

REPORT ON WATER TUBE BOILERS.

No. 797

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191

Port of Cleveland, Ohio.

No. in Survey held at Barberton, Ohio. Date, First Survey May 26th, Last Survey July 28th, 1936.
 Reg. Bk. 84383 & 87229 in suppl. on the boiler intended for S/S "AMERICAN FISHER" ex "Stanley Hiller" Number of Visits 9 Gross 4759
 Master --- Built at Quincy, Mass. By whom built Fore River S.B.Co. When built 1912 Tons Net 2984
 Engines made at Quincy, Mass. By whom made Fore River S. B. Co. When made 1912.
 Boilers made at Barberton, Ohio. By whom made Babcock & Wilcox Co. When made 1936
 Registered Horse Power --- Owners SANTA CRUZ OIL CO., LTD. Port belonging to SAN FRANCISCO.
311 California St., San Francisco.

WATER TUBE BOILERS—MAIN, AUXILIARY, OR DONKEY.—Manufacturers of Steel Otis Steel Co., Cleveland, Ohio.

(Letter for Record ---) Date of Approval of plan June 5th, 1936 Number and Description or Type of Boilers One B&W Water Tube, Fusion Welded Drum Working Pressure 500 lbs. Tested by Hydraulic Pressure to 1000 lbs. Date of Test July 27, 1936.
 No. of Certificate 246 Can each boiler be worked separately --- Total Heating Surface of Boiler 5257 Sq. Ft.
 Is forced draught fitted No. Area of fire grate (coal) in each Boiler --- Total grate area of boilers in vessel including Main and Auxiliary --- No. and type of burners (oil) in each boiler 5 B. & W. No. and description of safety valves on each boiler Two 4" single on y base. ✓ Area of each valve 12.57" ✓ Pressure to which they are adjusted 398 & 400 lbs. ✓
 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 20 ft. ✓ Height of Boiler 15'-9 3/4" ✓ Width and Length 15'-7 3/4" X 13'-5 3/4" ✓
 Steam Drums:—Number in each boiler One ✓ Inside radii 20-13/16" ✓ Material of plates steel ✓ Thickness 1-19/32" ✓
 Range of Tensile Strength 55,000 lbs. min. ✓ Are drum shell plates welded yes ✓ Description of riveting:—
 Cir. seams welded ✓ long. seams welded ✓ Diameter of rivet holes in long. seams --- Pitch of Rivets ---
 Lap of plate or width of butt straps --- Thickness of straps --- Percentage strength of long. joint:—Plate --- 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% ✓
 If Drum has a flat side state method of staying --- Depth and thickness of girders at centre (if fitted) --- Distance apart --- Number and pitch of stays in each --- Working pressure by rules ---
 Steam Drum Heads or Ends:—Material steel ✓ Thickness 1-19/32" ✓ Radius as shown stayed 20-13/16" ✓
 Size of Manhole or Handhole 12" x 16" ✓ Water Drums:—Number in each boiler --- Inside Diameter ---
 Material of plates --- Thickness --- Range of tensile strength --- Are drum shell plates welded or flanged --- Description of riveting:—Cir. seams --- long. seams --- 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 --- Pitch of tube holes ---
 Percentage strength of drum shell in way of tubes --- Water Drum Heads or Ends:—Material --- Thickness ---
 Radius or how stayed --- Size of manhole or handhole --- 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 4", 2" & 1 1/4" ✓
 Thickness #5, #10, & #13 B.W.G. Number 88, 88, 1290. ✓ 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 B&W ✓ Date of Approval of Plan --- Headers Tested by Hydraulic Pressure to 750 lbs. ✓
 Date of Test July 27th and 28th, 1936 Is a safety valve fitted to each section of the superheater which can be shut off from the Boiler No. ✓
 Diameter of Safety Valve 2" ✓ Pressure to which each is adjusted 390 lbs. ✓ Is easing gear fitted No. ✓
 Is a drain cock or valve fitted at lowest point of superheater Yes Number, diameter, and thickness of tubes 2742; 1 1/2", 1 1/4", & 2"; #14, 13 & 11 BWG. ✓
 Spare Gear. Tubes --- Gaskets or joints:—Manhole --- Handhole --- Handhole plates ---

The foregoing is a correct description,
[Signature] Manufacturer.

Dates of Survey During progress of work in shops: May 26th, 29th; June 11th; July 10th, 15th, 17th, 22nd, 27th and 28th, 1936. Is the approved plan of boiler forwarded herewith Yes.
During erection on board vessel: Aug. 25, Sept. 2, 11, 14, 15, 16, 29, & Oct. 12 Total No. of visits Eighteen.

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) The above mentioned boiler has been built under Special Survey, with tested materials, in accordance with the Society's Rules and approved plans, also the Rules of the Bureau of Navigation & Steamboat Inspection, for Fusion Welded Drums. The workmanship and materials were found to be good.
 The following hydraulic tests were made in the presence of the undersigned:— Drum - 1000 pounds per square inch; Sectional Headers - 750 pounds per square inch; Superheater Headers - 750 pounds per square inch. The results of tests were satisfactory.

Survey Fee ... \$240.00

When applied for, Oct. 20th 1936.

Travelling Expenses (if any) \$ 28.75

When received, 4.12 36

180.00 or 75% of Fee Cleveland
 60.00 or 25% of Fee San Francisco

Committee's Minute

Assigned + NB(WT) 10.36

NEW YORK NOV 10 1936

Engineer Surveyor to Lloyd's Register of Shipping.

Acting Surveyor to Lloyd's Register of Shipping.

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