

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 Survey held at Carters, New Jersey Date, First Survey Aug 22nd 1938 Last Survey Nov. 17th 1938

Reg. Bk. 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 Carters, N. J. By whom made Foster Wheeler Corp. (No. F.W.B. 2692/270) 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 sqft.

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^{1/2} TO CENTRE OF UPPER DRUM Width and Length 14^{1/2} x 9^{1/8}

Steam Drums:—Number in each boiler one Inside diameter 48" Material of plates Steel Thickness 1/32

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,
Jos. J. Kelly Manufacturer.
Wm. J. Kelly Vice President

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 2 November 9th & 17th
 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 740/- = £350 } When applied for, 19
 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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