

REPORT ON BOILERS.

No. 8936.

MAY 29 1937

Received at London Office

Date of writing Report 27th May 1937 When handed in at Local Office 27th May 1937 Port of MANCHESTER.

No. in Reg. Book Survey held at HALIFAX Date, First Survey 15th February Last Survey 25th May 1937

on the Morviken Oresundsvanet No. 49 (Number of Visits 3) Tons { Gross ✓ Net ✓

Built at GM By whom built ✓ Yard No. ✓ When built ✓

Engines made at ✓ By whom made ✓ Engine No. ✓ When made ✓

Boilers made at ✓ By whom made ✓ Boiler No. ✓ When made ✓

ORDER of MESSRS A/B CALDARIA, GOTHENBURG. Port belonging to ✓

VERTICAL DONKEY BOILER.

Made at Halifax By whom made Messrs Humphys Ltd. Boiler No. 5710 When made 1937 Where found ✓

Manufacturers of Steel The Park Gate Iron & Steel Co. Ltd. Rotherham.

Total Heating Surface of Boiler 157 SQ. FT. Is forced draught fitted No. Coal or Oil fired OIL.

No. and Description of Boilers ONE VERTICAL CROSS TUBE DONKEY BOILER. Working pressure 85 lbs/sq. in.

Tested by hydraulic pressure to 170 lbs/sq. in. Date of test 25th May 1937. No. of Certificate 91.

Area of Firegrate in each Boiler 15 SQ. FT. No. and Description of safety valves to each boiler DOUBLE 2 IN. SPRING LOADED.

Area of each set of valves per boiler { per rule 6.28 SQ. INS as fitted 6.28 SQ. INS Pressure to which they are adjusted ✓ Are they fitted with easing gear YES.

State whether steam from main boilers can enter the donkey boiler ✓ Smallest distance between boiler or uptake and bunkers or woodwork ✓

Is oil fuel carried in the double bottom under boiler ✓ Smallest distance between base of boiler and tank top plating ✓

Is the base of the boiler insulated ✓ Largest internal dia. of boiler 4 FT 9 INS. Height 11 FT 6 INS.

Shell plates: Material Mild Steel, open hearth, acid. Tensile strength 28-32 TONS/SQ. IN. Thickness 3/8 INS.

Are the shell plates welded or flanged No. Description of riveting: circ. seams { end SINGLE LAP inter SINGLE LAP long. seams DOUBLE LAP.

Dia. of rivet holes in { circ. seams 13/16 INS. Pitch of rivets { 2.125 INS. Percentage of strength of circ. seams { plate 61.77 rivets 45.53 of Longitudinal joint { plate 68.74 rivets 74.44 combined ✓

Working pressure of shell by rules 116.5 lbs / SQ. IN. Thickness of butt straps { outer ✓ inner ✓

Shell Crown: Whether complete hemisphere, dished partial spherical, or flat DISHED PARTIAL SPHERICAL Material Mild Steel, O.H. Acid.

Tensile strength 26-30 TONS/SQ. IN. Thickness 1/2 IN. Radius 4 FT 9 INS. Working pressure by rules 102.7 lbs/sq. in.

Description of Furnace: Plain, spherical, or dished crown DISHED CROWN. Material Mild Steel O.H. Acid. Tensile strength 26-30 TONS/SQ. IN.

Thickness 9/16. External diameter { top 3 FT 9 5/8 INS bottom 4 FT 4 3/8 INS Length as per rule 3 FT 7 1/2 INS. Working pressure by rules 127.3 lbs/sq. in.

Pitch of support stays circumferentially 7 INS. and vertically ✓ Are stays fitted with nuts or riveted over RIVETED.

Diameter of stays over thread 1 1/4 INS. Radius of spherical or dished furnace crown 3 FT 9 INS. Working pressure by rule 91.7 lbs/sq. in.

Thickness of Ogee Ring 9/16 INS. Diameter as per rule { D 4 FT 8 1/4 INS. a 4 FT 4 1/8 INS. Working pressure by rule 174.4 lbs/sq. in.

Combustion Chamber: Material _____ Tensile strength _____ Thickness of top plate _____

Radius if dished _____ Working pressure by rule _____ Thickness of back plate _____ Diameter if circular _____

Length as per rule _____ Pitch of stays _____ Are stays fitted with nuts or riveted over _____

Diameter of stays over thread _____ Working pressure of back plate by rules _____

Tube Plates: Material { front _____ back _____ Tensile strength { _____ Thickness { _____ Mean pitch of stay tubes in nests _____

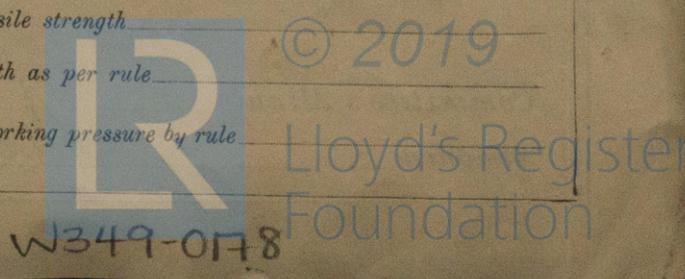
If comprising shell, Dia. as per rule { front _____ back _____ Pitch in outer vertical rows { _____ Dia. of tube holes FRONT { stay _____ plain _____ BACK { stay _____ plain _____

Is each alternate tube in outer vertical rows a stay tube _____ Working pressure by rules { 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 rule _____



Crown 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 _____ Working pressure by rules _____ Are the stays drilled at the outer ends _____

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 16 INS X 12 INS. Section of compensating ring 5 1/2 INS X 1/2 IN. No. of rivets and diameter of rivet holes 40 - 13/16. Outer row rivet pitch at ends 4" Depth of flange if manhole flanged _____

Uptake: External diameter 15 INS. Thickness of uptake plate 1/2 IN.

Cross Tubes: No. 5 External diameters 9 INS. Thickness of plates 3/8 INS.

Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with Yes.

The foregoing is a correct description.

FOR AND ON BEHALF OF
LUMBYS LIMITED. Manufacturer.

H.W.

Dates of Survey ^{During progress of work in shops - -} July 15th March 10th May 25th 1937. Is the approved plan of boiler forwarded herewith Yes.
_{while building} ^{During erection on board vessel - -} ✓ (If not state date of approval.)

Total No. of visits 3.

Is this Boiler a duplicate of a previous case Yes. If so, state Vessel's name and Report No. Report No. 8935 Mch.

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) This boiler has been built under special survey, of tested materials, and in accordance with the Secretary's letters, approved plans, and rule requirements. The workmanship and materials were found to be good, and the boiler was subjected to a hydraulic test of 170 lbs/sq. in. with satisfactory results.

This boiler is, in my opinion, eligible to be fitted on board a vessel classed with this Society.

FOR IDENTIFICATION PURPOSES
BOILER MARKED.

5710.

No 91
LLOYDS TEST
170 lbs
W.P. 85 lbs
G.R.C. 25.5.37.

Survey Fee ... £ 4 : 4 : When applied for, 28th May 1937

Travelling Expenses (if any) £ 10/8. When received, 3-6-1937

George R. Chappel.
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 24 JUN 1938

Assigned See Hbq. J.E. 1187

