

# REPORT ON BOILERS.

Received at London Office JUN 10 1937

Date of writing Report 8-6-1937 When handed in at Local Office 8-6-1937 Port of Aberdeen.

No. in Reg. Book. Survey held at Aberdeen. Date, First Survey Last Survey 3<sup>rd</sup> June 1934.

on the G.WENTHILLS (Number of Visits 10) Tons Gross 868 Net 456.

Master Built at Aberdeen. By whom built J. Lewis & Sons Ltd Yard No. 142 When built 1934

Engines made at Aberdeen By whom made J. Lewis & Sons Ltd Engine No. 220 When made 1934

Boilers made at " By whom made " Boiler No. 183 When made 1934

Nominal Horse Power 131. Owners Messrs. Morley Son & Co. Ltd Port belonging to Newport Man

## MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Colvilles Ltd. (Letter for Record S. ✓)

Total Heating Surface of Boilers 2354 sq ft. Is forced draught fitted No ✓ Coal or Oil fired Coal ✓

No. and Description of Boilers One - Single ended. Working Pressure 200 lbs sq in.

Tested by hydraulic pressure to 350 lbs Date of test 24-4-34 No. of Certificate 1128 Can each boiler be worked separately ✓

Area of Firegrate in each Boiler 60 sq ft. No. and Description of safety valves to each boiler 2 Direct Spring loaded ✓

Area of each set of valves per boiler {per Rule 13.41 sq in as fitted 14.13 sq in} Pressure to which they are adjusted 205 lbs 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 4'-6" Is oil fuel carried in the double bottom under boilers No.

Smallest distance between shell of boiler and tank top plating 6 feet Is the bottom of the boiler insulated Yes.

Largest internal dia. of boilers 15'-0 3/8" Length 10'-9" Shell plates: Material Steel Tensile strength 29/33 tons sq in

Thickness 1 5/16" Are the shell plates welded or flanged No Description of riveting: circ. seams {end D. R. H inter. ✓}

long. seams T. R. D. B. S. Diameter of rivet holes in {circ. seams 1 3/8" long. seams 1 3/8" Pitch of rivets {4.09" 9.12" ✓}

Percentage of strength of circ. end seams {plate 66.6 rivets 43.5} Percentage of strength of circ. intermediate seam {plate 85.5 rivets 88.5 ✓}

Percentage of strength of longitudinal joint {plate 85.5 rivets 88.5 combined 88.8} Working pressure of shell by Rules 200.1 lbs sq in

Thickness of butt straps {outer 1" inner 1 1/8" ✓} No. and Description of Furnaces in each Boiler 3 Plain.

Material Steel Tensile strength 26/30 tons sq in Smallest outside diameter 3'-4 3/8" ✓

Length of plain part {top 6'-4 3/32" bottom 5'-10 1/32" Thickness of plates {crown 13/16" bottom 13/16" Description of longitudinal joint Weld.

Dimensions of stiffening rings on furnace or c.c. bottom None Working pressure of furnace by Rules 200 lbs sq in

End plates in steam space: Material Steel Tensile strength 26/30 tons sq in Thickness 1 1/4" Pitch of stays 1'-8 1/4" x 1'-5 1/2" ✓

How are stays secured nuts inside + outside Working pressure by Rules 202.3 lbs sq in

Tube plates: Material {front Steel back " Tensile strength {26/30 tons sq in Thickness {29/32" 25/32" ✓}

Mean pitch of stay tubes in nests 10.1" Pitch across wide water spaces 14 1/8" Working pressure {front 201 lbs sq in back 206 " ✓}

Girders to combustion chamber tops: Material Steel Tensile strength 29/33 tons sq in Depth and thickness of girder

at centre 2 @ 11" x 9/16" Length as per Rule 2'-10 1/32" Distance apart 9" No. and pitch of stays

in each 3 @ 8 1/8" Working pressure by Rules 204 lbs sq in Combustion chamber plates: Material Steel

Tensile strength 26/30 tons sq in Thickness: Sides 21/32" Back 1/16" Top 21/32" Bottom 21/32" ✓

Pitch of stays to ditto: Sides 9 1/8" x 8 1/8" Back 9 1/8" x 9" Top 8 1/8" x 9" Are stays fitted with nuts or riveted over nuts.

