

# REPORT ON WATER TUBE BOILERS.

Received at London Office

118 AUG 1949

Date of writing Report 3rd June, 1949 When handed in at Local Office 3rd June, 1949 Port of Baltimore, Maryland.  
 No. in Survey held at Baltimore, Maryland. Date, First Survey 24th Nov. 1948 Last Survey 2nd June, 1949  
 Reg. Bk. on the S.S. "JAHRA" (Number of Visits 12) Tons { Gross 17905  
 Net 11071  
 Built at Sparrows Point, Maryland. By whom built Bethlehem Sparrows Point Shipyard, Inc., When built 1949  
 Engines made at Quincy, Mass. By whom made Bethlehem Steel Co., When made 1948  
 Boilers made at Carteret, N.J. By whom made Foster Wheeler Corp., When made 1948  
 Nominal Horse Power 3240 Owners Kupan Transport Co., Port belonging to Monrovia

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

Date of Approval of plan 25th August, 1948, New York. Number and Description or Type of Boilers Two - Type "D" Steam Generators Working Pressure 675 p.s.i. Tested by Hydraulic Pressure to 1013 p.s.i. Date of Test 25, Mar. '49.

No. of Certificate C 7665, C 7673 Can each boiler be worked separately. Yes Total Heating Surface of Boilers 13420 sq. ft. inc., W.W.

Is forced draught fitted Yes Area of fire grate (coal) in each Boiler Oil fired + Spt. ?

No. and type of burners (oil) in each boiler 4 - Todd. Hex Press. No. and description of safety valves on each boiler Two 1 1/2" Crosby Improved High Lift, 24546 lbs per hour

are adjusted 675 and 660 p.s.i. 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 xxxxxx and bunkers xxxxxx Not near Height of boiler 20' 7 7/8"

Width and Length 13'-10 9/16" x 16'-4 3/4" Steam Drums:—Number in each boiler One Inside diameter 46 7/8" Average

Thickness of plates Wrapper 1 3/16" Tube 3 7/16" 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 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 3.026" Pitch of tube holes 4.29 Grs.

Percentage strength of shell in way of tubes 31.3 Steam Drum Heads or Ends:—Range of tensile strength 4. 1/2 L. 70,000 p.s.i.

Thickness of plates 1 13/16" M.M. Radius or how stayed Ellipsoidal Size of manhole or handhole 12" x 16" Water Drums:—Number in each boiler one Inside Diameter 30-5" Thickness of plates 2 5/16" Range of tensile strength 70,000 p.s.i. 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. 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 3.026" Pitch of tube holes 3.72 Grs.

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

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

Headers xxxx Number 3-7 1/2" x 7 1/4" Material Steel Thickness 5/8" Tested by Hydraulic Pressure to 1013 p.s.i.

Tubes:—Diameter 1 1/2", 2", 3" Thickness 12-9-6 BWG Number 143-2" W.W. Tubes 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.** ~~Doors of~~ Headers:—Number in each boiler Two Inside Diameter 8"

Thickness 1.375" Material O.H. Seamless Car-Moly Forging Range of tensile strength 70,000 p.s.i. 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 ~~xxxx~~ Header 1 1/2" Pitch of tube holes 2 1/2" Percentage strength of Header ~~xxxx~~ shell in way of tubes .47 ~~xxxx~~ Header Ends:— 10.75" O.D. Thickness 1 3/4" Range of tensile strength 70,000 p.s.i.

Radius or how stayed - Size of manhole or handhole - Number, diameter, and thickness of tubes 200-1 1/2" O.D. - 12 BWG.

Tested by Hydraulic Pressure to 1013 p.s.i. Date of Test 25th March, 1949. 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 One 1 1/2" Crosby Improved High Lift/ 18355 lbs per hour Area of each set of valves 1.767 Pressure to which they are adjusted 624 p.s.i. Is easing gear fitted Yes

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

H.S. (2 Bhop W.W.) = 13420. # Total for Reg. Bk  
H.S. (2 Spt) = 2740 -  
H.S. (1 Econ) = 4970. -

The foregoing is a correct description, Manufacturer.

Dates of Survey } During progress of work in shops - - - 25 Oct., 1, 11, 13, 19, 23, 26 November, 1948. Is the approved plan of boiler forwarded herewith No.  
while } During erection on building board vessel - - - 14 Feb., 22, 23, 24, 25 March, 11, 20, April, 2, 3, 10, 11 May, 1 June, 1949. Will be forwarded with last Sister Ship Hull 4471

Total No. of visits 12

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

**GENERAL REMARKS** (State quality of workmanship, opinions as to class, &c.) These boilers have been constructed and installed on board the vessel under Special Survey and the scantlings and arrangements are in accordance with the approved plans. Please refer to Report Nos. 48865 and 48867 New York with attached particulars of electric welding and physical tests.

The workmanship and fittings throughout are good. Boilers were hydrostatically tested in place on board the vessel with all piping and fittings and examined under steam working conditions, and are eligible in my opinion to be classed and receive the notation 2 W.T. Boilers, 675 lbs F.D. made in the Register Book.

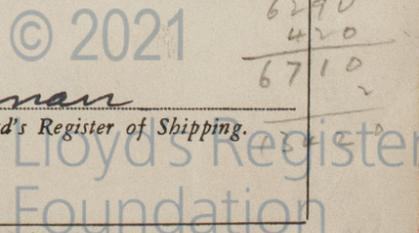
Survey Fee Arranged Fee \$ 100.00 When applied for, 26 July, 1949  
Credit New York 200.00  
Travelling Expenses (if any) \$ 38.00 When received, - 19  
Credit New York 10.00

Committee's Minute

Assigned 2 WTB (SPT) 675 lbs.

NEW YORK JUL 27 1949

C. H. Haman  
Engineer Surveyor to Lloyd's Register of Shipping.



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IM-3-44 Printed in U.S.A. as a Report sent on the hull of the ship?

H.S. =

$$BLR = 6290$$

$$WW = 420$$

$$\text{Suph} = 1370$$

$$ECON = 4970$$

$$50\% = 2485$$

$$\underline{8080}$$

$$\underline{2485}$$

$$10565 = \text{H.S. one boiler for Norm. H.P.}$$

$$\underline{10565}$$

$$21130$$

Two

$$MH = \frac{P + 590}{1500} \left( \frac{SHP}{6} + \frac{H}{12} \right)$$

$$= \frac{675 + 590}{1500} \left( \frac{12500}{6} + \frac{21130}{12} \right)$$

$$= .843 \times 3844.15$$

$$= 3240.$$



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