

REPORT ON BOILERS.

No. 166

REC'D NEW YORK July 8-1918
 Date of writing Report 1918 When handed in at Local Office 1918 Port of Cleveland Ohio
 No. in Survey held at Buffalo N.Y. Date, First Survey 2nd March Last Survey 26th April 1918
 Reg. Book. on the Main Boilers for S.S. LAKE CHARLOTTE (Number of Visits) Gross Tons 186 Net Tons 186
 Master Built at Astoria, O. By whom built The GT Lake Erie Who When built 1918-6
 Engines made at Astoria By whom made The GT Lake Erie Who When made 1918
 Boilers made at Buffalo N.Y. By whom made Lake Erie Boiler Who When made 1918
 Registered Horse Power 289 Owners U.S. Shipping Board Emergency Fleet belonging to Astoria

MULTITUBULAR BOILERS—MAIN, AUXILIARY OR DONKEY.—Manufacturers of Steel Carnegie Steel Co.

(Letter for record S.) Total Heating Surface of Boilers 4962 Is forced draft fitted No No. and Description of Boilers 2 Scotch Marine Working Pressure 190 Tested by hydraulic pressure to 300# Date of test 26-4-18
 No. of Certificate 121 Can each boiler be worked separately Yes Area of fire grate in each boiler 74.7 No. and Description of safety valves to each boiler Two Spring Area of each valve 12.57 Pressure to which they are adjusted 190 lb
 Are they fitted with easing gear Yes In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler Yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 8 1/2" Mean dia. of boilers 15'9" Length 11'0"
 Material of shell plates O.H. Steel Thickness 1 1/32" Range of tensile strength 62,720 Are the shell plates welded or flanged No
 Descrip. of riveting: cir. seams Lap, Single R. long. seams B. D. S. Diameter of rivet holes in long. seams 1 1/16" Pitch of rivets 8 1/8"
 Lap of plates or width of butt straps 19 3/4" Per centages of strength of longitudinal joint 88.1 Working pressure of shell by rules 200# Size of manhole in shell 12" X 16" Size of compensating ring 24" X 29" X 1 1/8" No. and Description of Furnaces in each boiler 3 Morrison Material O.H. Steel Outside diameter 47 1/4" Length of plain part 8'0" Thickness of plates 5/8" crown 5/8" bottom 5/8"
 Description of longitudinal joint Weld No. of strengthening rings — Working pressure of furnace by the rules 200.4# Combustion chamber plates: Material O.H. Steel Thickness: Sides 5/8" Back 5/8" Top 5/8" Bottom 29/32" Pitch of stays to ditto: Sides 7 1/8" X 7 1/8" Back 7 1/8" X 7 1/8" Top 7 1/2" X 8 1/8" If stays are fitted with nuts or riveted heads nuts on top Working pressure by rules 198# Material of stays O.H. Steel Area at smallest part 1.266 Area supported by each stay 50.76 Working pressure by rules 198# End plates in steam space: Material O.H. Steel Thickness 1 3/32" Pitch of stays 16 1/4" X 17" How are stays secured Double nuts Working pressure by rules 203# Material of stays O.H. Steel Area at smallest part 2 5/8" Area supported by each stay 276.25 Working pressure by rules 203# Material of Front plates at bottom O.H. Steel Thickness 3/4" Material of Lower back plate O.H. Steel Thickness 3/8" Greatest pitch of stays 7 1/8" X 7 1/8" Working pressure of plate by rules 219# Diameter of tubes 3 1/4" Pitch of tubes 4 1/4" X 4 1/2" Material of tube plates O.H. Steel Thickness: Front 3/4" X 1 3/32" Back 3/4" Mean pitch of stays 8 1/2" X 9" Pitch across wide water spaces 13 3/4" Working pressures by rules 215.6# Girders to Chamber tops: Material O.H. Steel Depth and thickness of girder at centre 8 3/8" X 9 1/4" X 2 Length as per rule 2' 7 1/2" Distance apart 8 1/8" Number and pitch of Stays in each 3-7 1/2"
 Working pressure by rules 204# Steam dome: description of joint to shell None % of strength of joint —
 Diameter — Thickness of shell plates — Material — Description of longitudinal joint — Diam. of rivet holes —
 Pitch of rivets — Working pressure of shell by rules — Crown plates — Thickness — How stayed —

SUPERHEATER. Type None Date of Approval of Plan — 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 —
 Diameter of Safety Valve — Pressure to which each is adjusted — Is Easing Gear fitted —

VERTICAL DONKEY BOILER— No. Description Manufacturers of steel
 Made at By whom made When made Where fixed Working pressure
 tested by hydraulic pressure to Date of test No. of Certificate Fire grate area Description of safety valves
 No. of safety valves Area of each Pressure to which they are adjusted If fitted with easing gear If steam from main boilers can enter the donkey boiler
 Dia. of donkey boiler Length Material of shell plates Thickness Range of tensile strength
 Descrip. of riveting long. seams Dia. of rivet holes Whether punched or drilled Pitch of rivets
 Lap of plating Per centage of strength of joint Rivets Working pressure of shell by rules Thickness of shell crown plates
 Radius of do. No. of Stays to do. Dia. of stays Diameter of furnace Top Bottom Length of furnace
 Thickness of furnace plates Description of joint Working pressure of furnace by rules Thickness of furnace crown plates
 Radius of do. Stayed by Diameter of uptake Thickness of uptake plates
 Thickness of water tubes

The foregoing is a correct description,
 LAKE ERIE BOILER WORKS Manufacturer.

Dates of Survey while building { During progress of work in shops - - March 2-6-8-9-15-20-21-
 { During erection on board vessel - - April 1-2-4-6-9-13-20-23-26-
 Total No. of visits 16

Is the approved plan of main boiler forwarded herewith Yes

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)

These boilers have been built under special survey:-
 The materials and workmanship employed in their construction are
 sound and good, and proved satisfactory under test.
 They have been forwarded to The Great Lakes Engineering Co. Ashtabula,
 to be fitted on board Hull No 186.

These Boilers have now been fitted on board the above Vessel

W. Linn.

Chesapeake. O.

1 July 1918

Certificate (if required) to be sent to

The amount of Entry Fee .. £	:	When applied for,
Special £	:19.....
Donkey Boiler Fee £	:	When received,
Travelling Expenses (if any) £	:19.....

Committee's Minute

Assigned

New York JUL - 9 1918

See blv. Rpt 166

W. Riddell W. Scott L. H. Osborn
 Engineer Surveyor to Lloyd's Register of Shipping.



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