

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.

2057 on the s.s. "ESSO WANDSWORTH". (Number of Visits) 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. S.32 When made 1943.

Boilers made at Ferrysburg, Michigan By whom made Johnston Bros. Boiler No. 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 x 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. 3 1/2"

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.

Smallest distance between boilers 1' 5" Is the bottom of the boiler insulated Yes.

Largest internal dia. of boilers 15' 6" Length 11' 7 5/16". 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 1 1/4" Are the shell plates welded or flanged - Description of riveting: circ. seams Double zig-zag.

long. seams 3 rows, Outer row 2 Diameter of rivet holes in { circ. seams 15/16" x 1 1/2" Pitch of rivets { 37/8" rows 2 1/4" apart. inner 4 1/4" outer 8 1/2".

Percentage of strength of circ. end seams { plate 66.1% rivets - 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 1 1/8" 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' 11 5/16".

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 1 5/16". Pitch of stays 18" x 21".

How are stays secured Main Stays, Nut Inside and Outside. Combustion Chamber welded, and screwed & Caulked in Shell.

Tube plates: Material { front Steel back Steel Tensile strength { Stated to be 55,000/65,000 lb.in². thickness { 15/16". 11/16".

Mean pitch of stay tubes in nests 7 1/2" x 10 1/2". Pitch across wide water spaces 13 1/2" x 8 1/2".

Girders to combustion chamber tops: Material Grade B Steel. Tensile strength 55,000/65,000 lbs. in². Depth and thickness of girder

at centre 10 1/2" x 3". Length as per Rule 38 1/2" Distance apart 9" No. and pitch of stays

in each 3 x (8 1/2" x 9". Combustion chamber plates: Material Grade B Steel.

Tensile strength 55,000/65,000 lbs. in². Thickness: Sides 3/4" Back 23/32" Top 3/4" Bottom 13/16".

Pitch of stays to ditto: Sides 8 1/2" x 8 1/2". Back 9" x 8 1/2" 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 44" 13 1/2" x 8 1/2" 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" 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 1 5/8" No. of threads per inch 10

Over threads 3 3/8"

Over threads 1 5/8"

Are the stays drilled at the outer ends Yes.

Margin stays: Diameter At turned off part, Over threads. 1 3/4"

No. of threads per inch 10

Tubes: Material Steel External diameter Plain, Stay. 2 1/2" Thickness 11 BWG 5/16" + 1/4" 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 -

Area of each safety valve - Is a safety valve fitted to every part of the superheater which can be shut off from the boiler -

Pressure to which the safety valves are adjusted - Are the safety valves fitted with easing gear -

tubes - forgings and castings - and after assembly in place - Hydraulic test pressure: valves fitted to free the superheater from water where necessary - Are drain cocks or

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 while building During progress of work in shops - - - During erection on board vessel - - - Are the approved plans of boiler and superheater forwarded herewith Yes (If not state date of approval.)

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.....

W. T. Mathieson A. Ross R. H. Banks
 Engineer Surveyors to Lloyd's Register of Shipping.

Committee's Minute FRIDAY 9 AUG 1957

Assigned See Rpt. 8.

