

# REPORT ON WATER TUBE BOILERS.

Date of writing Report 18th Dec. 1941 When handed in at Local Office 19th Dec. 1941 Port of Baltimore, Maryland

No. in Survey held at Sparrows Point, Md. Date, First Survey Aug. 20, 1940 Last Survey Oct 7th 1941

Reg. Bk. on the S.S. "GADDO" (Number of Plates 15) Gross 9990 Tons Net 5929 1941

Built at Sparrows Point, Md. By whom built Bethlehem Steel Co. When built 1941

Engines made at Essington, Penna. By whom made Westinghouse E. & M. Co. (Yard No. 4354) When made 1941

Boilers made at Carteret, N. J. By whom made Foster Wheeler Corp. (FWB 451 -2) When made 1941

Nominal Horse Power 2537 Owners Socony Vacuum Oil Co. Port belonging to New York, N. Y.

**WATER TUBE BOILERS—MAIN, AUXILIARY, OR DONKEYY**—Manufacturers of Steel Bethlehem Steel Co.

Date of Approval of plan 10th July, 1940 of Boilers 2 Foster Wheeler Water Tube Working Pressure 490 lbs. Tested by Hydraulic Pressure to Drum 990 lb. Boiler 735 lb. Number and Description of Tubes 25/16" & 12 Date of Test 15/11/40

No. of Certificate - Can each boiler be worked separately Yes Total Heating Surface of Boilers 14960 sq. ft.

Is forced draught fitted Yes Area of fire grate (coal) in each boiler Oil Fired No. and description of safety valves on each boiler 4 Todd Variable Capacity 7400 sq. in. Economiser

No. and type of burners (oil) in each boiler 2 Spring loaded Area of each set of valve 7.07 sq. in. Pressure to which they are adjusted 490 lbs. sq. in.

Are they fitted with easing gear Yes 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 Not Near Height of boiler 19' 6" Width and Length 13'0" x 18'0"

Steam Drums:—Number in each boiler One Inside diameter 48" Thickness of plates 1-2/16"

Range of Tensile Strength 70,000 lb/in<sup>2</sup> minimum 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 Attached Rivet -

Diameter of tube holes in drum 1-9/32" & 2-1/32" Pitch of tube holes 1 1/4" & 1 1/2" Percentage strength of shell in way of tubes 48.7 & 54.8

Working pressure by rules 493 lb/in<sup>2</sup> Steam Drum Heads or Ends:—Range of tensile strength - Thickness of plates 1-13/32 & 15/16"

Radius or how stayed Ellipsoidal Size of manhole or handhole 12" x 16" Working pressure by rules - Water Drums:—Number

in each boiler One Inside Diameter 32" Thickness of plates 1-1/16" Range of tensile strength 70000 Min. Are drum shell plates

welded or flanged Fusion Weld Description of riveting:—Cir. seams Fusion Weld long. seam Fusion Weld Diameter of rivet holes in

long. seams - Pitch of rivets - Lap of plates or width of butt straps - Thickness of straps 2 1/2" mean & 4 1/2" mean

Percentage strength of long. joint:—Plate - Rivet - Diameter of tube holes in drum 1-9/16" & 2-1/32" Pitch of tube holes 4 1/2" mean

Percentage strength of drum shell in way of tubes 48.7 & 54.8 Working pressure by rules - Water Drum Heads or Ends:—Range of

Tensile strength - Thickness of plates 1-1/16" & 15/16" Radius or how stayed Ellipsoidal

Size of manhole or handhole 12" x 16" Working pressure by rules - Headers or Sections:—Number 3, 7-3/4" x 7-3/4"

Material Steel Thickness 7/8" Tested by Hydraulic Pressure to - Tubes:—Diameter 1 1/2", 2", 3"

Thickness 11, 9, & 8 BWG resp. Number 577, 70, 3 Steam Dome or Collector:—Description of Joint to Shell None

Inside diameter - Thickness of shell plates - Range of tensile strength -

Description of longitudinal joint - Diameter of rivet holes - Pitch of rivets - Lap of plate or width of

butt straps - Thickness of straps - Percentage strength of long. joint - Plate - Rivet -

Working Pressure of shell by rules - Crown or End Plates:—Range of tensile strength -

Thickness - Radius or how stayed - Working pressure by rules -

**SUPERHEATER. Drums or Headers:**—Number in each boiler Interdeck Type Inside Diameter -

Thickness - Material - Range of tensile strength - Are drum shell plates welded

or flanged - Description of riveting:—Cir. seams - long. seams - Diameter of rivet holes in

ong. 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 - Working pressure by rules - Drum Heads or Ends:—

Thickness - Range of tensile strength - Radius or how stayed - Size of manhole or handhole -

Working pressure by rules - Number, diameter, and thickness of tubes 164 - 1 1/2" 10 BWG Tested by Hydraulic Pressure to 785 lbs. sq. in.

Date of Test 18 - 5 - 41 Is a safety valve fitted to each section of the superheater which can be shut off from the boiler Integral Superheater

No. and description of Safety Valves One. Consolidated high lift. Area of each set of valves 1.766 sq. in.

Pressure to which they are adjusted 435 lbs. sq. in. Is easing gear fitted Yes

Spare Gear. Has the spare gear required by the rules been supplied Yes

The foregoing is a correct description,

Foster Wheeler Corp.

Jos. J. Nellis

Manufacturer.

Dates During progress of work in shops -- Aug. 20, 27, Sept. 13, 17, 24, Oct. 1, 8, 11, 18, 25

while During erection on board vessel -- Mar. 25, Apr. 7, 8, 16, June 12, 26, July 16, 17, 24

Is the approved plan of boiler forwarded herewith No Total No. of visits 29

Is this boiler a duplicate of a previous case Yes If so, state vessel's name and report No. "CORSIANA" Rept. No. 7540

**GENERAL REMARKS** (State quality of workmanship, opinions as to class, etc.) These boilers have been built and erected under

special survey, Please refer New York Rpt No. 41039 with attached electric welding particulars, in accordance with the

rules and approved plans and the workmanship and material throughout are good. Same have been hydraulically tested

in place on board the vessel with all fittings and piping and subsequently seen under steam working conditions and are

eligible in my opinion to be classed and receive the notation 2 H.T. Boilers - 490 lbs. sq. in. F.D. made in Register

Class. Cleveland 120.00 New York 160.00 Baltimore 120.00

Survey Fee 24.00 Travelling Expenses (if any) 22.75 Baltimore 32.00

When applied for, Dec. 19, 1941 When received, 19

Committee's Minute NEW YORK DEC 30 1941 Engineer Surveyor to Lloyd's Register of Shipping.

Signed W.T.B. (Wt) 490 lbs.

