

REPORT ON BOILERS.

No. 114465

Received at London Office 10 JUL 1957
 Date of writing Report 30.6.19.57. When handed in at Local Office 2.7.19.57. Port of NEWCASTLE-ON-TYNE
 No. in Survey held at South Shields. Date, First Survey 27.10.56. Last Survey 28.6.1957.
 eg. Book. 2057 on the s.s. "ESSO WANDSWORTH".
 (Number of Visits.....) Tons {Gross 4352
 Net 2110
 Built at Ferrysburg, Michigan By whom built Johnston Bros. Yard No. 17. When built 1943.
 Engines made at Wilkes-Barre Pa. By whom made Vulcan Iron Works. Engine No. P.31 S.32 When made 1943.
 Boilers made at Ferrysburg, Michigan By whom made Johnston Bros. Boiler No. P.489 S.488 When made 1943.
 IN as per Rule 360 Owners Esso Petroleum Co. Ltd. Port belonging to London.

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel
 Total Heating Surface of Boilers $2 \times 2565 = 5130$ sq. ft. Of Superheaters None fitted.
 Total for Register Book 5130 sq. ft. Is forced draught fitted Yes. Coal or Oil fired Oil fired.
 No. and Description of Boilers 2 Scotch Multitubular (3 Furnace). Working Pressure 180 lbs.in².
 Tested by hydraulic pressure to 250 lbs. Date of test 29.5.57 No. of Certificate - Can each boiler be worked separately Yes.
 Area of Firegrate in each Boiler - No. and Description of safety valves to each boiler 2 Consolidated. 35"
 Area of each set of valves per boiler {per Rule 10.9 ins².
 as fitted 19.25 ins². Pressure to which they are adjusted 180 lbs. in². Are they fitted with easing gear Yes.
 In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler -
 Smallest distance between boilers or uptakes and bunkers 2' 8" Is oil fuel carried in the double bottom under boilers No.
 & D.B. Tanks.
 Smallest distance between boilers 1' 5" Is the bottom of the boiler insulated Yes.
 Largest internal dia. of boilers 15' 6" Length 11' 7⁵/₁₆". Shell plates: Material Steel. Tensile strength -
 If fusion welded, state name of welding Firm - Have all the requirements of the Rules for Class I vessels
 been complied with Yes Thickness 1¹/₄" Are the shell plates welded or flanged - Description of riveting: circ. seams end Double zig-zag.
 long, seams 3 rows, Outer row 2 Diameter of rivet holes in {circ. seams 15¹/₁₆" x 1¹/₂"
 x pitch of inner 2 rows. {long. seams 15¹/₁₆" Pitch of rivets {37⁷/₈" rows 2¹/₄" apart.
 inner 4¹/₄" outer 8¹/₄".
 Percentage of strength of circ. end seams {plate 66.1%
 rivets 84.5% Percentage of strength of circ. intermediate seam {plate -
 rivets -
 Percentage of strength of longitudinal joint {plate 84.5%
 rivets 86.2%
 combined 86.3%
 Thickness of butt straps {outer 1"
 inner 1¹/₂" No. and Description of Furnaces in each Boiler 3 Morison Type Corrugations.
 Material Steel (Grade B) Tensile strength 55,000/65,000 lb.in². Smallest outside diameter 3' 11⁵/₁₆".
 Length of plain part {top 11"
 bottom 11" Thickness of plates 19/32" Description of longitudinal joint Welded.
 Dimensions of stiffening rings on furnace or c.c. bottom -
 End plates in steam space: Material Steel Tensile strength 55,000/65,000 lb.in². Thickness 1⁵/₁₆". Pitch of stays 18" x 21".
 How are stays secured Main Stays, Nut Inside and Outside. Combustion Chamber welded, and screwed & Caulked in
 Tube plates: Material {front Steel
 back Steel Tensile strength {Stated to be 55,000/65,000 lb.in². Thickness 15¹/₁₆".
 11¹/₁₆".
 Mean pitch of stay tubes in nests 7¹/₂" x 10¹/₄". Pitch across wide water spaces 13¹/₂" x 8¹/₂".
 Stated to be 55,000/
 65,000 lbs. in².
 Girders to combustion chamber tops: Material Grade B Steel. Tensile strength 65,000 lbs. in². Depth and thickness of girder
 at centre 10¹/₂" x 3". Length as per Rule 38¹/₂" Distance apart 9" No. and pitch of stays
 in each 3 x (8¹/₂" x 9". Combustion chamber plates: Material Grade B Steel.
 Tensile strength 55,000/65,000 lbs. in². Thickness: Sides 3" Back 23/32" Top 3" Bottom 13/16".
 Pitch of stays to ditto: Sides 8¹/₂" x 8¹/₂". Back 9" x 8¹/₂" Top - Are stays fitted with nuts or riveted over Welded & Screwed.
 Front plate at bottom: Material Grade B Steel. Tensile strength Stated to be 55,000/65,000 lbs.in².
 Thickness 13/16". Lower back plate: Material Grade B Steel. Tensile strength 65,000 lb.in². Thickness 7/8"
 Pitch of stays at wide water space 13¹/₂" x 8¹/₂" Are stays fitted with nuts or riveted over Fitted with nuts.
 Main stays: Material Grade B Steel. Tensile strength Stated to be 55,000/65,000 lbs.in².
 Diameter {At body of stay 3"
 Over threads 3³/₈" No. of threads per inch 4 U.S.F. Threads / in.
 Screw stays: Material Grade B Steel. Tensile strength Stated to be 55,000/65,000 lbs.in².
 Diameter {At turned off part 1⁵/₈"
 Over threads 1⁵/₈" No. of threads per inch 10

Are the stays drilled at the outer ends Yes. Margin stays: Diameter { At turned off part, 1 3/4" or Over threads... 1 3/4" }
No. of threads per inch 10
Tubes: Material Steel External diameter { Plain 2 1/2" Stay 2 1/2" } Thickness 11 BWG No. of threads per inch 10
Pitch of tubes 3 3/4" x 3 3/4" 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 4 1/2" Steam Dome: Material -
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 the Rules Sections 14-1-22 inclusive for boilers been complied with Yes

The foregoing is a correct description, Manufacturer -
Dates of Survey { During progress of work in shops - - } Are the approved plans of boiler and superheater forwarded herewith Yes (If not state date of approval.)
while building { During erection on board vessel - - - } Total No. of visits -
Is this Boiler a duplicate of a previous case Yes If so, state Vessel's name and Report No. Esso Fulham.

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)
These Boilers were built under A.B. Survey and have now been examined throughout, Scantlings Verified, Securing Arrangements Examined, Hydraulically Tested to 250 lbs. in², Safety Valves Adjusted under steam to 180 lbs. in², and satisfactory Accumulation Tests carried out.
These Boilers are in our opinion satisfactory for Classification with this Society.
For record please see Report 9 attached.

See Report 9.
Survey Fee ... £ : : :
Travelling Expenses (if any) £ : : :
When applied for, 19...
When received, 19...

Committee's Minute FRIDAY 9 AUG 1957
Assigned See Rpt. 8.
W. T. Mathieson, A. Ross, and R. H. Banks.
Engineer Surveyors to Lloyd's Register of Shipping.
Lloyd's Register Foundation