

# REPORT ON BOILERS.

SEA. No. 3445

20 JUL 1942

Received at London Office

Date of writing Report 19 When handed in at Local Office 19 Port of SEATTLE, WASHINGTON

No. in Survey held at Seattle, Washington Date, First Survey July 31st Last Survey December 18 1941

Reg. Book. Todd-California Shipbuilding Corp., Yard No. 16, "Ocean Volunteer." (Number of Visits 22) } Gross 7174  
 Tons } Net 4272.

Master Built at Richmond, Calif. By whom built Todd-Calif. Shipbldg. Corp. When built 1941

Engines made at Hamilton, Ohio. By whom made General Machinery Corporation When made 1942.

Boilers made at Seattle, Wash. By whom made Puget Sound Machinery Depot When made 1941

Registered Horse Power 505. Owners British Government. Port belonging to London.

## MULTITUBULAR BOILERS—MAIN, AUXILIARY OR DONKEY.—Manufacturers of Steel Lukens, Carnegie-Illinois S. Cos.

(Letter for record S) Total Heating Surface of Boilers 7140 sq. ft. Is forced draft fitted No. and Description of Boilers One - Scotch, Single Ended Working Pressure 220 lbs Tested by hydraulic pressure to 380 lbs Date of test Dec. 11

P.S.M.D. ✓ No. of Certificate No. 5 Can each boiler be worked separately Area of fire grate in each boiler 52 sq. ft. No. and Description of safety valves to 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 Outs. 14' 9" Length 11' 9"

Material of shell plates Steel Thickness 1-13/32" Range of tensile strength (65,000 to 75,000) Are the shell plates welded or flanged No

Descrip. of riveting: cir. seams D.R. long. seams T.R.D.B.S. Diameter of rivet holes in long. seams 1 1/2" Pitch of rivets 5" & 10"

~~xxxxxx~~ width of butt straps 22-1/8" Per centages of strength of longitudinal joint 93.4 Working pressure of shell by rules 221.2 lbs Size of manhole in ~~xxxx~~ head 3-12" x 16" Size of compensating ring Flanged No. and Description of Furnaces in each boiler 3-Corrugated Material Steel Outside diameter 44-9/16" Length of plain part top 7-13/16" Thickness of plates crown 21/32"  
bottom 7-13/16" bottom 21/32"

Description of longitudinal joint Forge weld No. of strengthening rings - Working pressure of furnace by the rules 230 lbs Combustion chamber plates: Material Steel Thickness: Sides 25/32" Back 25/32" Top 25/32" Bottom 25/32" Pitch of stays to ditto: Sides (10-3/16" Back 9" x 9"

(7-5/8" (Nuts inside

Top (x 11" If stays are fitted with nuts or riveced heads Rivets outs Working pressure by rules 224 # Material of stays Steel Area at smallest part (2.06" (81.0 sq. ins. (224 lbs Dblr. 1-1/32"

Working pressure by rules (232 End plates in steam space: Material Steel Thickness 1-1/32"

Pitch of stays 21" How are stays secured D. Nuts Working pressure by rules 221 Material of stays Steel Area at smallest part 9.6 sq. ins.

Area supported by each stay 441 sq. ins. Working pressure by rules 245 # Material of Front plates at bottom Steel Thickness 1-1/32" Material of Lower back plate Steel Thickness 1-1/32" Greatest pitch of stays 9" x 9" Working pressure of plate by rules 232 Diameter of tubes 3"

Pitch of tubes (4-1/4" Material of tube plates Steel Thickness: Front 1-1/32" Back 13/16" Mean pitch of stays 9-7/16" Pitch across wide water spaces 14 1/2" Working pressures by rules 232 lbs Girders to Chamber tops: Material Steel Depth and thickness of girder at centre (x 7/8" Length as per rule 34" Distance apart 11" Number and pitch of Stays in each 3-7-5/8"

Working pressure by rules 229 Steam dome: description of joint to shell - % 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 -

## UPERHEATER.

Type - Date of Approval of Plan - Tested by Hydraulic Pressure to -

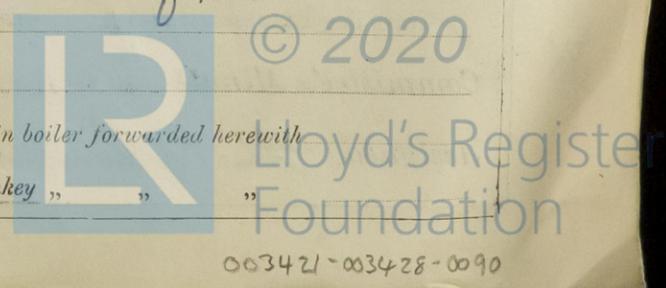
Date of Test - Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler -

Diameter of Safety Valve - Pressure to which each is adjusted - Is Easing Gear fitted -

The foregoing is a correct description,  
Puget Sound Machinery Depot Manufacturer.  
By A. B. Schaffer

Dates Survey while building: During progress of work in shops -- July: 31, Sept: 4, 12, 19, 25, 29, Oct: 1, 3, 18, 28  
 Total No. of visits 22  
 Is the approved plan of main boiler forwarded herewith Nov: 5, 13, 17, 26. Dec: 1, 3, 7, 9, 11, 15, 16, 18.

Is the approved plan of main boiler forwarded herewith " " " donkey " "



REPORT ON BOILERS

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

The Scotch marine single ended boiler herein mentioned has been built under special survey and in accordance with the Rules and approved plan. The materials tested as required by the Rules and together with workmanship, found good throughout. This boiler has now been forwarded to Todd-California Shipbuilding Corp., Richmond, California, stated to be fitted on board their Hull No. When this has been done in accordance with the Rules, to the Surveyor's satisfaction the boiler will be eligible in my opinion, to receive the notation 220 lbs in the Register Book

Certificate (if required) to be sent to  
 The Surveyors are requested not to write on or below the space for Committee's Minute.

The amount of Entry Fee .. £	:	:	When applied for.
Special .. .. .	\$	#108.61	.....19.....
Donkey Boiler Fee .. .. £	:	:	When received.
Travelling Expenses (if any) £		<del>\$4.00</del>	.....19.....

Committee's Minute NEW YORK JUL 1 1942  
 Assigned See Richmond Rpt. NO. 16

*W. Smith*  
 Engineer Surveyor to Lloyd's Register of Shipping



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