

# REPORT ON WATER TUBE BOILERS.

Date of writing Report 17 July 1919 When handed in at Local Office 16 July 1919 Received at London Office WED. 27 APR. 1921  
 Port of Cleveland Ohio.  
 No. in Survey held at Eric Pa Date, First Survey April 30<sup>th</sup> Last Survey 11 July 1919  
 Reg. Bk. 66874 on the 3 W.T. BOILERS N<sup>o</sup> 1498 1499 1500 5 1/2" N<sup>o</sup> 1708. " MOFFITT " FAT Number of Visits 10 Gross 6144  
 Master Jacksonville Fla Built at Jacksonville Fla By whom built A. Sanbly & Sons, Congl When built 1911-3 Tons Net 3696  
 Engines made at Hamelton, Ohio. By whom made Homer Owens + Rentschler Co When made 1919  
 Boilers made at Eric Pa By whom made Union Iron Works. When made 1919.  
 Registered Horse Power \_\_\_\_\_ Owners Emergency Fleet Corporation Port belonging to Jacksonville, Fla.  
CONTRACT NO. 3917.

## WATER TUBE BOILERS—MAIN, AUXILIARY, OR DONKEY.—Manufacturers of Steel Widvale Steel & Ordnance Co

(Letter for Record r) Date of Approval of plan 30 November 1918. Number and Description or Type of Boilers Three Foster Type Working Pressure 225# Tested by Hydraulic Pressure to 450# Date of Test 11/7/19.  
 No. of Certificate 10. Can each boiler be worked separately Yes. Total Heating Surface of Boilers 9150 Sqft.  
 Is <sup>INDUCED</sup> draught fitted Yes. Area of fire grate (coal) in each Boiler 75 Sqft Total grate area of boilers in vessel including Main and Auxiliary \_\_\_\_\_ No. and type of burners (oil) in each boiler 4 Com. pressure burners. No. and description of safety valves on each boiler one duplex 4 1/2" dia Area of each valve 31.8 sq in. Pressure to which they are adjusted 225 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 18" Height of Boiler 10' 2 7/8" Width and Length 12'-0 7/8" x 12'-6"  
 Steam Drums:—Number in each boiler one Inside diameter 42" Material of plates Steel Thickness 3/4"  
 Range of Tensile Strength 54000# Are drum shell plates welded or flanged Yes. Description of riveting:—  
 Cir. seams lap S. R. long seams 2BS/TR Diameter of rivet holes in long. seams 15/16" Pitch of Rivets 7 3/4"  
 Lap of plate or width of butt straps 3 1/8" Thickness of straps 9/16" Percentage strength of long. joint:—Plate 87.9% Rivet 66.9%  
 Diameter of tube holes in drum 3 1/8" Pitch of tube holes 7 3/4" x 3 3/8" headers. Percentage strength of shell in way of tubes 48.4%  
 If Drum has a flat side state method of staying none. Depth and thickness of girders at centre (if fitted) ✓ Distance apart ✓ Number and pitch of stays in each ✓ Working pressure by rules ✓  
 Steam Drum Heads or Ends:—Material Steel Thickness 3/4" Radius or how stayed 42"  
 Size of Manhole or Handhole 15" x 11" 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 Two each boiler  
 Material Steel Thickness 3/4" + 1/2" Tested by Hydraulic Pressure to 450# Material of Stays Iron (Hollow)  
 Area at smallest part 1.63 sq in. Area supported by each stay 52.3 sq in. Working Pressure by Rules 234# Tubes:—Diameter 3"  
 Thickness 10 Gauge. Number 489 each Steam Dome or Collector:—Description of Joint to Shell as stated above.  
 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 240# Crown or End Plates:—Material ✓ Thickness ✓ How stayed ✓

**SUPERHEATER.** Type to skin. Date of Approval of Plan \_\_\_\_\_ Tested by Hydraulic Pressure to 460 lbs.  
 Date of Test 2<sup>nd</sup> March 1919 Is a safety valve fitted to each section of the superheater which can be shut off from the Boiler Yes.  
 Diameter of Safety Valve 1 1/2" dia. Pressure to which each is adjusted 225 lbs. Is easing gear fitted Yes.  
 Is a drain cock or valve fitted at lowest point of superheater Yes. Number, diameter, and thickness of tubes 18 - 2" x 12 B.W.G.  
 Spare Gear. Tubes \_\_\_\_\_ Gaskets or joints:—Manhole \_\_\_\_\_ Handhole \_\_\_\_\_ Handhole plates \_\_\_\_\_

The foregoing is a correct description,  
Union Iron Works Manufacturer.  
per Chas B. Hooper

Dates of Survey } During progress of work in shops - - - Apr 30 May 9 23-27 June 12-17-24-27 July 9-11 Is the approved plan of boiler forwarded herewith Yes.  
 while building } During erection on board vessel - - - Oct. 18 25 28 31 No. 3 8 10 12 15 23 29 Dec. 7 15 20 29 Jan. 3 19 26 Total No. of visits 30.

**GENERAL REMARKS** (State quality of workmanship, opinions as to class, &c.) The above boilers have been constructed under Special Survey. The materials & workmanship are sound & good. The drums & headers with tubes fitted have been tested separately by hydraulic pressure to 450 lbs per sq in & found satisfactory. They have been shipped in sections to Jacksonville Fla, to be fitted in a vessel building by the Jacksonville Ship outfitting Co. The Boilers will be eligible for record of F.N.B (with date) when satisfactorily installed in vessel & tested by hydraulic pressure to 450# per sq in & the safety valves adjusted under steam. The above valves have been satisfactorily installed & tested to 450 lbs hydraulic pressure & showed no sign of weakness or defect at that pressure. Safety valves have been adjusted under steam to 225 lbs.

Survey Fee ... \$200.00 When applied for July 16<sup>th</sup> 1919  
 Travelling Expenses (if any) \$12.00 When received 17.12. 1919  
J. Robinson & J. J. ...  
 Engineer Surveyors to Lloyd's Register of Shipping.

Committee's Minute New York APR 12 1921 FRI. 16 SEP. 1921  
 Assigned See Jan. Rpt No 353  
 Lloyd's Register Foundation  
 005914 - 005928 - 0184