

REPORT ON WATER TUBE BOILERS.

No. 7993

2 NOV 1941

Date of writing Report 3 Feb 1941 When handed in at Local Office 7 Feb 1941 Port of Philadelphia
 No. in Survey held at Barberton Ohio & Lehigh Pa Date, First Survey 26 June 1940 Last Survey 17 Dec 1940
 Reg. Bk. on the S/S OKLAHOMA (Number of Visits 13) Tons } Gross 9264.73
 Net 5405
 Built at Lehigh Pa By whom built Sum Bros & Co When built 1940
 Engines made at Birmingham Pa By whom made Westinghouse Elec & Mfg Co When made "
 Boilers made at Barberton Ohio By whom made Babcock & Wilcox Co When made "
 Nominal Horse Power 1718 Owners The Texas Co Port belonging to Wilmington Del

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

Date of Approval of plan 11 Jan 1940 Number and Description or Type of Boilers 2 Watertube 2 drum type Working Pressure 510 Tested by Hydraulic Pressure to 765 Date of Test Nov 1940
 No. of Certificate 779 Can each boiler be worked separately Yes Total Heating Surface of Boilers 10111
 Is forced draught fitted Yes Area of fire grate (coal) in each Boiler -

No. and type of burners (oil) in each boiler 4 Todd No. and description of safety valves on each boiler 2 Spring loaded Area of each set of valves per boiler } per rule 20.5 ordinary valves including Spt. as fitted 4.9 Pressure to which they are adjusted 510 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 Smallest distance between boilers or uptakes and bunkers or woodwork 6'-9" Height of boiler 18'-2"

Width and Length 17'-6" Steam Drums:—Number in each boiler 1 Inside diameter 47 1/8"
 Thickness of plates Steel 7/8 & 3/4" Range of Tensile Strength 7000 to 8200 lbs Are drum shell plates welded or flanged Yes If fusion welded, state name of welding firm Babcock & Wilcox Co Have all the requirements of the rules for Class I vessels been complied with Yes Description of riveting:—Cir. seams fusion welded long. seams fusion welded
 Diameter of rivet holes in long. seams 90% Rivet - Thickness of straps - Percentage strength of long. joint:—Plate 90% Rivet - Diameter of tube holes in drum 1 1/4 - 2 - 3 1/4" Pitch of tube holes 1 1/4 - 3 1/4"

Percentage strength of shell in way of tubes 274 Steam Drum Heads or Ends:—Range of tensile strength 70 to 8200 lb
 Thickness of plates 1 7/16" Radius or how stayed 3'-0 3/8" Size of manhole or handhole 12" x 16" Water Drums:—Number in each boiler 1 Inside Diameter 30" Thickness of plates 1 9/32 & 2 1/32" Range of tensile strength 70 to 8200 lb Are drum shell plates welded or flanged fusion welded If fusion welded, state name of welding firm Babcock & Wilcox 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 90% Rivet - Diameter of tube holes in drum 1 1/4 x 2 x 3 1/4" Pitch of tube holes 1 1/4 - 4 1/2"

Percentage strength of drum shell in way of tubes 274 Water Drum Heads or Ends:—Range of Tensile strength 70 to 8200 lb
 Thickness of plates 1 7/16" Radius or how stayed 24" Size of manhole or handhole 12" x 16"
 Headers or Sections:—Number None Material - Thickness - Tested by Hydraulic Pressure to -
 Tubes:—Diameter 1 1/4 - 2 - 3 1/4" Thickness 0.95 - 1.04 - 1.48 - 2.50" Number 4246 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 13 W type 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 1020 lb Date of Test Sept 1940 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 Spring loaded Area of each set of valves 1.767 sq ft Pressure to which they are adjusted 465 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. Yes

Dates of Survey } During progress of work in shops June 24, July 26, Aug 29, Sept 10, 11, 25, 26, 30 Oct 2, 1940 Is the approved plan of boiler forwarded herewith Yes
 while building } During erection on board vessel 16 Oct, Nov 14, 29, Dec 17, 1940 Total No. of visits 13

Is this boiler a duplicate of a previous case Yes If so, state vessel's name and report No. OHIO No 7881

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) These boilers have been satisfactorily installed on board the vessel tested to a hydraulic test of 765 lb with satisfactory results. Safety valves have been adjusted under steam to 510 lb. In my opinion this installation is eligible to receive the record of 2 WTB Spt 510 lb.

Survey Fee See as agreed } When applied for, 19
 Travelling Expenses (if any) £ } When received, 19

Committee's Minute Assigned 2 W.T.B. (Cht) 510 lbs.
 NEW YORK OCT 15 1941
 Engineer Surveyor to Lloyd's Register of Shipping. W. T. B. (Cht)

