

REPORT ON WATER TUBE BOILERS.

No. 1074

Received at London Office 25 APR 1942

Writing Report Oct. 28th, 1941. When handed in at Local Office 19 ¹⁵ Port of Cleveland, Ohio.

Survey held at Barberton, Ohio. Date, First Survey July 14th, Last Survey Oct. 23rd, 1941.

Boiler on the Bethlehem Steel Co. Hull 1491 s/s "Sinclair HC" (Sinclair Refining Oil Co. Tanker) (Number of Visits 9) Tons { Gross - Net -

By whom built - When built -

Boiler made at Barberton, Ohio. By whom made Babcock & Wilcox Co. When made 1941

Owners (MB-1524 1 & 2) Port belonging to -

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

Approval of plan August 1940

Boilers (2) Single Drum Type Working Pressure 500 lbs. Tested by Hydraulic Pressure to 750 lbs. Number and Description or Type 1000 lbs. Date of Test 10/14-17/41.

Can each boiler be worked separately - Total Heating Surface of Boilers -

draught fitted - Area of fire grate (coal) in each Boiler -

type of burners (oil) in each boiler -

No. and description of safety valves on boiler -

Area of each set of valves per boiler { per rule - as fitted - Pressure to which they -

Are they fitted with easing gear - In case of donkey boilers state whether steam from main boilers can enter donkey boiler -

Smallest distance between boilers or uptakes and bunkers or woodwork - Height of boiler 16' 2-1/2" 18 - 34 ?

Length 10' 9-3/4" & 14' 8" Steam Drums:—Number in each boiler One Inside diameter 42-11/16"

Thickness of plates 25/32" and 1-5/8" Range of Tensile Strength 70,000 to 82,000 lbs. Are drum shell plates welded

If fusion welded, state name of welding firm Babcock & Wilcox Co. Certificates in order. Have all the requirements of the rules

as I vessels been complied with Yes Description of riveting:—Cir. seams - long. seams -

Number of rivet holes in long. seams - Pitch of rivets - Thickness of straps - Percentage strength of joint:—Plate 90% Rivet - Diameter of tube holes in drum 4-1/32" Pitch of tube holes 7"

Percentage strength of shell in way of tubes 42.41 Steam Drum Heads or Ends:—Range of tensile strength 65,000 to 77,000 lbs.

Thickness of plates 1-5/16" Radius or how stayed 33-3/8" Size of manhole or handhole 12" x 16" Water Drums:—Number

Boiler - Inside Diameter - Thickness of plates - Range of tensile strength - Are drum shell plates

flanged - If fusion welded, state name of welding firm - Have all the requirements of the rules

as I vessels been complied with - Description of riveting:—Cir. seams - long. seam -

Number 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 - Pitch of tube holes -

Percentage strength of drum shell in way of tubes - Water Drum Heads or Ends:—Range of Tensile strength -

Thickness of plates - Radius or how stayed - Size of manhole or handhole -

Sections:—Number (13) Material Steel Thickness 19/32" Tested by Hydraulic Pressure to 750 lbs.

Diameter 1-1/4" & 2" Thickness .095" & .134" Number (704) = 2" 1/4" Steam Dome or Collector:—Description of

Shell - Inside diameter - Thickness of shell plates - Range of tensile

Strength - 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 -

Number of rivets - Thickness of straps - Percentage strength of long. joint - Plate - Rivet -

Drum or End Plates:—Range of tensile strength - Thickness - Radius or how stayed -

Superheater. Headers:—Number in each boiler Upper and Lower Inside Diameter 5-1/2" square

Thickness 7/8" Material Steel Range of tensile strength 62,000 to 72,000 lbs. Are drum shell plates welded

If fusion welded, state name of welding firm - Have all the requirements of the rules

as I vessels been complied with Yes Description of riveting:—Cir. seams - long. seams -

Number of rivet holes in long. seams - Pitch of rivets - Thickness of straps - Percentage strength of joint:—Plate - Rivet - Diameter of tube holes in drum 1-1/4" Pitch of tube holes 1-3/4" Percentage strength of shell in way of tubes - Drum Heads or Ends:—Thickness - Range of tensile strength -

Radius or how stayed - Size of manhole or handhole - Number, diameter, and thickness of tubes (195), 1 1/2", .120"

Tested by Hydraulic Pressure to 750 lbs. Date of Test March 1941 Is a safety valve fitted to each section of the superheater which

can be shut off from the boiler - No. and description of Safety Valves - Area of each set

of valves - Pressure to which they are adjusted - Is easing gear fitted -

Easing Gear. Has the spare gear required by the rules been supplied -

The foregoing is a correct description,
Babcock & Wilcox Co. Manufacturer.

General Remarks (State quality of workmanship, opinions as to class, &c.) These boilers, unassembled, comprising steam drums and headers, were built to this Society's Special Survey Requirements and to Approved Plans, in conformity with the Rules of the United States Bureau of Navigation & Steamboat Inspection. Workmanship, materials, X-Ray examinations, tension and bend test results of fusion welded joint dimensions and hydraulic tests of drums and headers, were found satisfactory.

Survey Fee \$350.00: When applied for, 10/31/1941.

Travelling Expenses (if any) \$18.00: When received, 19

Committee's Minute NEW YORK JAN 28 1942

Approved see N.Y.K. RPT. NO. 42056.

V. Drummond
Engineer Surveyor to Lloyd Register of Shipping.

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