

REPORT ON WATER TUBE BOILERS.

No. 38841

AUG 14 1939.

Received at London Office

Date of writing Report *Nov. 21st 1938* When handed in at Local Office*Nov 21 1938*Port of *New York*

No. in Reg. Bk. *Survey held at Carteret, New Jersey* Date, First Survey *Aug 22nd 1938* Last Survey *Nov. 17th 1938*
 on the *Bethlehem S. B. Co. Hull No. 4333* (Number of Visits *10*) Tons { Gross — Net —
 Master *Built at Sparrows Pt. Md. By whom built Bethlehem S. B. Co.* When built —
 Engines made at *Philadelphia* By whom made *Westinghouse Electric* When made —
 Boilers made at *Carteret, N. J.* By whom made *Foster Wheeler Corp. (No. F.W.B. 269 & 270)* When made *1938*
 Registered Horse Power — Owners *Socony Vacuum Oil Co.* Port belonging to —

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

(Letter for Record —) Date of Approval of plan *July 20th 1938* Number and Description or Type of Boilers *2 Water tube D type* Working Pressure *450 lbs* Tested by Hydraulic Pressure to *675 lbs* Date of Test *10-17-38*
 No. of Certificate — Can each boiler be worked separately *yes* Total Heating Surface of Boilers *9920 sq. ft.*
 Is forced draught fitted *yes* Area of fire grate (coal) in each Boiler *Oil fired* Total grate area of boilers in vessel including Main and Auxiliary — No. and type of burners (oil) in each boiler *3 Todd Hexpress.* No. and description of safety valves on each boiler — Area of each valve — 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 *18' TO CENTRE OF UPPER DRUM* Width and Length *14'-11 5/8" x 9'-9 7/8" OVER 19" LEASINGS*
 Steam Drums:—Number in each boiler *one* Inside diameter *48"* Material of plates *Steel* Thickness *1 3/32"*
 Range of Tensile Strength *65,000 lbs. min.* Are drum shell plates welded or flanged *Fusion welded* Description of riveting:—
 Cir. seams *Fusion Welded* long. seams *Fusion Welded* Diameter of rivet holes in long. seams — Pitch of Rivets —
 Lap of plate or width of butt straps *Butt joint* Thickness of straps — Percentage strength of long. joint:—Plate *90% allowed* Rivet —
 Diameter of tube holes in drum *1 9/32" & 2 3/32"* Pitch of tube holes *2 1/4" & 2 3/4", 4 1/2"* Percentage strength of shell in way of tubes *48.75*
 If Drum has a flat side state method of staying *no flat side* Depth and thickness of girders at centre (if fitted) *none* Distance apart — Number and pitch of stays in each — Working pressure by rules *461 lbs.*
 Steam Drum Heads or Ends:—Material *Steel* Thickness *2 1/32" & 1 5/16"* Radius or how stayed *Ellipsoidal*
 Size of Manhole or Handhole *12" x 16"* Water Drums:—Number in each boiler *one* Inside Diameter *32"*
 Material of plates *Steel* Thickness *1 1/16"* Range of tensile strength *65,000 lbs. min.* Are drum shell plates welded or flanged *Fusion Welded* Description of riveting:—Cir. seams *Fusion Welded* long. seams *Fusion Welded* Diameter of Rivet Holes in long. seams — Pitch of rivets — Lap of plates or width of butt straps *Butt joints* Thickness of straps —
 Percentage strength of long. joint:—Plate *90% allowed* Rivet — Diameter of tube holes in drum *1 9/32" & 2 3/32"* Pitch of tube holes *2 1/4" & 2 3/4", 4 1/2"*
 Percentage strength of drum shell in way of tubes *48.75* Water Drum Heads or Ends:—Material *Steel* Thickness *9/16" & 7/8"*
 Radius or how stayed *Ellipsoidal* Size of manhole or handhole *12" x 16"* Headers or Sections:—Number —
 Material — Thickness — Tested by Hydraulic Pressure to — Material of Stays —
 Area at smallest part — Area supported by each stay — Working Pressure by Rules — Tubes:—Diameter *1 1/4" & 2"*
 Thickness — Number — Steam Dome or Collector:—Description of Joint to Shell —
 Percentage strength of Joint — Diameter — Thickness of shell plates — Material —
 Description of longitudinal joint — Diameter of Rivet Holes — Pitch of Rivets — Working Pressure of shell by Rules —
 Crown or End Plates:—Material — Thickness — How stayed —

SUPERHEATER.

Type — Date of Approval of Plan — 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 —
 Diameter of Safety Valve — Pressure to which each is adjusted — Is easing gear fitted —
 Is a drain cock or valve fitted at lowest point of superheater — Number, diameter, and thickness of tubes —
 Spare Gear. Tubes — Gaskets or joints:—Manhole — Handhole — Handhole plates —

The foregoing is a correct description,

J. A. Young, Manufacturer.

Dates of Survey { During progress of *August 22nd September 1st, 8th, 13th & 29th, Oct. 6th, 13th & 17th* Is the approved plan of boiler forwarded herewith *yes*
 while { During erection on —
 building { board vessel — } Total No. of visits *10*

GENERAL REMARKS

(State quality of workmanship, opinions as to class, &c.)

The fusion welded drums (4) for these two Main water tube boilers have been built in accordance with the rules & approval plans. The workmanship & material are good, for particulars of tests of Electric Welding see special sheet attached. The drums have been forwarded to Baltimore to be fitted to the boilers & when this has been done in accordance with the rules & to the Surveyors satisfaction the boilers will be eligible in my opinion to receive the notations 2. W.T.B. 450 lbs.

Survey Fee, *50% of 400 = £200* To be applied for at Balto.
 Travelling Expenses (if any) £ *10* : When received, *See Baltimore Report*

J. A. Young, Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

NEW YORK AUG 2 - 1939

Assigned *See Attached Report Balt. No. 6825*

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