

REPORT ON WATER TUBE BOILERS.

No. 7969

Received at London Office FEB 17 1941

Date of writing Report 19 When handed in at Local Office 19 Port of Philadelphia

No. in Survey held at 0.1 Chester, Pa Date, First Survey 5 Aug Last Survey 7 Nov 1940

Reg. Bk. on the SS M V. AMERICAN SUN. (Number of Visits 7) Tons { Gross 10248 Net 6891

Built at Chester, Pa By whom built Sun Ship Bldg Co (Hull 196) When built 1940

Engines made at " By whom made " When made "

Boilers made at Bartons, N.J. By whom made Foster Wheeler Corp (WHB 190) When made "

Nominal Horse Power 1590 Owners Sun Oil Co Port belonging to Philadelphia.

WATER TUBE BOILERS EXHAUST GAS HEATED MAIN, AUXILIARY, OR DONKEY. Manufacturers of Steel Bethlehem Steel Co

Date of Approval of plan 8 August 1940 Number and Description or Type of Boilers One WT (Waste Heat) Foster Wheeler Working Pressure 245 lb Tested by Hydraulic Pressure to 368 lb Date of Test 11-10-40

No. of Certificate 727 Can each boiler be worked separately Total Heating Surface of Boilers 31500

Is forced draught fitted Area of fire grate (coal) in each Boiler 3.79 for waste heat

No. and type of burners (oil) in each boiler 2 Spring loaded Crosby high lift Area of each set of valve 1.77 sq ft Rule size 3.79 No. and description of safety valves on each boiler 2 Spring loaded Crosby high lift Pressure to which they are adjusted 245 lb

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 Height of boiler 11'-1" o/a Width and Length 8'-6" x 11'-3"

Steam Drums: Number in each boiler One Inside diameter 36" Thickness of plates 3/4" Range of Tensile Strength 65000 lb minimum Are drum shell plates welded or flanged Fusion Welded Description of riveting:—

Cir. seams Fusion Welded long. seams Fusion Welded Diameter of rivet holes in long. seams Pitch of rivets

Lap of plate or width of butt straps Fusion Weld Thickness of straps Percentage strength of long. joint:—Plate 90% allowable Rivet

Diameter of tube holes in drum 2 1/32" Pitch of tube holes 4 7/8" Percentage strength of shell in way of tubes 58.3

Working pressure by rules 311 lb **Steam Drum Heads or Ends:** Range of tensile strength 65000 minimum Thickness of plates 19/32 22/32

Radius or how stayed Elliptical 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 2 X 6 7/8" o/dia

Material Steel Thickness 1/2" Tested by Hydraulic Pressure to 368 lb **Tubes:** Diameter 2"

Thickness 1/48 Number 140 **Steam Dome or Collector:** Description of Joint to Shell None

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 None Thickness Radius or how stayed Working pressure by rules

SUPERHEATER. Drums or Headers: Number in each boiler None Inside Diameter Thickness Material 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 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 Tested by Hydraulic Pressure to Date of Test 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 Yes

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

The foregoing is a correct description,

Manufacturer.

Dates of Survey { During progress of work in shops - - - Aug 5, 23, Sept 24, Oct 4, 1940 Is the approved plan of boiler forwarded herewith

while { During erection on board vessel - - - Oct 8, 11, Nov 7, 1940 Total No. of visits 7

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.)

This boiler has been satisfactorily installed on board the vessel (the workmanship & materials are good) and in accordance with the approved plans, the boiler has been subjected to a hydrostatic test of 368 lb found satisfactory. The safety valves have been adjusted under steam to 245 lb. In my opinion the vessel is eligible to receive the notation of 3 WTDB (1 Pt) 245 lb.

Survey Fee Cleveland 85 \$ 12 \$ When applied for, 4 Jan. 1941

N York 130 \$ 12 \$ When received, 19

Travelling Expenses (if any) Phila 135 \$ 5 \$

Committee's Minute

NEW YORK JAN 8 - 1941

Assigned 1 WTDB (Exhaust Gas Heated) 245 lb.

Engineer Surveyor to Lloyd's Register of Shipping.