

Rpt. 5a.

REPORT ON BOILERS.

No. 42561

Received at London Office

Date of writing Report 19 When handed in at Office 19 Port of NEW YORK

No. in Reg. Book Survey held at SCHEMECTADY, N. Y. Date First Survey May 13th Last Survey June 22nd, 1942

on One Boiler of U.S. Navy Contract Nos. LL-97320 for Twenty Boilers (Number of Boilers 14) Gross Tons Net

Built at By whom built Yard No. When built

Engines made at By whom made Engine No. When made

Boilers made at Schenectady, N. Y. By whom made American Locomotive Co. Boiler No. #13 When made 1942

Nominal Horse Power Owners British Government Port belonging to

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY

Manufacturers of Steel Bethlehem Steel Co. & Worth Steel Co. (Letter for Record S)

Total Heating Surface of Boilers 2380 sq. ft. Is forced draught fitted Yes Coal or Oil fired Coal

No. and Description of Boilers One (1) Scotch Type Working Pressure 220 lbs.

Tested by hydraulic pressure to 380 lbs. Date of test June 22, 1942 No. of Certificate S-103 Can each boiler be worked separately Yes

Area of Firegrate in each boiler 43 sq. ft. No. and Description of Safety valves to each boiler

Area of each set of valves per boiler (per Rule) 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 Is oil fuel carried in the double bottom under boilers

Smallest distance between shell of boiler and tank top plating Is the bottom of the boiler insulated

Largest internal diameter of boilers 14' 6-3/16" Length 11' 8-1/32" Shell plates: Material Steel Tensile strength 65000/75000 lbs.

Thickness 1-13/32" Are the shell plates welded or flanged No Description of riveting: circ. seams end Double lap.

Long. seams T.R.D.B.S. Diameter of rivet holes in circ. seams 1 1/8" Pitch of rivets 5" and 10"

Percentage of strength of circ. and seams plate 65.2 rivets 46.3 Percentage of strength of circ. intermediate seams plate 85 rivets 93.5

Percentage of strength of longitudinal joint plate 88.7 rivets 88.7

Thickness of butt straps outer 1-3/32" inner 1-7/32" No. and Description of Furnaces in each Boiler 3 Morison

Material Steel Tensile strength 58000/68000 lbs. Smallest outside diameter 41 1/2"

Length of plain part top 9-3/16" bottom 9-3/16" Thickness of plates crown 21/32" bottom 21/32" Description of longitudinal joint Welded

Dimensions of stiffening rings on furnace or c.c. bottom

End plates in steam space: Material Steel Tensile strength 58000/68000 lbs. Thickness 1-7/16" Pitch of stays 21 1/2" x 21 1/2"

How are stays secured Double nuts.

Tube plates: Material front Steel Tensile strength 58000/68000 lbs. Thickness 31/32"

back Steel Tensile strength 58000/68000 lbs. Thickness 13/16"

Mean pitch of stay tubes in nests 10" Pitch across wide water spaces 14 1/2" x 8 1/2"

Girders to combustion chamber tops: Material Steel Tensile strength 65000/75000 lbs. Depth and Thickness of girder

at centre 10-1/4" x 1-5/4" Length as per Rule 2' 10" Distance apart 11" No. and pitch of stays

in each 3 7-5/8" Combustion chamber plates: Material Steel

Tensile strength 58000/68000 lbs. Thickness: Sides 25/32" Back 23/32" Top 25/32" Bottom 25/32"

Pitch of stays to dunnets: Sides 9" x 10-3/16" Back 9" x 9" Top 11" x 7-5/8" Are stays fitted with nuts or riveted over Nuts

Front plate at bottom: Material Steel Tensile strength 58000/68000 lbs.

Thickness 31/32" Lower back plate: Material Steel Tensile strength 58000/68000 lbs. Thickness 29/32"

Pitch of stays at wide water space 14 1/2" x 9" Are stays fitted with nuts or riveted over Nuts on main stays, balance

Main stays: Material Steel Tensile strength 60000/70000 lbs.

Diameter At body of stay 3-1/2" No. of threads per inch Six (6)

Over threads 3-3/4" Tensile strength 58000/68000 lbs.

Screw stays: Material Steel Tensile strength

Diameter At turned off part 1-3/4", 1-7/8", 2", 2-1/8" No. of threads per inch Nine (9)

Over threads

If not, state whether, and when, one will be sent?

No

Is a Report also sent on the Hull of the Ship?

(Printed in U.S.A.)

Lloyd's Register Foundation

Are the stays drilled at the ends ☒ No ☐ Yes Diameter ☒ At turned off part ☐ Over threads 2" & 2-1/8"

No. of threads per inch Nine (9)

Tubes: Material External diameter { Plant 3" Stay 3" Thickness { 3/8" & 5/16" No. of threads per inch Nine (9)

Pitch of tubes 4-1/4" x 4-1/8"

Manhole compensation: Size of opening in shell plate None Section of compensating ring - No. of rivets and diameter of rivet holes -

Outer row rivet pitch at ends - Depth of flange if manhole flanged - Steam Dome: Material None

Tensile strength - Thickness of shell - Description of longitudinal joint -

Diameter of rivet holes - Pitch of rivets - Percentage of strength of joint { Plate - Rivets -

Internal diameter - Thickness of crown - No. and diameter of stays -

How connected to shell - Inner radius of crown -

Size of doubling plate under dome - Diameter of rivet holes and pitch of rivets in outer row in dome connection to shell -

Type of Superheater N.E. Marine Engine Co. Manufacturers of { Tubes Combustion Engineering Co. Steel forgings " " " Steel castings " " "

Number of elements 58 Material of tubes Seamless Carbon Steel A.S.T.M. A-192-40 Grade A Internal diameter and thickness of tubes .689" x .093"

Material of header Seamless Carbon Steel A.S.T.M. A-106-40 Grade B Pipe strength 60000 lbs. Thickness 1-1/8" Can the superheater be shut off and the boiler be worked separately Yes Is a safety valve fitted to every part of the superheater which can be shut off from the boiler

Area of each safety valve Are the safety valves fitted with easing gear

Pressure to which the safety valves are adjusted Hydraulic test pressure: tubes forgings and castings and after assembly in place Are drain cocks or valves fitted to free the superheater from water where necessary Yes

Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with Yes

The foregoing is a correct description,
 Mechanical Engineer, American Locomotive Co.

Dates of Survey { During progress of work in shops - - June 13, 14, 21, 25, 27, 27, 28, 29, June 4, 6, 8, 10, 18, 22, 1942
 while building { During erection on board vessel - - -
 Are the approved plans of boiler and superheater forwarded herewith No
 (If not state date of approval) Approved 21st Apr., 1942
 Total No. of visits

Is this Boiler a duplicate of a previous case Yes If so, state Vessel's name and Report No. "OCEAN VANGUARD" Richmond, Calif. Rpt. No. 1

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) This boiler has been built under Special Survey in accordance with the Rules and approved plans. The workmanship and materials are good. It has been satisfactorily tested to 380 lbs. hydrostatic pressure in the presence of the undersigned. It has been forwarded to Portland, Maine, to be exported to an unknown destination arranged between the U.S.A. and British Government Authorities.

If the boiler is fitted on board a vessel classed with the Society, it will be eligible, in my opinion, to receive the notation 220 lbs.

Survey Fee ... 100.00
 Travelling Expenses (if any) 40.00

When applied for, June 29, 1942
 When received, 10

Committee's Minute

Assigned



© 2020
 Mr. Croft
 Engineer Surveyor to Lloyd's Register of Shipping.

Lloyd's Register
 Foundation