

REPORT ON BOILERS.

No. 42307

Received at London Office

-8 MAY 1942

19... When handed in at Local Office 19... Port of Portland, Maine (New York)

Survey held at Portland, Maine, U.S.A. Date, First Survey... Last Survey... 19...
See Back
(Number of Visits...)

on the S. S. "OCEAN LIBERTY" Tons { Gross 7173
Net 4278

S. Portland, Maine By whom built Todd-Bath Iron Shipbuilding Corporation No. 1 When built 1942-2

made at Hamilton, Ohio By whom made General Machinery Corp. Engine No. 6522 When made 1942

made at Schenectady, N.Y. By whom made American Locomotive Co. Boiler No. S85, S87, S89 When made 1942

al Horse Power 505 Owners British Government Port belonging to London

TUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY

Constructors of Steel Worth Steel Co. (Letter for Record S)

Heating Surface of Boilers 7140 Sq. Feet Is forced draught fitted Yes Coal or Oil fired Coal

Description of Boilers 3 Cylindrical Multitubular Working Pressure 220 lb.

by hydraulic pressure to 380 lb. Date of test Aug. 19, 21, 25 of Certificate S85, S87, S89 Can each boiler be worked separately Yes

Firegrate in each boiler 43 Sq. ft. No. and Description of Safety valves to each boiler Two Spring-Loaded Special High Lift.

each set of valves per boiler { per Rule as approved 12.67 for ordinary valves
as fitted 5.52 sq. ins. Pressure to which they are adjusted 220 lb Are they fitted with easing gear Yes

of donkey boilers, state whether steam from main boilers can enter the donkey boiler No Donkey Boiler

distance between ~~boilers~~ or uptakes and bunkers ~~xxxxxx~~ 6'-6" No Woodwork oil fuel carried in the double bottom under boilers No Oil Fuel

distance between shell of boiler and tank top plating 2'4" Is the bottom of the boiler insulated Yes

internal diameter of boilers 14'-6 3/16" Length 11'-8 1/32" Shell plates: Material Steel Tensile strength 65,000-75,000 lb.

ss 1 13/32" Are the shell plates welded or flanged No. Description of riveting: circ. seams { end D.R.
inter. None

beams T.R.D.B.S. Diameter of rivet holes in { circ. seams 1 1/2"
long. seams 1 1/2" Pitch of rivets { 10"
4.25"

age of strength of circ. end seams { plate 64.6. ✓
rivets 47.0. ✓ Percentage of strength of circ. intermediate seam { plate 85.0. ✓
rivets 93.5. ✓
combined 88.7. ✓

age of strength of longitudinal joint { plate 85.0. ✓
rivets 93.5. ✓
combined 88.7. ✓

ss of butt straps { outer 1 3/32"
inner 1 7/32" No. and Description of Furnaces in each Boiler 3 Morrison Corrugated.

Steel Tensile strength 58,200 - 68,200 lb. Smallest outside diameter 41 1/2"

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

ions of stiffening rings on furnace or c.c. bottom None

plates in steam space: Material Steel Tensile strength 58,240 lb. Thickness 1 7/16" Pitch of stays 21 1/4" x 21"

e stays secured Double Nuts.

plates: Material { front Steel Tensile strength { 58,240-68,240 lb. Thickness { 31/32"
back " " " 13/16"

itch of stay tubes in nests 9.45" 9.7 Pitch across wide water spaces 14 1/2" x 8 1/4"

to combustion chamber tops: Material Steel Tensile strength 64960-74960 lb. Depth and Thickness of girder

10 1/4" x 1 3/4" Length as per Rule 2'-10" Distance apart 11" No. and pitch of stays

3 @ 7 5/8" Combustion chamber plates: Material Steel

strength 58,240-68,240 lb. Thickness: Sides 25/32" Back 25/32" Top 25/32" Bottom 25/32"

stays to ditto: Sides 9"x10 3/16" Back 9"x9" Top 11" x 7 5/8" Are stays fitted with nuts or riveted over Nuts.

plate at bottom: Material Steel Tensile strength 58,240 - 68,240 lb.

31/32" Lower back plate: Material Steel Tensile strength 58,240-68,240 lb. Thickness 29/32"

stays at wide water space 14 1/2" x 9" Are stays fitted with nuts or riveted over Nuts.

stays: Material Steel Tensile strength 62720 - 71680 lb.

{ At body of stay, 3 1/2" No. of threads per inch 6.
or
{ Over threads 3 3/4"

stays: Material Steel Tensile strength 58,240 - 67,200 lb.

{ At turned off part, 1 3/4", 1 7/8", 2", 2 1/8" No. of threads per inch 9
or
{ Over threads

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Are the stays drilled at the outer ends No. Margin stays: Diameter { At turned off part, 2" & 2 1/8"
 No. of threads per inch 9.
 Tubes: Material S.D. Steel External diameter { Plain 3"
 Stay 3" Thickness { .165"
3/8" & 5/16" No. of threads per inch 9.
 Pitch of tubes 4 1/4" x 4 1/8" Manhole compensation: Size of opening None
 End 12" x 16" Section of compensating ring X No. of rivets and diameter of rivet holes X
 Outer row rivet pitch at ends X Depth of flange if manhole flanged X Steam Dome: Material None
 Tensile strength X Thickness of shell X Description of longitudinal joint X
 Diameter of rivet holes X Pitch of rivets X Percentage of strength of joint { Plate X
 Rivets X
 Internal diameter X Thickness of crown X No. and dia. of stays X
 Inner radius of crown X
 How connected to shell X Size of doubling plate under dome X Diameter of rivet holes in dome connection to shell X

Type of Superheater No. E. Marine Eng. Co. Type. Manufacturers of { Tubes Combustion Eng. Co.
 Steel forgings " " "
 Steel castings " " "

Number of elements 58. each lb. Material of tubes S.D. Steel Internal diameter and thickness of tubes 7/8" x .093"
 Material of headers S. D. Steel Tensile strength 62,000 Lb. Min. Thickness 1 1/8" Can the superheater be shut off from the boiler Yes.
 the boiler be worked separately No. Is a safety valve fitted to every part of the superheater which can be shut off from the boiler Yes.
 Area of each safety valve 1.77 sq. ins. Are the safety valves fitted with easing gear Yes.
 Pressure to which the safety valves are adjusted 220 lb/in² Hydraulic test pressure 220 lb/in²
 tubes 1000 lb/in² forgings and castings 440 lb/in² and after assembly in place X Are drain 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,

Todd Bath Iron Shipbuilding Corp.

Dates of Survey { During progress of work in shops - - } See attached reports. Are the approved plans of boiler and superheater forwarded herewith approved (If not state date of approval.) 26th March, 1942.
 while building { During erection on board vessel - - } continuous from 23 July, 1941 until 16th March, 1942. Total No. of visits 1

Is this Boiler a duplicate of a previous case No. If so, state Vessel's name and Report No. X

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) These boilers, built under the supervision of the Society's Surveyors, have now been fitted on board this vessel in accordance with the approved plans and the Society's Rules. The workmanship is good. For full particulars see attached boiler reports Nos. S 85, S 87 & S 89.

Survey Fee ... £ See Machinery When applied for, 10
 Travelling Expenses (if any) £ Report : When received, 10

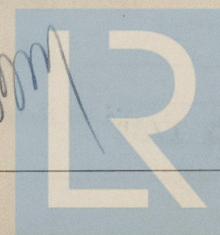
7th B. Picketing & others

R. C. Hackell & C. Macpherson

Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute NEW YORK APR 15 1942

Assigned 3 S B (Sht) 220 lbs.



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