

Rpt. 5a.

REC'D NEW YORK

DEC 20 1941

## REPORT ON WATER TUBE BOILERS.

No. 7540

Date of writing Report 18th Dec. 1941

When handed in at Local Office 19th Dec. 1941

Received at London Office

Port of Baltimore, Maryland

No. in Survey held at Sparrows Point, Md.

Reg. Bk.

Date, First Survey Aug. 20, 1940 Last Survey Oct 7th 1941

on the S.S. "CADDON"

(Number of Plates 15)

Gross 9890

Tons 5928

Net 1941

Built at Sparrows Point, Md.

By whom built Bethlehem Steel Co.

Engines made at Essington, Penna.

By whom made Westinghouse E. &amp; M. Co. (Yard No. 4354)

When built 1941

Boilers made at Carteret, N. J.

By whom made Foster Wheeler Corp. (FWB 451 -2)

When made 1941

Nominal Horse Power 2537

Owners Socony Vacuum Oil Co.

Port belonging to New York, N. Y.

## WATER TUBE BOILERS—MAIN, AUXILIARY, OR DOMESTIC

Date of Approval of plan 10th July, 1940 Manufacturers of Steel Bethlehem Steel Co.

of Boilers 2 Foster Wheeler Water Tube

Working Pressure 490 lbs.

Drum 990 lb.

Boiler 735 lb.

Number and Description of Tubes 25/16" &amp; 12

Date of Test 15/11/40

No. of Certificate -

Can each boiler be worked separately Yes

Total Heating Surface of Boilers 14960 sq. ft.

Is forced draught fitted Yes

Area of fire grate (coal) in each boiler Oil Fired

7400 sq. ft. Economiser

No. and type of burners (oil) in each boiler 2 Spring loaded

Area of each set of valve 7.07 sq. in.

No. and description of safety valves on

each boiler 2 Spring loaded

In case of donkey boilers state whether steam from main boilers can enter the donkey boiler -

Pressure to which they are adjusted 490 lbs. sq. in.

Smallest distance between boilers or uptakes and bunkers or woodwork Not Near

Height of boiler 19' 6"

Width and Length 13' 0" x 18' 0"

Steam Drums:—Number in each boiler One

Ins. le diameter 48"

Thickness of plates 1-2/16"

Range of Tensile Strength 70,000 lb/in<sup>2</sup> minimum

Are drum shell plates welded or flanged Fusion Welded

Description of riveting:—

Cir. seams Fusion Weld long. seams Fusion Weld

Diameter of rivet holes in long. seams -

Pitch of rivets -

Lap of plate or width of butt straps 1-2/32" &amp; 2-1/32"

Thickness of straps -

Percentage strength of long. joint:—Plate 90

Rivet -

Diameter of tube holes in drum 1-2/32" &amp; 2-1/32"

Pitch of tube holes 1 1/2" &amp; 2 1/2"

Percentage strength of shell in way of tubes 48.7 &amp; 54.8

Working pressure by rules 493 lb/in<sup>2</sup>

Steam Drum Heads or Ends:—Range of tensile strength -

Thickness of plates 1-13/32 &amp; 15/16"

Radius or how stayed Ellipsoidal

Size of manhole or handhole 12" x 16"

Working pressure by rules -

Water Drums:—Number

in each boiler One

Inside Diameter 32"

Thickness of plates 1-1/16"

Range of tensile strength 70000 Min.

Are drum shell plates

welded or flanged Fusion Weld

Description of riveting:—Cir. seams Fusion Weld

long. seam Fusion Weld

Diameter of rivet holes in

long. seams -

Pitch of rivets -

Lap of plates or width of butt straps -

Thickness of straps -

Percentage strength of long. joint:—Plate -

Rivet -

Diameter of tube holes in drum 1-9/16" &amp; 2-1/32"

Pitch of tube holes 4 1/2" mean

Percentage strength of drum shell in way of tubes 48.7 &amp; 54.8

Working pressure by rules -

Water Drum Heads or Ends:—Range of

Tensile strength -

Thickness of plates 1-1/16" &amp; 15/16"

Radius or how stayed Ellipsoidal

Size of manhole or handhole 12" x 16"

Working pressure by rules -

Headers or Sections:—Number 3, 7-3/4" x 7-3/4"

Material Steel

Thickness 7/8"

Tested by Hydraulic Pressure to -

Tubes:—Diameter 1 1/2", 2", 3"

Thickness 11, 9, &amp; 8 BWG resp. Number 577, 70, 3

Steam Dome or Collector:—Description of Joint to Shell None

Inside diameter -

Thickness of shell plates -

Range of tensile strength -

Description of longitudinal joint -

Diameter of rivet holes -

Pitch of rivets -

Lap of plate or width of

butt straps -

Thickness of straps -

Percentage strength of long. joint -

Plate -

Rivet -

Working Pressure of shell by rules -

Crown or End Plates:—Range of tensile strength -

Thickness -

Radius or how stayed -

Working pressure by rules -

SUPERHEATER. Drums or Headers:—Number in each boiler Interdeck Type

Inside Diameter -

Thickness -

Material -

Range of tensile strength -

Are drum shell plates welded

r flanged -

Description of riveting:—Cir. seams -

long. seams -

Diameter of rivet holes in

ong. seams -

Pitch of rivets -

Lap of plates or width of butt straps -

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 -

Working pressure by rules -

Drum Heads or Ends:—

Thickness -

Range of tensile strength -

Radius or how stayed -

Size of manhole or handhole -

Working pressure by rules -

Number, diameter, and thickness of tubes 164 - 1 1/2" 10 BWG

Tested by Hydraulic Pressure to 785 lbs. sq. in.

Date of Test 16 - 5 - 41

Is a safety valve fitted to each section of the superheater which can be shut off from the boiler Integral

No. and description of Safety Valves One. Consolidated high lift.

Area of each set of valves 1.766 sq. in.

Pressure to which they are adjusted 435 lbs. sq. in.

Is easing gear fitted Yes

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

The foregoing is a correct description,

Foster Wheeler Corp.

Jos. J. Nellis

Manufacturer.

Dates During progress of Aug. 20, 27, Sept. 13, 17, 24, Oct. 1, 8, 11, 18, 25

Survey work in shops - Nov. 12, 15, Dec. 23, 1940 and Jan. 7, 1941

Is the approved plan of boiler forwarded herewith No

While During erection on Mar. 25, Apr. 7, 8, 16, June 12, 26, July 16, 17, 24

Building board vessel - Aug. 23, 29, Sept. 6, 11, 17, Oct 7

Total No. of visits 29

this boiler a duplicate of a previous case Yes

If so, state vessel's name and report No. "CORSICANA" Rept. No. 7540

## GENERAL REMARKS

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

These boilers have been built and erected under

Special Survey. Please refer New York Rpt No. 41039 with attached electric welding particulars, in accordance with the

rules and approved plans and the workmanship and material throughout are good. Same have been hydraulically tested

in place on board the vessel with all fittings and piping and subsequently seen under steam working conditions and are

satisfactory in my opinion to be classed and receive the notation 2 W.T. Boilers - 490 lbs. sq. in. F.D. made in Register

K. Cleveland 120.00

Survey Fee New York 160.00

Baltimore 120.00

Travelling Expenses (if any) New York 24.00

Cleveland 22.75

Baltimore 32.00

When applied for, Dec. 19, 1941

When received, 19

Committee's Minute NEW YORK DEC 30 1941

Engineer Surveyor to Lloyd's Register of Shipping.

Signed 2 W.T.B. (Sgt) 490 lbs.



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006126-006139-0233