

pt. 5a.
EP 1944
D.O.

REPORT ON BOILERS.

MOB. 17765
No. 17714.

Received at London Office

21 SEP 1944

Date of writing Report 16th Sept. 1944. When handed in at Local Office 20th Sept. 1944 Port of Middlesbrough.

No. in Survey held at 1044. Date, First Survey 28th March Last Survey 8th Sept. 1944
g. Book. (Number of Visits 17.) Gross 8196
Tons Net 4566

S/S "WAVE EMPEROR."

built at Haverhill Hill. n. Des By whom built Turner Shipbuilding Co. Ltd. Yard No. 361 When built 1944-12.
Engines made at West. Liverpool By whom made Richardson Westgarth. Engine No. 2748 When made
Boilers made at Haverhill Hill. n. Des By whom made Haverhill Hill. n. Des & Riley Boilers Ltd. Boiler No. 6827 When made 1944
pitch Owners Admiralty Port belonging to London.
Nominal Horse Power

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel The Steel Company of Scotland (Letter for Record 5. ✓)
Total Heating Surface of Boilers 2080 sq. ft. Is forced draught fitted Coal or Oil fired
No. and Description of Boilers 1 SE. Marine. Working Pressure 180 lbs./sq. in. ✓
Tested by hydraulic pressure to 320 lbs. Date of test 8/9/44 No. of Certificate 7122 Can each boiler be worked separately
Area of Firegrate in each Boiler No. and Description of safety valves to each boiler 2 1/2" Spring-Loaded Lift. ✓
Area of each set of valves per boiler { per Rule 6.67 sq. ft. ✓ Pressure to which they are adjusted 185 lbs. Are they fitted with easing gear Yes
as fitted 7.95 sq. ft. ✓
In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler No. ✓
Smallest distance between boilers or uptakes and bunkers or woodwork 3'-6" Is oil fuel carried in the double bottom under boilers ✓
Smallest distance between shell of boiler and tank top plating 18" Is the bottom of the boiler insulated Yes. ✓
Largest internal dia. of boilers 13'-3 1/4" Length 11'-6" Shell plates: Material Steel Tensile strength 29-33. ✓
Thickness 1 3/32" Are the shell plates welded or flanged No. ✓
Long. seams TR. D.B.S. Diameter of rivet holes in { circ. seams 1 3/16" ✓ Pitch of rivets { end 3-59. ✓
{ long. seams 1 3/16" ✓ { inter. 8 3/16" ✓
Percentage of strength of circ. end seams { plate 66.9% ✓ Percentage of strength of circ. intermediate seam { plate
{ rivets 44.7 ✓ { rivets
Percentage of strength of longitudinal joint { plate 85.5 ✓
{ rivets 91.85 ✓
{ combined 87.36 ✓
Thickness of butt straps { outer 7/8" ✓ No. and Description of Furnaces in each Boiler 3 Deep. Corrugated. ✓
{ inner 1" ✓ Tensile strength 26-30. ✓ Smallest outside diameter 3'-1 1/4" ✓
Material Steel ✓ Description of longitudinal joint welded. ✓
Length of plain part { top Thickness of plates { crown 1/2" ✓
{ bottom { bottom 1/2" ✓
Dimensions of stiffening rings on furnace or c.c. bottom ✓
End plates in steam space: Material Steel Tensile strength 26-30. ✓ Thickness 1 5/32" Pitch of stays 19" x 17 1/2" ✓
How are stays secured Stays secured into back end. Stays from front end. Stays from both ends. ✓
Tube plates: Material { front Steel ✓ Tensile strength 26-30. ✓ Thickness 1 3/16" ✓
{ back Steel ✓
Mean pitch of stay tubes in nests 9 3/8" Pitch across wide water spaces 13 1/2" ✓
Girders to combustion chamber tops: Material Steel Tensile strength 28-32. ✓ Depth and thickness of girder
at centre 8 3/8" - 2 @ 1 3/16" Length as per Rule 2'-8" Distance apart 10" No. and pitch of stays
in each 2 - 10" Combustion chamber plates: Material Steel
Tensile strength 26-30. ✓ Thickness: Sides 2 1/32" Back 1 1/16" Top 2 1/32" Bottom 2 1/32" ✓
Pitch of stays to ditto: Sides 10" x 8" Back 10 1/2" x 7 1/2" Top 10" x 10" Are stays fitted with nuts or riveted over
other " " cc's only. ✓
Front plate at bottom: Material Steel Tensile strength 26-30. ✓ Thickness 27/32" ✓
Thickness 1 3/16" Lower back plate: Material Steel Tensile strength 26-30. ✓ Thickness 27/32" ✓
Pitch of stays at wide water space 15" Are stays fitted with nuts or riveted over No. ✓
Main stays: Material Steel Tensile strength 28-32. ✓
Diameter { At body of stay, 27/8" ✓ No. of threads per inch 6. ✓
{ Over threads 8 1/4" ✓ Tensile strength 26-30. ✓
Screw stays: Material Steel
Diameter { At turned off part, 1 3/4" ✓ No. of threads per inch 9 ✓
{ Over threads 1 3/4" ✓

Are the stays drilled at the outer ends No. Margin stays: Diameter { At turned off part, 1 7/8" or Over threads 1 7/8"

No. of threads per inch 9.

Tubes: Material Standard Steel External diameter { Plain 2 1/2" Stay 2 1/2" Thickness { 9 w. 1. 3/8" + 5/16" No. of threads per inch 9

Pitch of tubes 3 3/4" x 3 3/4" Manhole compensation: Size of opening in shell plate 20 1/2" x 16 1/2" Section of compensating ring 6 3/4" x 1 1/8" No. of rivets and diameter of rivet holes 36 - 1 3/16"

Outer row rivet pitch at ends 8 3/16" 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

Manufacturers of { Tubes _____ Steel forgings _____ Steel castings _____

Number of elements _____ Material of tubes _____ Internal diameter and thickness of tubes _____

Material of headers _____ Tensile strength _____ Thickness _____ Can the superheater be shut off and the boiler be worked separately _____ 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 _____

Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with or and on behalf of

The foregoing is a correct description,

A. M. Puley Manufacturer.

Dates of Survey { During progress of work in shops - - 1944 March 28, April 19, May 4, 10, 22, June 6, 12, 20, 28, July 3, 12, 20, Aug. 2, 9, 16, 30, Sept. 8. Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.)

while building { During erection on board vessel - - - } Total No. of visits 17.

Is this Boiler a duplicate of a previous case No. If so, state Vessel's name and Report No. Holbro Report No. 17673

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

This boiler has been constructed under Special Survey & in accordance with the Rule Requirements & approved plan.

The materials & workmanship are good & on completion the boiler was hydrostatically tested to 320 lbs/sq. in. & found satisfactory.

This boiler is being dispatched to the Green Shipbuilding Co. - Haverton Hill, for Richardson's Westgate. Contract No. 2748.

This boiler has now been securely fitted on board & examined under working conditions & found satisfactory.

On completion the SVs were adjusted under steam to 185 lbs/sq. in.

Survey Fee ... £ 13 : 18 : 0
SUPERVISION FEE 3 : 9 : 6
Travelling Expenses (if any) £

MD8 - 8-1-45.
When applied for, 20-9-1944.
When received, 19

G. L. Mearns
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

FRI. 26 JAN 1945

Assigned

Su F.E. machy, rpt.



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Foundation