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IN B.O.

REPORT ON WATER TUBE BOILERS.

No. 1338

6 JUL 1949

Received at London Office.

Date of writing Report April 7 1949 When handed in at Local Office 19 Port of Cleveland, Ohio

No. in Survey held at Barberton, Ohio Date, First Survey Oct. 18, 1948 Last Survey February 3 1949

Reg. Bk. 570 "SOVAC PEGASUS" 572 "SOVAC ASTRAL" 574 "SOVAC COMET" (Number of Visits 17) Tons {Gross -- Net --

on the 571 "SOVAC ALADDIN" 573 "SOVAC BRILLIANT" 575 "SOVAC DAYLIGHT" Hulls 570 to 576 incl.

Built at Chester, Pennsylvania By whom built Sun Shipbuilding & Dry Dock Co. When built 1949

Engines made at -- By whom made -- When made --

Boilers made at Barberton, Ohio By whom made Babcock and Wilcox Co. When made 1949

Nominal Horse Power -- Owners -- Port belonging to --

WATER TUBE BOILERS—MAIN, AUXILIARY, OR DONKEY.—Manufacturers of Steel Worth Steel Company

Date of Approval of plan 12-28-48 and 2-1-49 Number and Description or Type 1028

of Boilers (2) B&W Marine 2 Drum single uptake Working Pressure 685# Tested by Hydraulic Pressure to 1370 Date of Test 12-10-48 12-21-48 (950 sq.ft. each superhtr. economizer)

No. of Certificate Can each boiler be worked separately Yes Total Heating Surface of Boilers (7390 each boiler)

Is forced draught fitted -- Area of fire grate (coal) in each Boiler --

No. and type of burners (oil) in each boiler Iowa straight mechanical 4 each boiler No. and description of safety valves on each boiler -- Area of each set of valves per boiler {per rule -- as fitted -- Pressure to which they are adjusted -- Are they fitted with easing gear -- 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 22'-6"

Width and Length 17'-2" Steam Drums:—Number in each boiler One Inside diameter 46-27/32"

Thickness of plates Wrapper 1-3/16" Tube 3-3/4" Range of Tensile Strength 70,000 minimum Are drum shell plates welded or flanged welded If fusion welded, state name of welding firm Babcock and Wilcox Company Have all the requirements of the rules for Class I vessels been complied with Yes Description of riveting:—Cir. seams No Riveting 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 1-1/4"-2"-3-1/4" Pitch of tube holes 1.75"

Percentage strength of shell in way of tubes .2714% Steam Drum Heads or Ends:—Range of tensile strength 70,000 psi. min. Thickness of plates 1-13/16" Radius or how stayed 6" Radius Size of manhole 12" x 16" Water Drums:—Number in each boiler One Inside Diameter 29-5/8" Thickness of plates Tube 2-1/2" Range of tensile strength 70,000 min. Are drum shell plates welded or flanged welded If fusion welded, state name of welding firm Babcock and Wilcox Co. Have all the requirements of the rules for Class I vessels been complied with Yes Description of riveting:—Cir. seams No Riveting long. seam --

Diameter of rivet holes in long. seams -- Pitch of rivets -- Thickness of straps 1-1/4"-2"-3-1/4" Percentage strength of long. joint:—Plate -- Rivet -- Diameter of tube holes in drum 1-1/4"-2"-3-1/4" Pitch of tube holes 1.75"

Percentage strength of drum shell in way of tubes .2714% Water Drum Heads or Ends:—Range of Tensile strength 70,000 min. Thickness of plates manhead 1-3/16" Blank 1" Radius 3-3/4" Size of manhole 12" x 16"

Headers:—Number 2 Rear Headers Material Seamless O.H. Carbon Steel Thickness .875 Tested by Hydraulic Pressure to 1370 psig. Generating 1-1/4" Waterwall 2" Thickness #11 BWG #8 BWG Number 1422 71

Tubes:—Diameter Waterwall 2" Thickness #11 BWG #8 BWG Number 1422 71 Steam Dome or Collector:—Description of Joint to Shell None 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 -- Pitch of rivets -- Thickness of straps -- Percentage strength of long. joint -- Plate -- Rivet --

Crown or End Plates:—Range of tensile strength None Thickness -- Radius or how stayed --

SUPERHEATER. Headers:—Number in each boiler 3 Inside Diameter 5-1/4" sq. Thickness 1" (2) O.H. seamless Carbon Steel Material (1) Chrome Moly. Range of tensile strength 70,000 minimum Are drum shell plates welded or flanged Seamless If fusion welded, state name of welding firm Seamless Have all the requirements of the rules for Class I vessels been complied with Yes Description of riveting:—Cir. seams No Riveting 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 1.275" Pitch of tube holes 1-3/16" Percentage strength of drum shell in way of tubes .310% Ends closed by hot working process Thickness 1-1/4" Range of tensile strength 70,000# min. Radius or how stayed -- Size of manhole or handhole 3-3/4" x 3-3/8" Number, diameter, and thickness of tubes 148 pcs. 1-1/4" x .135"

Tested by Hydraulic Pressure to 1370 psig. Date of Test various 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 --

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

Boilers MB. 4338 Nos. 1 & 2. The foregoing is a correct description, Manufacturer.

Dates of Survey } During progress of work in shops - - { Oct. 18, 22, 29 - Nov. 3, 16, 22 - Dec. 1, 6, 13, 16, 21, 1948. Is the approved plan of boiler forwarded herewith. Yes

while building } During erection on board vessel - - { Jan. 3, 5, 11, 14, 21 - Feb. 3, 1949. Total No. of visits

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.) The Boiler components consisting of Drums, superheater headers, water wall headers and economizer headers were built in accordance with approved drawings and under special survey during construction by Surveyors to this Society. Workmanship is satisfactory throughout and it is recommended that these Boilers become part of the machinery of a classed vessel with notation in Register of 2 WTB 685# (SPT)

Survey Fee £ : When applied for. 19

Travelling Expenses (if any) \$65.00 : When received. 19

Arranged fee to be charged by Philadelphia Surveyors on Completion. For W. Chas Clark & D. A. Johnson. Acting Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute NEW YORK JUN 15 1949

Assigned Transmit to London R. S. Haagenesen Surveyor to Lloyd's Register

