strength Yes If fusion welded, state name of welding firm Yes Diameter of rivet holes Yes Plate Yes Rivet Yes  
 Pitch of rivets Yes Thickness of straps Yes Percentage strength of long. joint Yes Plate Yes Rivet Yes  
 Crown or End Plates:—Range of tensile strength Yes Thickness Yes Radius or how stayed Yes  
 SUPERHEATER, Drums or Headers:—Number in each boiler 2 Inside Diameter 10 3/4"  
 Thickness 1 1/8" Material STEEL Range of tensile strength 55,000 - 65,000 lb Are drum shell plates welded or flanged Solid Drum If fusion welded, state name of welding firm Yes Have all the requirements of the rules for Class I vessels been complied with Yes Description of riveting:—Cir. seams Yes long. seams Yes  
 Diameter of rivet holes in long. seams 1 1/4" Pitch of rivets 2 1/4" Thickness of straps 2 1/4" Percentage strength of long. joint:—Plate 56.3% Rivet 56.3% Diameter of tube holes in drum 1 9/32" Pitch of tube holes 2 1/4" Percentage strength of drum shell in way of tubes 56.3% Drum Heads or Ends:—Solid drum Thickness Yes Range of tensile strength Yes  
 Radius or how stayed Yes Size of manhole or handhole Yes Number, diameter, and thickness of tubes 86, 1 1/2", 10 BWG  
 Tested by Hydraulic Pressure to 750 lb Date of Test 4 Aug 42 Is a safety valve fitted to each section of the superheater which can be shut off from the boiler 1 1/2" one valve. Spring loaded Area of each set of valves 475 lb Is easing gear fitted Yes  
 Spare Gear. Has the spare gear required by the rules been supplied Yes

The foregoing is a correct description,

Manufacturer.

Dates of Survey { During progress of work in shops -- May 1-11 1942 June 3-12 1942 Is the approved plan of boiler forwarded herewith No  
 while building { During erection on board vessel -- July 16, Aug 7, 14, Sept 24 1942 Total No. of visits 18

Is this boiler a duplicate of a previous case No If so, state vessel's name and report No.

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) The above boilers have been satisfactorily installed on board the vessel. tested by hydraulic pressure to 750 lb & found sound & tight. The safety valves have been adjusted under steam to 500 lb. In my opinion the installation is eligible to receive the Record of 2 WTB 500 lbs Spt.

Survey Fee 120.00 (Ph.) When applied for, 20 Oct 1942  
 Travelling Expenses (if any) 160.00 (N.Y.K.) When received, 20 Nov 1942  
 Expenses 10.00 (Ph.)  
21.00 (N.Y.K.)  
22.75 (Chd.)

Committee's Minute

Assigned 2 WTB (Spt) 500 lbs.

NEW YORK DEC 16 1942

Engineer Surveyor to Lloyd's Register of Shipping.

Lloyd's Register  
Foundation