

REPORT ON BOILERS.

No. 54968

Received at London Office

19 SEP 1934

Date of writing Report _____ 19 _____ When handed in at Local Office 18.9.1934 Port of Glasgow
 No. in Survey held at Grangemouth Date, First Survey 5th May 31 Last Survey 17th Sept 1934
 Book. _____ (Number of Visits 25) Tons { Gross 729 Net 301 }
5588 on the S.S. ELKHOUND
 Built at Bristol By whom built C. Hill & Son Ltd Yard No. When built 1929
 Engines made at Clydebank By whom made Aitchison Blair & Co. Engine No. 181 When made 1934
 Boilers made at Glasgow By whom made D. Rowan & Co. Boiler No. 386 When made 1934
 Nominal Horse Power _____ Owners Irvin Steamship Ltd Port belonging to London

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel _____ (Letter for Record S)
 Total Heating Surface of Boilers lb Is forced draught fitted _____ Coal or Oil fired Yes
 No. and Description of Boilers One single ended Cylinder return tube Working Pressure 180 lbs
 Tested by hydraulic pressure to _____ 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 One pair 2 5/8" High Lift
 Area of each set of valves per boiler { per Rule 15.7 sq in as fitted 16.2 } Pressure to which they are adjusted 180 lbs. Are they fitted with casing 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 24" Is oil fuel carried in the double bottom under boilers No
 Smallest distance between shell of boiler and tank top plating open floors Is the bottom of the boiler insulated No
 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. _____ }
 Long. seams _____ Diameter of rivet holes in { circ. seams _____ long. seams _____ } Pitch of rivets { _____ }
 Percentage of strength of circ. end seams { plate _____ rivets _____ } Percentage of strength of circ. intermediate seam { plate _____ rivets _____ }
 Percentage of strength of longitudinal joint { plate _____ rivets _____ combined _____ } Working pressure of shell by Rules _____
 Thickness of butt straps { outer _____ inner _____ }
 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 _____
 End plates in steam space: Material _____ Tensile strength _____ Thickness _____ Pitch of stays _____
 How are stays secured _____ Working pressure by Rules _____
 Tube plates: Material { front _____ back _____ } Tensile strength { _____ } Thickness { _____ }
 Mean pitch of stay tubes in nests _____ Pits across wide water spaces _____ Working pressure { front _____ back _____ }
 Girders to combustion chamber tops: Material _____ Tensile strength _____ Depth and thickness of girder _____
 at centre _____ Length as per Rule _____ Distance apart _____ No. and pitch of stays _____
 in 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 _____
 Diameter { At body of stay, _____ or _____ Over threads _____ } No. of threads per inch _____ Area supported by each stay _____
 Working pressure by Rules _____ Screw stays: Material _____ Tensile strength _____
 Diameter { At turned off part, _____ or _____ Over threads _____ } No. of threads per inch _____ Area supported by each stay _____

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 Please see

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 _____
 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 _____
 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

Number of elements _____ Material of tubes _____ Manufacturers of { Tubes Steel castings } _____ 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 _____ Working pressure as per _____
 Rules _____ Pressure to which the safety valves are adjusted _____ Hydraulic test pressure _____
 tubes _____, 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 yes

The foregoing is a correct description, _____

Dates of Survey { During progress of work in shops - - } _____
 while building { During erection on board vessel - - - } _____

SEE ACCOMPANYING MACHINERY REPORT

Are the approved plans of boiler and superheater forwarded herewith yes (If not state date of approval.)

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

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) This boiler has been properly secured on board and safety valves adjusted under steam to 180 lbs per sq. inch and found sound and tight
18/9/34

Survey Fee £ : ✓ : } When applied for, 19
 Travelling Expenses (if any) £ : : } When received, 19

G. E. Murdoch
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **GLASGOW 18 SEP 1934**

Assigned See accompanying machinery report

