

# REPORT ON WATER TUBE BOILERS.

No. N.Y.K. 52406

DRUMS

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Date of writing Report 10 Dec. 1952 When handed in at Local Office 10 Dec. 1952 Port of NEW YORK

No. in Survey held at CARTERET, N.J. Date, First Survey 2nd June '52 Last Survey 18 Nov. 1952

Reg. Bk. on the Bethlehem Steel Co., Quincy Hull No. 1631 S.S. ANDROS ISLAND (Number of Visits ") Tons {Gross \_\_\_\_\_ Net \_\_\_\_\_}

Built at \_\_\_\_\_ By whom built \_\_\_\_\_ When built \_\_\_\_\_

Engines made at \_\_\_\_\_ By whom made \_\_\_\_\_ When made \_\_\_\_\_

Boilers made at Carteret, N.J. By whom made Foster-Wheeler Corporation When made 1952

Nominal Horse Power \_\_\_\_\_ Owners Orion Shipping & Trading Co. Inc. Port belonging to \_\_\_\_\_

WATER TUBE BOILERS—MAIN, AUXILIARY, OR DONKEY.—Manufacturers of Steel Bethlehem Steel Corporation

Date of Approval of plan \_\_\_\_\_ Number and Description or Type of Boilers 4 Drums 2 Steam 2 Water Working Pressure 675 p.s.i. Tested by Hydraulic Pressure to 1013 p.s.i. Date of Test 9, 11 & 24 Sept 21st Oct.

No. of Certificate B5001 No. 1&2 Can each boiler be worked separately - Total Heating Surface of Boilers -

Is forced draught fitted \_\_\_\_\_ Area of fire grate (coal) in each Boiler \_\_\_\_\_

No. and type of burners (oil) in each boiler \_\_\_\_\_ No. and description of safety valves on each boiler \_\_\_\_\_

Area of each set of valves per boiler {per rule \_\_\_\_\_ as fitted \_\_\_\_\_} 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 \_\_\_\_\_ Height of boiler \_\_\_\_\_

Width and Length 13/16" wrapper 3 7/16" tube Number in each boiler One Inside diameter 48"

Thickness of plates 1 3/16" wrapper 3 7/16" tube Range of Tensile Strength 70000 p.s.i. Min. Are drum shell plates welded or flanged 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 long. seams \_\_\_\_\_

Diameter of rivet holes in long. seams \_\_\_\_\_ Pitch of rivets \_\_\_\_\_ Thickness of straps \_\_\_\_\_ Percentage strength of long. joint:—Plate \_\_\_\_\_ Rivet \_\_\_\_\_ Diameter of tube holes in drum 1.278" 2.028" 3.026" Pitch of tube holes 1.875" & 4.5"

Percentage strength of shell in way of tubes 31-3 & 54-7 Steam Drum Heads or Ends:—Range of tensile strength 70,000 p.s.i. Min.

Thickness of plates Plain 1 3/16" Man. 1 13/16" Radius or how stayed Ellipsoidal Size of manhole or handhole 12" x 16" Water Drums:—Number in each boiler One Inside Diameter 30 1/2" Thickness of plates 2 5/16" Range of tensile strength 70,000 p.s.i. Min. Are drum shell plates welded or flanged 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 long. seam \_\_\_\_\_

Description of riveting:—Cir. seams \_\_\_\_\_ long. seam \_\_\_\_\_

Diameter of rivet holes in long. seams \_\_\_\_\_ Pitch of rivets \_\_\_\_\_ Thickness of straps \_\_\_\_\_ Percentage strength of long. joint:—Plate \_\_\_\_\_ Rivet \_\_\_\_\_ Diameter of tube holes in drum 1.278" 2.028" 3.026" Pitch of tube holes 1.875" & 4.5"

Percentage strength of drum shell in way of tubes 31.3 & 54.7 Water Drum Heads or Ends:—Range of tensile strength 70,000 p.s.i. Min

