

REPORT ON WATER TUBE BOILERS.

118 MAY 1949

Received at London Office

Date of writing Report March 31 1949 When handed in at Local Office 19 Port of Cleveland, Ohio
 No. in Survey held at Barberton, Ohio Date, First Survey Oct. 8 Last Survey Oct. 29 1948
 Reg. Bk. on the S.S. 'KUWAIT' (Number of Visits 8) { Gross --
 Tons { Net --
 Built at Chester, Pa. By whom built Sun Shipbuilding & D.D. Corp. When built 1949
 Engines made at -- By whom made -- When made --
 Boilers made at Barberton, Ohio By whom made Babcock & Wilcox Co. When made 1948
 Nominal Horse Power -- Owners Gulf Oil Co. Port belonging to --

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

Date of Approval of plan September 14, '48 Number and Description or Type of Boilers Two Drum 'D' Type (unassembled) Working Pressure 965# Tested by Hydraulic Pressure to 1930# Date of Test Oct. 8-29
 No. of Certificate Proc 5803 Can each boiler be worked separately Yes Total Heating Surface of Boilers 7882 sq. ft.
 Forced draught fitted -- Area of fire grate (coal) in each Boiler --

No. and type of burners (oil) in each boiler 4 B&W -- No. and description of safety valves on each boiler --
 Area of each set of valves per boiler { per rule --
 as fitted 3-14-16" Pressure to which they are adjusted --
 Are they fitted with easing gear Yes 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 2-3" Height of boiler 20'-9-1/4"
 Width and Length 20'-0" x 15'-11-7/8" Steam Drums:—Number in each boiler One (1) Inside diameter 47-3/8"
 Thickness of plates Wrapper 1-11/16" Range of Tensile Strength 70,000 min. Are drum shell plates welded or flanged welded
 If fusion welded, state name of welding firm Babcock & Wilcox Co. 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 1.275" Percentage strength of long. joint:—Plate -- Rivet 90% Diameter of tube holes in drum 2.025" Pitch of tube holes 5"

Percentage strength of shell in way of tubes 32% Steam Drum Heads or Ends:—Range of tensile strength 70,000 min.
 Thickness of plates Manhead 2-9/16" Radius or how stayed Radius 23-11/16" Size of manhole or handhole 12" x 16" Water Drums:—Number in each boiler One Inside Diameter 30" Thickness of plates Wrapper 1-11/16" Range of tensile strength 70,000 min. Are drum shell plates welded or flanged welded
 If fusion welded, state name of welding firm Babcock & Wilcox Co. Have all the requirements of the rules for Class I vessels been complied with Yes

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 -- 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 70,000 min.
 Thickness of plates Manhead 1-5/8" Radius or how stayed Radius 15"-14-5/32" Size of manhole or handhole 12" x 16"
 Headers or Sections:—Number 3 1-Upper R.W. Material Seamless Carbon Steel Thickness 1" Tested by Hydraulic Pressure to 1930#
 Tubes:—Diameter 2" Dia. 1-Lower R.W. Thickness .165 Number 63 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. Headers:—Number in each boiler 4 Inside Diameter 6-3/4"
 Thickness 1-1/4" Material Chrome Moly Carbon Steel Range of tensile strength 60,000 min. Are drum shell plates welded or flanged seamless
 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 -- Diameter of tube holes in Header 1.275" Pitch of tube holes 1-7/8" Percentage strength of drum shell in way of tubes 32%
 Drum Heads or Ends working process Thickness 1-1/4" Range of tensile strength 60,000 min.
 Radius or how stayed -- Size of manhole or handhole 3-3/4" x 3-3/8" Number, diameter, and thickness of tubes 182 - 1-1/4" - .134"

Tested by Hydraulic Pressure to 2500 # Date of Test Oct. 14, 48 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 1-2" Area of each set of valves --
 Pressure to which they are adjusted 897# Is easing gear fitted --

Spare Gear. Has the spare gear required by the rules been supplied Yes
 Boiler No. M.B. 4332 The foregoing is a correct description, ✓ Manufacturer. --

Dates of Survey } During progress of work in shops - - { Oct. 8, 11, 13, 14, 18, 20, 25, 29, 1948 Is the approved plan of boiler forwarded herewith Yes
 while } During erection on building } board vessel - - { -- Total No. of visits 8

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

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) The steam drum, water drum, headers, superheaters, economizers and water walls were built under Special Survey to approved plans and joints X-Rayed. Examinations and hydrostatic tests were found satisfactory and when boilers are installed to Rule requirements and to the Surveyors satisfaction the vessel will in my opinion be eligible to receive the notation of 2 WTB, 956# (SPT)
 Survey Fee To be charged by Phila. When applied for --
 Travelling Expenses (if any) \$ 48.00 When received -- 19

Committee's Minute NEW YORK APR 27 1949
 Assigned See First Entry Report attached Engineer Surveyor to Lloyd's Register of Shipping. J.A. Waller

1448 Feb 14 1949

Em 24/6/49

