

# REPORT ON WATER TUBE BOILERS.

No. 8291

25 JAN 1942

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 barrett 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 Net 5000  
 Built at Chester Pa By whom built Sum SWS & DD Co. When built 1942  
 Engines made at Cressington Pa By whom made Westinghouse E.M. Co When made "  
 Boilers made at Cortlandt NJ By whom made Foster Wheeler Corp FNB 70-11 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 1941

of Boilers 2 Foster Wheeler Water Tube Blns Working Pressure 500 lbs 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 2 = 6000 for 2 blns

each boiler 2, 2" Spring loaded, High lift Area of each set of valves per boiler 500 lbs per rule 5.82 for 1 1/2" type including superheater as fitted 6.28" Pressure to which they are adjusted 500 lbs

Are they fitted with easing gear Yes In case of donkey boilers state whether steam from main boilers can enter the donkey boiler Yes

Smallest distance between boilers or uptakes and bunkers or woodwork 6" Height of boiler 20'-2 1/2"

Width and Length 11'-8 1/4" - 17'-3 1/4" Steam Drums: - Number in each boiler One Inside diameter 42"

Thickness of plates 1 1/32" Range of Tensile Strength 70000 minimum 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. seams Yes

Diameter of rivet holes in long. seams 1 1/8" Pitch of rivets 2" Thickness of straps 1 1/2" Percentage strength of long. joint: - Plate 48.7% Rivet 54.8% Diameter of tube holes in drum 1 9/32" & 2 1/32" Pitch of tube holes 2 1/4" & 2 3/4"

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 1/8" Pitch of rivets 1 1/2" Thickness of straps 1 1/2"

Percentage strength of long. joint: - Plate 48.7% Rivet 54.8% Diameter of tube holes in drum 1 9/32" & 2 1/32" Pitch of tube holes 2 1/4" & 2 3/4"

Percentage strength of drum shell in way of tubes 48.7% & 54.8% Water Drum Heads or Ends: - Range of Tensile strength 60000 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 2 Material STEEL Thickness 1 1/8" 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 None Inside diameter None Thickness of shell plates None Range of tensile strength None

If fusion welded, state name of welding firm None Diameter of rivet holes None

Pitch of rivets None Thickness of straps None Percentage strength of long. joint None Plate None Rivet None

Crown or End Plates: - Range of tensile strength None Thickness None Radius or how stayed None

SUPERHEATER, Drums or Headers: - Number in each boiler 2 Inside Diameter 10 3/4" & 9"

Thickness 1 1/8" Material STEEL Range of tensile strength 55,000 & 65,000 lb Are drum shell plates welded or flanged Solid drawn If fusion welded, state name of welding firm None Have all the requirements of the rules for Class I vessels been complied with Yes

Description of riveting: - Cir. seams None long. seams None

Diameter of rivet holes in long. seams None Pitch of rivets None Thickness of straps None Percentage strength of long. joint: - Plate None Rivet None Diameter of tube holes in drum None Pitch of tube holes None Percentage strength of drum shell in way of tubes 56.3% Drum Heads or Ends: - Solid drawn Thickness None Range of tensile strength None

Radius or how stayed None Size of manhole or handhole None Number, diameter, and thickness of tubes 86, 1 1/2", 10 BWG

Tested by Hydraulic Pressure to 750 lbs 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 Yes

No. and description of Safety Valves 1 1/2" - one valve, Spring loaded Area of each set of valves 475 sq in Is easing gear fitted Yes

Pressure to which they are adjusted 465 designed

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 - - } Apr 20, 27, May 1, 11, 19, 22, June 2, 12 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 lbs & found sound & tight. The safety valves have been adjusted under steam to 500 lbs. 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.Yk) When received, 20 Nov 1942  
 Expenses 21.00 (N.Yk)  
22.75 (Chd.)

Committee's Minute NEW YORK DEC 16 1942 Engineer Surveyor to Lloyd's Register of Shipping.

Assigned 2 WTB (Spt) 500 lbs.