Thickness of plates Plain 13/16" Man. 1 3/16" Radius or how stayed Ellipsoidal Size of manhole or handhole 12" x 16"

Headers or Sections:—Number \_\_\_\_\_ Material \_\_\_\_\_ Thickness \_\_\_\_\_ Tested by Hydraulic Pressure to \_\_\_\_\_

Tubes:—Diameter \_\_\_\_\_ Thickness \_\_\_\_\_ Number \_\_\_\_\_ Steam Dome or Collector:—Description of joint to shell \_\_\_\_\_ Inside diameter \_\_\_\_\_ Thickness of shell plates \_\_\_\_\_ Range of tensile strength \_\_\_\_\_

Description of longitudinal joint \_\_\_\_\_ If fusion welded, state name of welding firm \_\_\_\_\_ Have all the requirements of the rules for Class I vessels been complied with \_\_\_\_\_ Diameter of rivet holes \_\_\_\_\_

Pitch of rivets \_\_\_\_\_ Thickness of straps \_\_\_\_\_ Percentage strength of long. joint \_\_\_\_\_ Plate \_\_\_\_\_ Rivet \_\_\_\_\_

Crown or End Plates:—Range of tensile strength \_\_\_\_\_ Thickness \_\_\_\_\_ Radius or how stayed \_\_\_\_\_

**SUPERHEATER. Drums or Headers:**—Number in each boiler \_\_\_\_\_ Inside Diameter \_\_\_\_\_

Thickness \_\_\_\_\_ Material \_\_\_\_\_ Range of tensile strength \_\_\_\_\_ Are drum shell plates welded or flanged \_\_\_\_\_ If fusion welded, state name of welding firm \_\_\_\_\_ Have all the requirements of the rules for Class I vessels been complied with \_\_\_\_\_ Description of riveting:—Cir. seams \_\_\_\_\_ long. seams \_\_\_\_\_

Diameter of rivet holes in long. seams \_\_\_\_\_ Pitch of rivets \_\_\_\_\_ 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 \_\_\_\_\_

Drum Heads or Ends:—Thickness \_\_\_\_\_ Range of tensile strength \_\_\_\_\_

Radius or how stayed \_\_\_\_\_ Size of manhole or handhole \_\_\_\_\_ Number, diameter, and thickness of tubes \_\_\_\_\_ 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 \_\_\_\_\_ No. and description of Safety Valves \_\_\_\_\_ Area of each set of valves \_\_\_\_\_ Pressure to which they are adjusted \_\_\_\_\_ Is easing gear fitted \_\_\_\_\_

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

FOSTER WHEELER CORP.

The foregoing is a correct description,

*H. E. Seating*

Manufacturer.

Dates of Survey } During progress of work in shops -- } 2nd, 19th & 24th June Is the approved plan of boiler forwarded herewith \_\_\_\_\_

while } During erection on board vessel - - - } 9th, 11th, 23rd & 24th September Total No. of visits 12

building } 2nd, 7th, 21st & 28th Oct.

\_\_\_\_\_ } 18th Nov.

Is this boiler a duplicate of a previous case Yes If so, state vessel's name and report No. Beth. Steel Quincy Hull 1630

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) These fusion welded drums have been made and tested in accordance with the approved Plans & Requirements for Class 1 Fusion Welding and the workmanship and materials are good. When the drums have been installed on board Bethlehem Steel Co. Quincy Hull No. 1631, according to the Rules and to the satisfaction of the Society's Surveyor, the vessel will be eligible, in my opinion, to secure the notation of 2 W.T.B. (Spt) 675 p.s.i.

Survey Fee \_\_\_\_\_ £ : : } When applied for, 19

Travelling Expenses (if any) £ - \$30.00 : : } When received, 19

Committee's Minute \_\_\_\_\_

Assigned See attached 1st entry Rpt.

NEW YORK MAY 20 1953

Engineer Surveyor to Lloyd's Register of Shipping.

Lloyd's Register Foundation