Working pressure by Rules 200.5 lbs sq in Front plate at bottom: Material Steel Tensile strength 26/30 tons sq in

Thickness 29/32" Lower back plate: Material Steel Tensile strength 26/30 tons sq in Thickness 24/32" ✓

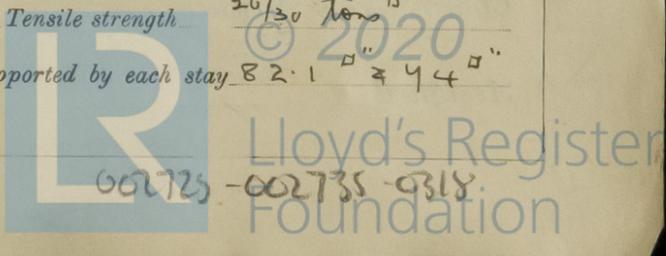
Pitch of stays at wide water space 1'-2 1/8" Are stays fitted with nuts or riveted over nuts. ✓

Working Pressure 205.5 lbs sq in Main stays: Material Steel Tensile strength 28/32 tons sq in ✓

Diameter {At body of stay, 3 1/8" No. of threads per inch 6" Area supported by each stay 354.4 sq in ✓

Working pressure by Rules 208 lbs sq in Screw stays: Material Steel Tensile strength 26/30 tons sq in

Diameter {At turned off part, 1 3/4" & 1 5/8" No. of threads per inch 9" Area supported by each stay 82.1 & 74.4 sq in ✓



Working pressure by Rules 205 <sup>221</sup> Are the stays drilled at the outer ends *No* Margin stays: Diameter { At turned off part, <sup>1 1/8"</sup> or Over threads <sup>1 1/8"</sup> ✓  
 No. of threads per inch 9 Area supported by each stay 105.5" Working pressure by Rules 202.3 lbs ✓  
**Tubes:** Material L. W. W. L. External diameter { Plain 3 1/4" Stay 3 1/4" Thickness { 8 W G 1/4" 5/16" No. of threads per inch 9 ✓  
 Pitch of tubes 4 1/2" x 4 1/2" Working pressure by Rules 209.8 & 205.8 lbs ✓ **Manhole compensation:** Size of opening in shell plate 19" x 15" Section of compensating ring 4" x 1 5/16" No. of rivets and diameter of rivet holes 40 - 1 3/8" ✓  
 Outer row rivet pitch at ends 9 1/2" Depth of flange if manhole flanged 3" **Steam Dome:** Material *None* ✓  
 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  
 How connected to shell Inner radius of crown Working pressure by Rules  
 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** *None* 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  
 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 forgings and castings and after assembly in place Are drain cocks of 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  
 For JOHN LEWIS & SONS LTD.  
 The foregoing is a correct description,  
*Jan. J. Donald* SECRETARY Manufacture

Dates of Survey { During progress of work in shops - - } <sup>1934</sup> Feb. 23. Mar. 24. 30. Apr. 9. 24. May 4. Are the approved plans of boiler and superheater forwarded herewith *Yes*  
 (If not state date of approval.)  
 { During erection on board vessel - - - } Apr. 28. May 28. June 1. 3. Total No. of visits 10

Is this Boiler a duplicate of a previous case *Yes*. If so, state Vessel's name and Report No. *"GLENGARIFF" ABN Rpt. 18650*

**GENERAL REMARKS** (State quality of workmanship, opinions as to class, &c.) *This boiler has been constructed under Special Survey, in accordance with the Rules + approved plan. The materials & workmanship are good. The boiler has been securely fitted on board the vessel, examined under working conditions & found good. The safety valves have been adjusted under steam as stated, tried for accumulation & found satisfactory. For record of survey, please see Mch by Rpt attached*

*changed on Mch by Rpt.*  
 Survey Fee ... £ : : } When applied for, 10  
 Travelling Expenses (if any) £ : : } When received, 10

*J. Avey*  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **FRI 11 JUN 1937**

Assigned *See Abn. J.E. 18998*

