

REPORT ON WATER TUBE BOILERS.

No. 1013

Received at London Office 12 NOV 1941

Date of writing Report 19 When handed in at Local Office 19 Port of Cleveland, Ohio.

No. in Survey held at Barberton, Ohio. Date, First Survey June 24th, Last Survey October 1st, 1940.

Reg. Bk. on the (Sun S/B & D/D Co's Hull No. 198) Texas Co. Tanker. (Number of Visits 9) Tons { Gross - Net -

Built at - By whom built - When built -
Engines made at - By whom made - When made -
Boilers made at Barberton, Ohio. By whom made Babcock & Wilcox Co. (MB-1484 A & B) When made 1940
Nominal Horse Power - Owners - Port belonging to -

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

Date of Approval of plan January 11th, 1940 Number and Description or Type of Boilers Two, Watertube (2) Drum Type Working Pressure 510# Tested by Hydraulic Pressure to 1020# Date of Test 9/40

No. of Certificate - Can each boiler be worked separately - Total Heating Surface of Boilers -

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

No. and type of burners (oil) in each boiler - No. and description of safety valves on each boiler -

Area of each set of valves per boiler { per rule - as fitted - 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 - (Overall) Height of boiler 18' 2"

Width and Length 17' -6" Steam Drums:—Number in each boiler One Inside diameter 47-1/8"

Thickness of plates 7/8" & 3-3/32" Range of Tensile Strength 70,000# to 82,000# Are drum shell plates welded or flanged Fusion If fusion welded, state name of welding firm Yes B&W Co. 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 90% Rivet - Diameter of tube holes in drum 1 1/4", 2", 3 1/2" Pitch of tube holes 1 3/4", 4 1/4", 5"

Percentage strength of shell in way of tubes .274 Steam Drum Heads or Ends:—Range of tensile strength 70,000-82,000#

Thickness of plates 1-7/16" Radius or how stayed 3' 0-7/8" Size of manhole or handhole 12" x 16" Water Drums:—Number in each boiler One Inside Diameter 30" Thickness of plates 19/32" & 2-1/32" Range of tensile strength to 82,000# Are drum shell plates welded or flanged Fusion welded If fusion welded, state name of welding firm Yes B&W Co. Have all the requirements of the rules for Class I vessels been complied with - 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 90% Rivet - Diameter of tube holes in drum 1 1/4", 2", 3 1/2" Pitch of tube holes 1 3/4", 4 1/4", 5"

Percentage strength of drum shell in way of tubes .274 Water Drum Heads or Ends:—Range of Tensile strength -

Thickness of plates 15/16" Radius or how stayed 24" Size of manhole or handhole 12" x 16"

Headers or Sections:—Number None Material - Thickness - Tested by Hydraulic Pressure to -

Tubes:—Diameter - Thickness - Number - 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. ~~DRUMS~~ Headers:—Number in each boiler (2) Upper & (2) Lower Inside Diameter 6" x 6-1/8"

Thickness 7/8" Material Steel Range of tensile strength 62,000 to 72,000 lbs. 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 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 -

Drum 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 (84) 1 1/4", .120"

Tested by Hydraulic Pressure to 1020# Date of Test Sept. 1940. 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 -

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

The foregoing is a correct description,

(signed) E. Wilson for Babcock & Wilcox Co. Manufacturer.

Dates of Survey { During progress of work in shops - June 24th; July 26th; Aug. 29th; Sept. 10th, 11th, 25th, 26th, 30th & Oct. 2nd, 1940. Is the approved plan of boiler forwarded herewith - while { During erection on board vessel - Total No. of visits -

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

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) The steam drums, also superheater boxes and economizers of these boilers, were built under Special Survey, in accordance with the Rules and Approved Plans and to the Regulations of the Department of Commerce & Bureau of Marine Inspection & Navigation. They were tested by hydraulic pressure to 1020 pounds per square inch. The workmanship and materials, X Ray examinations, tension and bend tests of fusion welded joints, and the hydraulic tests, were found satisfactory.

Survey Fee TO BE CREDITED TO CLEVELAND When applied for, 16-1-1941

Travelling Expenses (if any) \$48.00 : When received, 29-1-1941

NEW YORK OCT 15 1941

J. Drummond 2020 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute Assigned See Phil. Rpt. No. 7993.

