

## REPORT ON WATER TUBE BOILERS.

No. 1942.

Received at London Office.

Date of writing Report 17. 11. 1942 When handed in at Local Office 19. 11. 1942 Port of Mobile, ALA.  
 No. in Survey held at CHICKASAW, ALA. Date, First Survey 19. 4. 42 Last Survey 7. 11. 1942  
 Reg. Bk. on the S.S. "RAPHAEL SENNELS" (Number of Visits 17) Gross 6165 Tons Net 3519  
 Built at CHICKASAW, ALA. By whom built GULF SHIPBUILDING CO. When built 1942  
 Engines made at LYNN, MASS. By whom made GENERAL ELECTRIC CO. When made 1942  
 Boilers made at BARBICATON, OHIO. By whom made BARBOCK & WILCOX CO. When made 1942  
 Nominal Horse Power 1220. Owners WATERMAN STEAMSHIP CORPN. Port belonging to Mobile, ALA.

WATER TUBE BOILERS—MAIN, AUXILIARY, OR DONKEY—Manufacturers of Steel WORTH STEEL COY.  
 Date of Approval of plan AUGUST 1941. Number and Description or Type of Boilers TWO - SINGLE DRUM TYPE. Working Pressure 500 LBS. Tested by Hydraulic Pressure to 750 Date of Test 15. 8. 42  
 No. of Certificate — Can each boiler be worked separately YES. Total Heating Surface of Boilers 7402 sq. ft. 8144 (Superheaters 1258)  
 Is forced draught fitted YES. Area of fire grate (coal) in each Boiler — No. and description of safety valves on each boiler 3. BARBOCK & WILCOX DESIGN. No. and description of safety valves on each boiler 12. 26 1/2" 9. 88 + 3 for superheat  
 HIGH LIFT CONSOLIDATED TYPE. Area of each set of valves per boiler {per rule 2 - 2 1/2" DIA. Pressure to which they are adjusted 500 LBS. Are they fitted with easing gear YES. In case of donkey boilers state whether steam from main boilers can enter the donkey boiler — Height of boiler 14' 8"  
 Width and Length 12' 4 1/2" x 9' 10". Steam Drums:—Number in each boiler ONE. Inside diameter 42 1/2"  
 Thickness of plates 3/8" Range of Tensile Strength 70,000 to 82,000 LBS. Are drum shell plates welded or flanged WELDED. If fusion welded, state name of welding firm BARBOCK & 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 — Percentage strength of long. joint:—Plate 90% Rivet — Diameter of tube holes in drum 4 3/8" 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 1/2" Radius or how stayed 33 1/2" Size of manhole or handhole 12" x 16" Water Drums:—Number in each boiler — Inside Diameter — Thickness of plates — Range of tensile strength — 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 — 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 —  
 Thickness of plates — Radius or how stayed — Size of manhole or handhole — Tested by Hydraulic Pressure to 750 LBS.  
 Headers or Sections:—Number TWELVE Material STEEL. Thickness 3/4" 1 1/4" 2" Tubes:—Diameter 1 1/4" 2" Thickness .095-.095-.134 Number 48-1318-70 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 — Plate — Rivet —  
 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:—Number in each boiler UPPER AND LOWER. Inside Diameter 5 1/2" SQUARE. Thickness 8" Material STEEL. Range of tensile strength 62,000 to 72,000 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 — Diameter of tube holes in drum — Pitch of tube holes — Percentage strength of 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 141. 1 1/4" .120.  
 Tested by Hydraulic Pressure to 750 LBS. Date of Test 15. 8. 42 Is a safety valve fitted to each section of the superheater which can be shut off from the boiler YES. No. and description of Safety Valves 2-1 1/2" CAST STEEL SPRING LOADED. Area of each set of valves — Pressure to which they are adjusted 500 LBS. Is easing gear fitted YES.  
 Spare Gear. Has the spare gear required by the rules been supplied YES.

The foregoing is a correct description,

Manufacturer.

Dates of Survey } During progress of work in shops -- APRIL 15. 15. 21. MAY 2. 3. 8. 10. JUNE 10. Is the approved plan of boiler forwarded herewith —  
 while } During erection on board vessel -- JULY 15. 18. AUG. 15. SEPT. 4. OCT. 1. Total No. of visits 17.  
 building } 2. 8. 19. NOV. 7.

Is this boiler a duplicate of a previous case YES.

If so, state vessel's name and report No. S.S. FAIRPORT 1925

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) These boilers have been built in accordance with the approved plans, the materials and workmanship are good. The boilers, tested hydrostatically upon completion and were found sound and tight. The safety valves adjusted in accordance with the approved working pressure. Accumulation test satisfactory. In my opinion these boilers are eligible to be classed with this class.

Survey Fee £ 35.00

When applied for, 19. 11. 1942

Travelling Expenses (if any) £ 25.00

When received, 19

NEW YORK DEC 2 1942

Committee's Minute

Assigned 2 WTB (Net) 500 lbs.

Engineer Surveyor to Lloyd's Register of Shipping.

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