

REPORT ON BOILERS.

No. 7941

Received at London Office

9 MAY 1928

Date of writing Report 1928 When handed in at Local Office 7.5.1928 Port of Glasgow

No. in Survey held at Glasgow Date, First Survey 22.2.26 Last Survey 26.4.1928

2713 on the S.S.M.V. "Elsa" (Number of Visits 102) Tons { Gross 5381 Net 3177

Master Built at Glasgow By whom built Barclay & Co. Ltd Yard No. 619 When built 1928

Engines made at Glasgow By whom made Barclay & Co. Ltd Engine No. EW100 When made 1928

Boilers made at Glasgow By whom made Barclay & Co. Ltd Boiler No. 10245 When made 1924

Nominal Horse Power 482 Owners H. Batten Port belonging to Oslo.

Aktieselskabet Oljefart II.

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Wm Beardmore & Co. Ltd. (Letter for Record S ✓)

Total Heating Surface of Boilers 1206 sq ft Is forced draught fitted No. ✓ Coal or Oil fired oil. ✓

No. and Description of Boilers One Single ended return tube Working Pressure 120 lbs ✓

Tested by hydraulic pressure to 230 lbs Date of test 28.6.24 No. of Certificate 14476 Can each boiler be worked separately No. ✓

Area of Firegrate in each Boiler 3545 sq ft No. and Description of safety valves to each boiler 2 direct spring (high lift) ✓

Area of each set of valves per boiler { per Rule 10.4.6 Small as fitted 9.8 ✓ Pressure to which they are adjusted 120 lbs. Are they fitted with easing gear No. ✓

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 full clear ✓ Is oil fuel carried in the double bottom under boilers Boiler fitted on flat above ✓

Smallest distance between shell of boiler and tank top plating ✓ Is the bottom of the boiler insulated No. ✓

Largest internal dia. of boilers 11'-6" ✓ Length 11'-0" ✓ Shell plates: Material S ✓ Tensile strength 28-32 tons ✓

Thickness 2 1/32" ✓ Are the shell plates welded or flanged No. ✓ Description of riveting: circ. seams { end D.P. overlap inter. ✓

Long. seams DBS 3R 5 inches in pitch Diameter of rivet holes in { circ. seams 15/16 ✓ Pitch of rivets { 2.454 ✓ long. seams 3/4 ✓ 5.5 ✓

Percentage of strength of circ. end seams { plate 66.0 rivets 62.8 Percentage of strength of circ. intermediate seam { plate ✓ rivets ✓

Percentage of strength of longitudinal joint { plate 86.3 rivets 94.1 Working pressure of shell by Rules 121. combined 91.0

Thickness of butt straps { outer 1/2" ✓ inner 5/8" ✓ No. and Description of Furnaces in each Boiler 2 Dighton ✓

Material S ✓ Tensile strength 26-30 tons ✓ Smallest outside diameter 3'-3 1/2" ✓

Length of plain part { top ✓ bottom ✓ Thickness of plates { crown 1 1/2" ✓ bottom 3/32" ✓ Description of longitudinal joint Weld ✓

Dimensions of stiffening rings on furnace or c.c. bottom ✓ Working pressure of furnace by Rules 121.

End plates in steam space: Material S ✓ Tensile strength 26-30 tons ✓ Thickness 35/32" ✓ Pitch of stays 15" x 1 1/2" ✓

How are stays secured Into inside & outside ✓ Working pressure by Rules 124 ✓

Tube plates: Material { front S ✓ back S ✓ Tensile strength { 26-30 tons ✓ Thickness { 23/32" 21/32" ✓

Mean pitch of stay tubes in nests 11 1/2" ✓ Pitch across wide water spaces 14 1/4" ✓ Working pressure { front 125 back 125

