

Rpt. 5a.

REPORT ON BOILERS.

No. S-74

Received at London Office.

5 FEB 1943

(9) opening in
Date of writing Report August 6 1941 When handed in at London Office 19 Port of New York
No. in Reg. Book. Survey held at Schenectady, N. Y. Date, First Survey July 1st. Last Survey August 5th 1941
on the British Government Freighters S/S "Ocean Angel" (Number of Visits 29) Tons { Gross -
Net -
Built at S. Portland, Maine By whom built Todd-Bath Iron Shipbuilding Corporation Yard No. - When built 1941
Engines made at Hamilton, Ohio By whom made General Machinery Corporation Engine No. - When made 1941
Boilers made at Schenectady, N. Y. By whom made American Locomotive Co. Boiler No. S-74 When made 1941
Nominal Horse Power 505 Owners British Government Port belonging to -

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY

Manufacturers of Steel Worth Steel Co. (Letter for Record S) Total Heating Surface of Boilers 7140 sq. ft. Is forced draught fitted Yes Coal or Oil fired Coal
No. and Description of Boilers One (1) Scotch Type Working Pressure 220
Tested by hydraulic pressure to 380 lbs. Date of test August 5, 1941 No. of Certificate S-74 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 2 spring load high lift
Area of each set of valves per boiler { per Rule 5.52 sq. in. Pressure to which they are adjusted 225 lbs. Are they fitted with easing gear Yes
as fitted approved
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 See Installation Report Is oil fuel carried in the double bottom under boilers -
Smallest distance between shell of boiler and tank top plating See Installation Report 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 to 75000 lbs.
Thickness 1-13/32" Are the shell plates welded or flanged No Description of riveting: circ. seams { end Double lap
inter 10"
Long. seams T.R.D.B.S. Diameter of rivet holes in { circ. seams 1 1/2" Pitch of rivets { 4.25"
long. seams 1 1/2"
Percentage of strength of circ. end seams { plate 64.6 Percentage of strength of circ. intermediate seam { plate None
rivets 47.0
rivets 85.0
Percentage of strength of longitudinal joint { plate 85.0
rivets 93.5
combined 88.7
Thickness of butt straps { outer 1-3/32 No. and Description of Furnaces in each Boiler 3 Morrison
inner 1-7/32
Material Steel Tensile strength 58200 to 68200 lbs. Smallest outside diameter 41 1/2"
Length 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"
Dimensions of stiffening rings on furnace or c.c. bottom None
End plates in steam space: Material Steel Tensile strength 58240 to 68240 lbs. Thickness 1-7/16" Pitch of stays 21 1/4" x 21"
How are stays secured Double Nuts
Tube plates: Material { front Steel Tensile strength { 58240 to 68240 lbs. Thickness { 31/32"
back Steel Thickness { 13/16"
Mean pitch of stay tubes in nests 9.45" Pitch across wide water spaces 14 1/2" x 8 1/4"
Girders to combustion chamber tops: Material Steel Tensile strength 64960 to 74960 lbs. Depth and Thickness of girder
at centre 10 1/4" x 1-3/4" 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 58240 to 68240 lbs. Thickness: Sides 25/32 Back 23/32 Top 25/32 Bottom 25/32
Pitch of stays to ditto: 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 58240 to 68240 lbs.
Thickness 31/32" Lower back plate: Material Steel Tensile strength 58240 to 68240 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
Main stays: Material Steel Tensile strength 62720 to 71680 lbs.
Diameter { At body of stay 3 1/2" No. of threads per inch Six (6)
or Over threads 3-3/4"
Screw stays: Material Steel Tensile strength 58240 to 67200 lbs.
Diameter { At turned off part 1-3/4" No. of threads per inch Nine (9)
or Over threads 1-7/8" 2" 2-1/8"

Are the stays drilled at the outer ends _____ No. _____ Margin stays: Diameter { ~~XXXXXX~~ Over threads. 2" x 2-1/8"
 No. of threads per inch _____ Nine (9)
 Tubes: Material Seamless Steel External diameter { Plain 3" Stay 3" Thickness { .165 3/8" x 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 _____ 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 _____ Inner radius of crown _____
 How connected to shell _____ 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/ Tubing Stay 2-5/8" ID 3/8" Wall 2-11/16" ID 5/16 Wall A.S.T.M.-A-106-40 Class B. Internal diameter and thickness of tubes Plain 2.68 ID-#8 L.S.G.
 Material of headers 25-30 Carbon for Welding Tensile strength 62000 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

R. J. Smith

The foregoing is a correct description,

Mechanical Engineer for American Locomotive Co. Manufacturer.

Dates of Survey { During progress of work in shops - - July 1st, 1941 to August 5, 1941 Continuous Attendance Are the approved plans of boiler and superheater forwarded herewith Approved 24 of March, while building { During erection on board vessel - - - Total No. of visits Twenty-nine days

Is this Boiler a duplicate of a previous case Yes If so, state Vessel's name and Report No. Vessel not named. New York Rpt. S-1.

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) The boiler has been built under special survey in accordance with the Rules and approved plans, and the workmanship and material is good. It has been satisfactorily tested to 380 lbs. by hydraulic pressure in presence of the undersigned. It has been forwarded to S. Portland, Maine to be fitted on board, and when this has been done in accordance with the rules, the vessel will be eligible in my opinion to receive the notation L.M.C. with date, and 220 lbs and F.D. in the Register Book.

Survey Fee ... £ See Mcky When applied for, 19
 Travelling Expenses (if any) £ Report When received, 19

Thomas Park
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute NEW YORK DEC 30 1942
 Assigned See First Entry Report.



© 2020

Lloyd's Register Foundation