

REPORT ON WATER TUBE BOILERS.

No. 11353

19 MAY 1958

Received at London Office.

Writing Report Dec. 1957 When handed in at Local Office Mar. 24, 1958 Port of Baltimore, Maryland
 Survey held at Sparrows Point Date, First Survey July 18th., 1957 Last Survey Dec. 17th., 1957
 on the S.S. "GULFQUEEN" (Number of Visits 14) Gross 20,466 Tons Net 12,851
 Sparrows Point, Maryland By whom built Bethlehem Sparrows Pt. Shipyard, Inc. When built 1957
 made at Quincy, Mass. By whom made Bethlehem Steel Company When made 1957
 made at Mountaintop, Pa. By whom made Foster Wheeler Corp. When made 1957
 Horse Power 3000 Owners Black Steamships, Inc. Port belonging to Wilmington, Del.

WATER TUBE BOILERS—MAIN, AUXILIARY, OR DONKEY. Manufacturers of Steel at Sparrows Pt.
 Approval of plan 19th. Sept. 1956 Designed W.P. 700 P.S.I. Number and Description or Type
 ers. Two Foster Wheeler "D" Type. Working Pressure 600 P.S.I. Tested by Hydraulic Pressure to 1100 P.S.I. Date of Test Sept. 13, 57.
 Certificate Can each boiler be worked separately Yes. Total Heating Surface of Boilers 18,538 Sq. Ft. 18539
 draught fitted Yes. Area of fire grate (coal) in each Boiler Oil Fired
 type of burners (oil) in each boiler 3- Todd Hexpress No. and description of safety valves on
 Steam Drum, 2 Consolidated High Lift (1.625" Dia.)
 der. MFG Manning Marwell & Moore, Inc. Area of each set of valves per boiler {per rule - Pressure to which they
 FWD 700 P.S.I. as fitted 4.147 Sq. Ins.
 AFT 695 P.S.I. Are they fitted with easing gear Yes. In case of donkey boilers state whether steam from main boilers can enter
 key boiler None Fitted Smallest distance between boilers and bunkers 5 Feet Height of boiler 25 Ft.
 Length 18' 7" X 13' 7" Steam Drums: Number in each boiler One. Inside diameter 46 15/16"
 of plates 3 3/8" Max. 1 1/4" Min. Range of Tensile Strength 70,000 lbs. Are drum shell plates welded
 pose Welded If fusion welded, state name of welding firm Foster Wheeler Corp. Have all the requirements of the rules
 g at full vessels been complied with Yes. Description of riveting:—Cir. seams - long. seams -
 of rivet holes in long. seams - Pitch of rivets - Thickness of straps - Percentage strength of
 nt:—Plate - Rivet - Diameter of tube holes in drum 2" & 1 1/4" Pitch of tube holes 4 1/2" & 1 7/8"
 ge strength of shell in way of tubes 31.6 Min. Steam Drum Heads or Ends:—Range of tensile strength 70,000 lbs.
 of plates 1 7/8" Radius or how stayed Ellipsoidal Size of manhole or handhole 12" X 16"
 boiler One Inside Diameter 31 5/16" Thickness of plates 2 1/4" Max. 7/8" Min. Water Drums:—Number
 or flanged Welded If fusion welded, state name of welding firm Foster Wheeler Corp. Have all the requirements of the rules
 I vessels been complied with Yes. Description of riveting:—Cir. seams - long. seam -
 of rivet holes in long. seams - Pitch of rivets - Thickness of straps -
 ge strength of long. joint:—Plate - Rivet - Diameter of tube holes in drum 2" & 1 1/4" Pitch of tube holes 4 1/2" & 1 7/8"
 ge strength of drum shell in way of tubes 31.6 Min. Water Drum Heads or Ends:—Range of Tensile strength 70,000 lbs.
 of plates 1 1/4" Max. & 13/16" Min. Radius or how stayed Ellipsoidal Size of manhole or handhole 12" X 16"
 or Sections:—Number 3 Per Boiler Material Seamless Steel Thickness 7/8" Each Boiler Tested by Hydraulic Pressure to 1100 Lbs.
 Diameter 2" & 1 1/4" Thickness (.180 Ecom.) .165 & .120 Number 245 @ 2" 819 @ 1 1/4"
 Shell - Inside diameter - Thickness of shell plates -
 Description of longitudinal joint - If fusion welded, state name of welding
 Have all the requirements of the rules for Class I vessels been complied with - Diameter of rivet holes -
 rivets - Thickness of straps - Percentage strength of long. joint - Plate - Rivet -
 or End Plates:—Range of tensile strength - Thickness - Radius or how stayed -
HEATER. Drums or Headers:—Number in each boiler Five (5) Inside Diameter 7 3/4" and 7 1/2"
 1 1/2" Material Steel Range of tensile strength 70,000 lbs. Are drum shell plates welded
 d Welded If fusion welded, state name of welding firm Foster Wheeler Corp. Have all the requirements of the rules
 I vessels been complied with Yes Description of riveting:—Cir. seams - long. seams -
 of rivet holes in long. seams - Pitch of rivets - Thickness of straps - Percentage strength of
 ufacture:—Plate - Rivet - Diameter of tube holes in drum 1.275" Pitch of tube holes 1 3/4" Percentage strength of
 all in way of tubes - Drum Heads or Ends:—Shaped Thickness 1 1/2" Range of tensile strength 70,000 lbs.
 r how stayed - Size of manhole or handhole 2 3/4" X 3 3/4" Number, diameter, and thickness of tubes 200 @ 1 1/4" X .120
 y Hydraulic Pressure to 1100 lbs. Date of Test Sept. 13th. 1957 Is a safety valve fitted to each section of the superheater which
 but off from the boiler Yes. No. and description of Safety Valves I Consolidated High Lift MFG. Manning Marwell & Moore, Inc. (1-312" Dia.)
 2.704 Sq. Ins. Pressure to which they are adjusted 630 P.S.I. Is easing gear fitted Yes.

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

The foregoing is a correct description,

Manufacturer.

During progress of work on board vessel July 18th, 20th, 23rd, 28th, Aug. 5th, 13th, 21st, 29th Is the approved plan of boiler forwarded herewith No.
 During erection on board vessel Sept. 9th, 13th, Oct. 1st, 11th, Nov. 12th, Dec. 17th. Total No. of visits 14

Is a duplicate of a previous case Yes If so, state vessel's name and report No. S.S. "GULFKING" Rpt. No. 11295

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) These boilers, Foster Wheeler Nos. 3981 & 3980 have
 constructed & installed to the Society's Rules & approved plans. Please refer to PHL Report No. 10683 Both Boilers
 examined in the course of construction, Hydraulically tested & subsequently examined under steam. The materials
 workmanship appear good. The Boilers are eligible in our opinion to be fitted to a classed vessel & receive the
 on of 2 WT Boilers 700 PSI Sat & 630 PSI Supt. F.D. in the Register Book.

When applied for, 19
 When received, 19

Committee's Minute

11th. N. 12.57. 2WTB (spr) 6000 Sq. Ins. 1958

Engineer Surveyor to Lloyd's Register of Shipping.

Lloyd's Register
Foundation

Each boiler

Generating H_2O = 4900

Water walls = 370

Superheater = 1112

6382

Each economiser = 5775 H_2O

$\therefore \text{H.S. for R.B.} = (6382 \times 2) + 5775$

= 18539 H_2O