Girders to combustion chamber tops: Material S ✓ Tensile strength 28-32 tons ✓ Depth and thickness of girder

at centre 8 1/8" x 1 1/4" ✓ Length as per Rule 2'-8 25/32" ✓ Distance apart 10" ✓ No. and pitch of stays

in each 3 @ 8 3/4" ✓ Working pressure by Rules 125 Combustion chamber plates: Material S ✓

Tensile strength 26-30 tons ✓ Thickness: Sides 9/16" ✓ Back 9/16" ✓ Top 9/16" ✓ Bottom 9/16" ✓

Pitch of stays to ditto: Sides 10 x 8 3/4" ✓ Back 9 1/2" x 9 1/8" ✓ Top 10 x 8 3/4" ✓ Are stays fitted with nuts or riveted over Into ✓

Working pressure by Rules 123. Front plate at bottom: Material S ✓ Tensile strength 26-30 tons ✓

Thickness 23/32" ✓ Lower back plate: Material S ✓ Tensile strength 26-30 tons ✓ Thickness 21/32" ✓

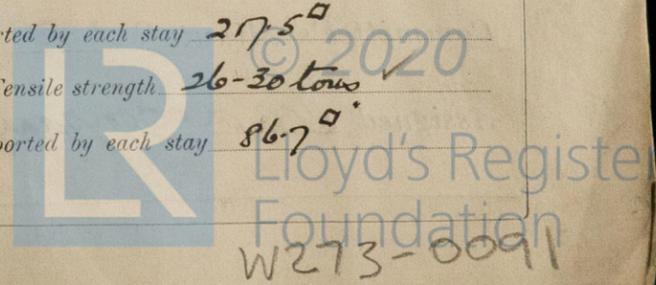
Pitch of stays at wide water space 14 1/4" x 9 1/8" ✓ Are stays fitted with nuts or riveted over Into ✓

Working Pressure 121 Main stays: Material S ✓ Tensile strength 28-32 tons ✓

Diameter { At body of stay, 2 1/8" ✓ No. of threads per inch 6 ✓ Area supported by each stay 27.5" ✓ or Over threads

Working pressure by Rules 126 Screw stays: Material S ✓ Tensile strength 26-30 tons ✓

Diameter { At turned off part, 1 1/2" ✓ No. of threads per inch 9 ✓ Area supported by each stay 86.7" ✓ or Over threads



Working pressure by Rules 143. Are the stays drilled at the outer ends. No. Margin stays: Diameter ^{At turned off part,} 1 5/8 or 1 5/8 Over threads.

No. of threads per inch 9. Area supported by each stay 108.3. Working pressure by Rules 140.

Tubes: Material Iron External diameter ^{Plain} 3 1/4 Thickness ^{Stay} 3/8 5/16 No. of threads per inch 9

Pitch of tubes 4 13/32 Working pressure by Rules 130. Manhole compensation: Size of opening 19 x 15

shell plate 19 x 15 Section of compensating ring 2-11 x 2-7 x 2 1/32 No. of rivets and diameter of rivet holes 40 @ 1"

Outer row rivet pitch at ends 7" Depth of flange if manhole flanged 4 1/4 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 _____

of rivets in outer row in dome connection to shell _____

Type of Superheater _____ Manufacturers of ^{Tubes} _____ ^{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 _____

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 _____

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 23 inclusive for boilers been complied with

FOR BARCLAY, CURLE & CO., LTD.

John Alexander
ENGINE WORKS MANAGER

The foregoing is a correct description,
Manufacture

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

^{while building} ^{During erection on board vessel - - -} machinery report Total No. of visits 102

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

This Boiler has been built under special Survey and in accordance with the Rules. The materials and workmanship are good. On completion it has been tested by hydraulic pressure with satisfactory results and afterwards placed on board and efficiently secured in position.

U.S.
2/5/28

Survey Fee £ See Engine Report. When applied for, 192

Travelling Expenses (if any) £ See Engine Report. When received, 192

Geo. J. Murray
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **GLASGOW 8 - MAY 1928**

Assigned *See accompanying Mech. Report.*