

REPORT ON WATER TUBE BOILERS.

No. 42056

Received at London Office 25 APR 1942

Date of writing Report JAN 10 19 42 When handed in at Local Office JAN 19 19 42 Port of NEW YORK (BOSTON DISTRICT)
 No. in Survey held at QUINCY, MASS. Date, First Survey NOV 26 - 1941 Last Survey JAN 6 19 42
 Reg. Bk. on the STEEL SINGLE SCREW TANKER "SINCLAIR HC" (Number of Visits 14) Tons { Gross 7874
 Net 4596
 Built at QUINCY, MASS. By whom built BETHLEHEM STEEL CO. When built 1941
 Engines made at TRENTON, N.T. By whom made DE LAVAL STEAM TURBINE CO. When made 1941
 Boilers made at BARBERTON, OHIO By whom made BABCOCK-WILCOX CO. When made 1941
 Nominal Horse Power 897 Owners SINCLAIR REFINING CO. Port belonging to WILMINGTON, DEL.

WATER TUBE BOILERS—MAIN, AUXILIARY, OR DONKEY. Manufacturers of Steel BETHLEHEM STEEL CO.
 Date of Approval of plan AUGUST 1940 Number and Description or Type of Boilers (2) WATER TUBE SINGLE DRUM Working Pressure 500 Tested by Hydraulic Pressure to 750 Date of Test DEC 31 - 1941
 No. of Certificate — Can each boiler be worked separately YES Total Heating Surface of Boilers 6826
 Is forced draught fitted YES Area of fire grate (coal) in each Boiler —
 No. and type of burners (oil) in each boiler THREE (3) GOOD "HEX-PRESS" TYPE No. and description of safety valves on each boiler TWO CONSOLIDATED SPRING LOADED Area of each set of valve 9.82 SQ IN. 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 —
 Smallest distance between boilers or uptakes and bunkers or woodwork NO WOODWORK Height of boiler 18'-3 1/4" Width and Length 10'-9 3/4" x 14'-8"
Steam Drums:—Number in each boiler ONE Inside diameter 42 1/16" Thickness of plates 25 1/32" AND 1 5/8"
 Range of Tensile Strength 70,000 - 82,000 LBS. Are drum shell plates welded or flanged FUSION WELDED Description of riveting:—
 Cir. seams — long. seams — 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 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
 Working pressure by rules — **Steam Drum Heads or Ends:**—Range of tensile strength 65-70,000 LBS. Thickness of plates 1 5/16"
 Radius or how stayed 33 3/8" Size of manhole or handhole 12" x 16" Working pressure by rules — **Water Drums:**—Number in each boiler — Inside Diameter — Thickness of plates — Range of tensile strength — Are drum shell plates welded or flanged — Description of riveting:—Cir. seams — long. seam — 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 — Working pressure by rules — **Water Drum Heads or Ends:**—Range of Tensile strength — Thickness of plates — Radius or how stayed — Size of manhole or handhole — Working pressure by rules — **Headers or Sections:**—Number THIRTEEN (13) **Tubes:**—Diameter 1 1/4" AND 2" Thickness .095" AND .134 Number 704 - 1 1/4" 52 - 2" **Steam Dome or Collector:**—Description of Joint to Shell — Inside diameter — Thickness of shell plates — Range of tensile strength — Description of longitudinal joint — Diameter of rivet holes — Pitch of rivets — Lap of plate or width of butt straps — Thickness of straps — Percentage strength of long. joint — Plate — Rivet — Working Pressure of shell by rules — **Crown or End Plates:**—Range of tensile strength — Thickness — Radius or how stayed — Working pressure by rules —

SUPERHEATER. Drums or Headers:—Number in each boiler TWO - UPPER AND LOWER Inside Diameter 5 1/2" SQUARE Thickness 7/8" Material STEEL Range of tensile strength 62,000 - 72,000 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 1 1/4" Pitch of tube holes 1 3/4" Percentage strength of drum shell in way of tubes — Working pressure by rules — **Drum Heads or Ends:**—Thickness — Range of tensile strength — Radius or how stayed — Size of manhole or handhole — Working pressure by rules — Number, diameter, and thickness of tubes 195 - 1 1/4" - 120 Tested by Hydraulic Pressure to 750 LBS. Date of Test DEC 31 - 1941 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 CONSOLIDATED SPRING LOADED Area of each set of valves 1.77 SQ IN EACH Pressure to which they are adjusted 465 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,
 Bethlehem Steel Company (Shipbuilding Division)
 Fore River Yard L.V. Quinn Manufacturer.
 General Manager

Dates of Survey { During progress of work in shops - - - PLEASE SEE CLEVELAND REPORT NO 1074 Is the approved plan of boiler forwarded herewith NO
 while building { During erection on board vessel - - - NOV 26 DEC 1.8.17.20.29.30.31 Total No. of visits 14
JAN 1.2.3.4.5.6

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

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) THESE BOILERS HAVE BEEN ERECTED, TESTED, AND FITTED ON BOARD THIS VESSEL IN ACCORDANCE WITH THE RULES AND APPROVED PLANS. THE MATERIALS AND WORKMANSHIP ARE GOOD AND IN MY OPINION THIS VESSEL IS ELIGIBLE TO HAVE THE NOTATION 2 WTB (50T) 500 LBS.

Survey Fee ... £ charged : When applied for, 19
 Travelling Expenses (if any) £ charged : When received, 19

Committee's Minute NEW YORK JAN 28 1942

Assigned 2 WTB (50T) 500 lbs.

Engineer Surveyor to Lloyd's Register of Shipping.

015348-015354-0092