

REPORT ON WATER TUBE BOILERS.

No. 1025

See Ph. Rpt. No. 8081

Received at London Office

Date of writing Report **March 12, 1941.** When handed in at Local Office

19

Port of

Cleveland, Ohio.

20 SEP 1941

No. in Survey held at **Barberton, Ohio.** Date, First Survey **Jan. 17th** Last Survey **Feb. 11th, 1941.**

Reg. Bk. on the **(Sun Shipbuilding & Dry Dock Company's Hull No. 208)**
(Petroleum Shipping Co. Ltd. Tanker) (Number of Visits **6**)

Master **-** Built at **-** By whom built **-** When built **-**

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

Boilers made at **Barberton, Ohio.** By whom made **Babcock & Wilcox Co.**
(M.B. 1492 1 & 2) When made **1941**

Registered Horse Power **-** Owners **-** Port belonging to **-**

WATER TUBE BOILERS—MAIN, AUXILIARY, OR DONKEY.—Manufacturers of Steel **Bethlehem Steel Co.**

(Letter for Record **S**) Date of Approval of plan **October, 1940** Number and Description or Type of Boilers **(2) Water Tube (Single Drum Type)** Working Pressure **475#** Tested by Hydraulic Pressure to **713#** Date of Test **Jan. 1941**

No. of Certificate **-** Can each boiler be worked separately **-** Total Heating Surface of Boilers **-**

Is forced draught fitted **-** Area of fire grate (coal) in each Boiler **-** Total grate area of boilers in vessel including Main and Auxiliary **-** No. and type of burners (oil) in each boiler **-** No. and description of safety valves on each boiler **-**

Area of each valve **-** 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 **20'11"** Width and Length **9'10 1/4" & 13'11"**

Steam Drums:—Number in each boiler **One** Inside diameter **42-11/16"** Material of plates **Steel** Thickness **3/4" & 1-17/32"**

Range of Tensile Strength **70,000 to 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**

If Drum has a flat side state method of staying **-** Depth and thickness of girders at centre (if fitted) **-**

Distance apart **-** Number and pitch of stays in each **-** Working pressure by rules **483 lbs.**

Steam Drum Heads or Ends:—Material **Steel** Thickness **1-7/32"** Radius of ~~XXXXXX~~ **33-3/8"**

Size of Manhole or Handhole **12" x 16"** Water Drums:—Number in each boiler **-** 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 **(13)** Material **Steel** Thickness **19/32"**

Tested by Hydraulic Pressure to **713 lbs.** Material of Stays **-** Area at smallest part **-**

Area supported by each stay **-** Working Pressure by Rules **-** Tubes:—Diameter **1 1/4" & 2"** Thickness **.095" & .134"**

Number **51 - 2"** Steam Dome or Collector:—Description of Joint to Shell **-** 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 **B&W** Date of Approval of Plan **October 1940** Tested by Hydraulic Pressure to **713 lbs.**

Date of Test **Jan. & Feb. 1941.** 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 **(192) 1-1/4", .120"**

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

The foregoing is a correct description,

Babcock & Wilcox Co. Manufacturer.
E. D. Drummond

1941
Dates of Survey } During progress of work in shops - - } **Jan. 17, 20, 22, 30, Feb. 5, 11.**
while building } During erection on board vessel - - - }

Is the approved plan of boiler forwarded herewith **No**

Total No. of visits

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) **These boilers, unassembled, comprising steam drums and headers for boilers and superheaters, were built to this Society's Special Survey and approved plans, also in conformity with the Regulations of the U.S. Department of Commerce & Bureau of Marine Inspection & Navigation. The workmanship, materials, X Ray examinations, tension and bend tests of fusion welded joints and hydraulic tests, were found satisfactory.**

TO BE CREDITED TO CLEVELAND

Survey Fee ... £ : : When applied for, 19
Travelling Expenses (if any) \$ **14.00** : : When received, 19
(see Ph. Rpt. No. 8081)

E. D. Drummond
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **NEW YORK. AUG 13 1941**

Assigned *See attached First Entry Report.*



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