

REPORT ON BOILERS.

No. 2855.

Received at London Office 25 DEC 1941

Date of writing Report 17.12.41. When handed in at Local Office 10 Port of Barns.

Survey held at Barns. Date, First Survey 16.10.41 Last Survey 12.12.41.

on the 7^{1/2} "EMPIRE BAXTER". (Number of Visits 13.) Tons { Gross 7023.65 Net 5052.10

Master Built at Barns. By whom built Vickers Armstrongs Ltd No. 787 When built 1941

Engines made at Glasgow. By whom made Barclay Curle & Co. Engine No. EW 135 When made 1941

Boilers made at Grenock. By whom made J. G. Kincaid & Co Ltd Boiler No. 249 When made 1941

Nominal Horse Power 516 Owners Ministry of Shipping Port belonging to Barns.

MULTITUBULAR BOILERS ~~MAIN~~, AUXILIARY, ~~OR DONKEY~~.

Manufacturers of Steel _____ (Letter for Record _____)

Total Heating Surface of Boilers _____ Coal or Oil fired _____

No. and Description of Boilers _____ Working Pressure _____

Tested by hydraulic pressure _____ Date of test _____ No. of Certificate _____ Can each boiler be worked separately _____

Area of Firegrate in each Boiler _____ No. and Description of safety valves to each boiler _____

Area of each set of valves per boiler { per Rule _____ as fitted _____ } Pressure to which they are adjusted 225 lb 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 or woodwork 2' 1/2" Is oil fuel carried in the double bottom under boilers No

Smallest distance between shell of boiler and tank top plating 3' 6 1/2" Is the bottom of the boiler insulated Yes.

Largest internal dia. of boilers _____ Length _____ Shell plates: Material _____ Tensile strength _____

Thickness _____ Are the shell plates welded or flanged _____ Description of riveting: circ. seams { end _____ inter. _____ }

Percentage of strength of circ. end seams { plate _____ rivets _____ } Diameter of rivet holes in { circ. seams _____ long. seams _____ } Pitch of rivets { _____ }

Percentage of strength of longitudinal joint { plate _____ rivets _____ combined _____ } Working pressure of shell by Rules _____

Thickness of butt straps { outer _____ inner _____ } No. and Description of Furnaces in each Boiler _____

Material _____ Tensile strength _____ Smallest outside diameter _____

Length of plain part { top _____ bottom _____ } Thickness of plates { crown _____ bottom _____ } Description of longitudinal joint _____

Dimensions of stiffening rings on furnace or c.c. bottom _____ Working pressure of furnace by Rules _____

Stays in steam space: Material _____ Tensile strength _____ Thickness _____ Pitch of stays _____

How are stays secured _____ Working pressure by Rules _____

End plates: Material { front _____ back _____ } Tensile strength { _____ } Thickness { _____ }

Can pitch of stay tubes in nests _____ Pitch across wide water spaces _____ Working pressure { front _____ back _____ }

Orders to combustion chamber tops: Material _____ Tensile strength _____ Depth and thickness of girder _____

centre _____ Length as per Rule _____ Distance apart _____ No. and pitch of stays _____

each _____ Working pressure by Rules _____ Combustion chamber plates: Material _____

Tensile strength _____ Thickness: Sides _____ Back _____ Top _____ Bottom _____

Pitch of stays to ditto: Sides _____ Back _____ Top _____ Are stays fitted with nuts or riveted over _____

Working pressure by Rules _____ Front plate at bottom: Material _____ Tensile strength _____

Thickness _____ Lower back plate: Material _____ Tensile strength _____ Thickness _____

Pitch of stays at wide water space _____ Are stays fitted with nuts or riveted over _____

Working Pressure _____ Main stays: Material _____ Tensile strength _____

At body of stay, _____ No. of threads per inch _____ Area supported by each stay _____

Over threads _____

Working pressure by Rules _____ Screw stays: Material _____ Tensile strength _____

At turned off part, _____ No. of threads per inch _____ Area supported by each stay _____

Over threads _____



Working pressure by Rules _____ Are the stays drilled at the outer ends _____ Margin stays: Diameter { At turned off part, or Over threads _____

No. of threads per inch _____ Area supported by each stay _____ Working pressure by Rules _____

Tubes: Material _____ External diameter { Plain Stay _____ Thickness { _____ No. of threads per inch _____

Pitch of tubes _____ Working pressure by Rules _____ **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 _____

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 _____ Working pressure by Rules _____ Thickness of crown _____ No. and diameter of stays _____ Inner radius of crown _____ Working pressure by Rules _____

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 _____ Are the safety valves fitted with easing gear _____ Working pressure as per Rules _____ 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 _____

The foregoing is a correct description,
 For VICKERS-ARMSTRONGS LIMITED,
Mitchell Manufacturer.

Dates of Survey { During progress of work in shops - - } _____ Are the approved plans of boiler and superheater forwarded herewith 7. 3. 41. (If not state date of approval.)

while building { During erection on board vessel - - - } 1941 Oct 16 17 20 25 31. Nov 3 15 19 26 27 } Total No. of visits 13.
 Dec. 10 11 12

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

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

This boiler has been efficiently installed on board in accordance with Rule requirements & approved plans. The safety valves have been adjusted under steam as above.

Survey Fee *See minutes: repl.* } When applied for, 19 _____
 Travelling Expenses (if any) £ : : } When received, 19 _____

Mitchell
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 9 JAN 1942
 Assigned *See f.e. machy repl.*