

REPORT ON WATER TUBE BOILERS.

No. 40511

FEB 17 1941

Received at London Office

Date of writing Report 5 Oct 1940 When handed in at Local Office 5 Oct 1940 Port of NEW YORK

No. in Survey held at NEW YORK Date, First Survey 8 July Last Survey 25 Aug 1940

Reg. Bk. on the SUN S. B. Co. Hull N^o 196 Phil (Number of Visits 4) Tons Gross 11,355
Net 6891

Master ✓ Built at CHESTER PA By whom built SUN S. B. Co. When built 1940

Engines made at CHESTER PA By whom made SUN S. B. Co. When made 1940

Boilers made at CARTARET N.J. By whom made FOSTER WHEELER CORPⁿ When made 1940

Registered Horse Power 1590 Owners SUN OIL Co. Port belonging to _____

WATER TUBE BOILERS ~~MADE~~, ~~ASSEMBLED~~ OR **DONKEY**.—Manufacturers of Steel BETHLEHEM STEEL Co.

(Letter for Record _____) Date of Approval of plan 12 MAR 1940 Number and Description or Type of Boilers 1 CARGO BOILER (SECTIONAL HEADER TYPE) Working Pressure 245 LBS Tested by Hydraulic Pressure to 368 LBS Date of Test DRUM 16/7/40

No. of Certificate PHILADELPHIA Can each boiler be worked separately YES Total Heating Surface of Boilers 5260 SQ FT. ✓

Is forced draught fitted YES Area of fire grate (coal) in each Boiler OIL FIREP Total grate area of boilers in vessel including Main and Auxiliary Two Spring Loaded No. and type of burners (oil) in each boiler 5 No. and description of safety valves on each boiler Rule 32.1 for 4000 lb. superheated 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 DIESEL ENG SHIP

Smallest distance between boilers or uptakes and bunkers or woodwork _____ Height of Boiler 13'-4" TO CENTRE OF DRUM Width and Length 16'-1/4" x 12'-8 3/8"

Steam Drums:—Number in each boiler ONE Inside diameter 42" Material of plates STEEL Thickness 1 5/16"

Range of Tensile Strength 60000 LBS 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 FUSION WELDED Pitch of Rivets _____

Lap of plate or width of butt straps _____ Thickness of straps _____ Percentage strength of long. joint:—Plate 90% ALLIGNED Rivet ✓

Diameter of tube holes in drum 4 3/32" Pitch of tube holes 7" Percentage strength of shell in way of tubes 424

If Drum has a flat side state method of staying NO FLAT SIDE Depth and thickness of girders at centre (if fitted) _____ Distance apart _____ Number and pitch of stays in each _____ Working pressure by rules 250

Steam Drum Heads or Ends:—Material STEEL Thickness 1 5/16" Radius or how stayed 42" R

Size of Manhole or Handhole 12" x 16" Water Drums:—Number in each boiler NONE 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 22

Material STEEL Thickness 1 1/16" Tested by Hydraulic Pressure to 368 LBS Material of Stays _____

Area at smallest part _____ Area supported by each stay _____ Working Pressure by Rules _____ Tubes:—Diameter 2"

Thickness 1/34" Number 748 Steam Dome or Collector:—Description of Joint to Shell NONE

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 RADIANT Date of Approval of Plan 12/3/40 Tested by Hydraulic Pressure to 368 LBS

Date of Test _____ Is a safety valve fitted to each section of the superheater which can be shut off from the Boiler _____

Diameter of Safety Valve _____ Pressure to which each is adjusted _____ Is easing gear fitted _____

Is a drain cock or valve fitted at lowest point of superheater _____ Number, diameter, and thickness of tubes 28 - 2" - 148"

Spare Gear. Tubes _____ Gaskets or joints:—Manhole _____ Handhole _____ Handhole plates _____

The foregoing is a correct description,
John S. Heck Manufacturer.
VICE PRESIDENT *Foster Wheeler Corporation*

Dates of Survey } During progress of work in shops - - - } 1940 8, 11, 16 July 28 Aug
while building } During erection on board vessel - - - }

Is the approved plan of boiler forwarded herewith _____
Total No. of visits _____

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) The Fusion Welded Drum for this boiler has been built & tested in accordance with the approved plan & Rules for Fusion Welded Pressure Vessels & the workmanship & material are good. For particulars of tests please see report hereto attached. The drum has been forwarded to Chester Pa to be fitted on board & when this has been done in accordance with the Rules & to the satisfaction of the Surveyor, the vessel will be eligible, in my opinion, to receive the notation 3 W.T.D.B. (1 Spht) 245 lbs

Survey Fee ... £ \$ 175⁰⁰ : } When applied for, 4 JAN. 1941 AT PHIL.
Travelling Expenses (if any) £ 6⁰⁰ : } When received, 19

John S. Heck
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute NEW YORK JAN 8 - 1941
Assigned See attached Report Phil. No. 7969.

