

REPORT ON WATER TUBE BOILERS.

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Date of writing Report Dec. 29, 1953 When handed in at Local Office Dec. 29, 1953 Port of NEW YORK
 No. in Survey held at Carteret, N. J. Date, First Survey May 13th Last Survey Dec. 7th 19 53
 Reg. Bk. on the BETHLEHEM STEEL CORP., QUINCY, MASS., HULL No. 1643 (Number of Visits 16) {Gross
 Tons }
 Net }
 Built at _____ By whom built _____ When built _____
 Engines made at _____ By whom made _____ When made _____
 Boilers made at Carteret By whom made Foster Wheeler Corp. When made 1953
 Nominal Horse Power _____ Owners _____ Port belonging to _____

WATER TUBE BOILERS—MAIN, AUXILIARY, OR DONKEY.—Manufacturers of Steel SHELLS: Beth. HEADS: Claymont & Beth.

Date of Approval of plan July 8, 1953 Number and Description or Type of Boilers 4 drums only (2 steam, 2 water) Working Pressure 675 PSI Tested by Hydraulic Pressure to 1013 Date of Test July 20, 23, 28, 30
 No. of Certificate B-5236 Nos. 1 & 2 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 _____ Steam Drums:—Number in each boiler One Inside diameter 48"

Thickness of plates 1-3/16" WRAPPER, 3-7/16" TUBE Range of Tensile Strength 70,000 PSI MIN Are drum shell plates welded or flanged Welded If fusion welded, state name of welding firm Foster Wheeler Corp. Have all the requirements of the rules for Class I vessels been complied with Yes 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 1.288" & 2.038" Pitch of tube holes 1.875" & 4.5"

Percentage strength of shell in way of tubes 31.9 & 54.7 Steam Drum Heads or Ends:—Range of tensile strength 70,000 PSI MIN.

Thickness of plates MAN 1-13/16" PLAIN 1-3/16" Radius or how stayed Elipsoidal 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" Min Range of tensile strength 70000 PSI MIN Are drum shell plates welded or flanged Welded If fusion welded, state name of welding firm Foster Wheeler Have all the requirements of the rules for Class I vessels been complied with Yes 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 1.288", 2.038" Pitch of tube holes 1.875" & 4.5"

Percentage strength of drum shell in way of tubes 31.9 & 54.7 Water Drum Heads or Ends:—Range of Tensile strength 70,000 PSI MIN

Thickness of plates MAN 1-3/16", PLAIN 13/16" Radius or how stayed Elipsoidal 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 _____

Drum 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 _____

Are Gear. Has the spare gear required by the rules been supplied _____

The foregoing is a correct description,
R. E. Keating Manufacturer.

Dates of Survey } During progress of work in shops -- } May 13, 20, 26, 28 } Sep. 2, 28, 30 } Is the approved plan of boiler forwarded herewith _____
 } During erection on board vessel - - - } June 8, 9, 25 } Oct. 28 } Total No. of visits 16
 } } July 20, 23 } Dec. 7 }
 } } Aug. 14, 21 }
 Is boiler a duplicate of a previous case _____ If so, state vessel's name and report No. _____

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 and Requirements for Class 1 Fusion Welding and the workmanship and materials are good. When the drums have been installed on board Bethlehem Steel Hull No. 1643 according to the rules and the satisfaction of the Society's Surveyors, the vessel will be eligible, in my opinion, to receive the notation of 2 WT(B) 675 PSI

Survey Fee C-9447 Inclusive fee : } When applied for, 19
 Travelling Expenses (if any) \$40.00 : } When received, 19

Committee's Minute NEW YORK NOV 17 1954
 Signed see attached 1st entry Report
 D. David Dick
 Engineer Surveyor to Lloyd's Register of Shipping

