

# REPORT ON BOILERS.

No. 14003

Received at London Office

MON. 20 JUL 1925

Date of writing Report 18<sup>th</sup> July 1925 When handed in at Local Office 18<sup>th</sup> July 1925 Port of Aberdeen

No. in Reg. Book. Survey held at Aberdeen Date, First Survey 31.3.25 Last Survey 16.7.1925

on the MAIN BOILER FOR S.S. "RIBBLEMERE" (Number of Visits 20) Tons { Gross 489 Net 220

Master \_\_\_\_\_ Built at Aberdeen By whom built J. Lewis & Sons, Ltd. Yard No. 91 When built 1925

Engines made at Aberdeen By whom made J. Lewis & Sons, Ltd. Engine No. 176 When made 1925

Boilers made at Aberdeen By whom made J. Lewis & Sons, Ltd. Boiler No. 133 When made 1925

Nominal Horse Power 84 Owners John V. Sellers & Co. (Mgrs.) Port belonging to Liverpool

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

Manufacturers of Steel D. Colville & Sons, Ltd., and The Lanarkshire Steel Co. Ltd. (Letter for Record S.)

Total Heating Surface of Boiler 1618 sq ft Is forced draught fitted No. Coal or Oil fired Coal

No. and Description of Boilers One Single Ended 15B Working Pressure 180 lbs./sq in

Tested by hydraulic pressure to 320 lbs./sq in Date of test 24.6.25 No. of Certificate 1043 Can each boiler be worked separately -

Area of Firegrate in each Boiler 52.14 sq ft No. and Description of safety valves to each boiler Two spring loaded

Area of each set of valves per boiler { per Rule 5.18 sq ft as fitted 5.94 sq ft Pressure to which they are adjusted 185 lbs./sq in 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 15" Is oil fuel carried in the double bottom under boilers No.

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

Largest internal dia. of boiler 13'-0" Length 10'-6" Shell plates: Material Steel Tensile strength 28/32 tons/sq in

Thickness 1/8" Are the shell plates welded or flanged No. Description of riveting: circ. seams { end D.R. LAP. inter. -

Long. seams T.R.D.B.S. Diameter of rivet holes in { circ. seams 1 3/16" long. seams 1 3/16" Pitch of rivets { 3.79" 8 1/4"

Percentage of strength of circ. end seams { plate 68.75 rivets 42.8 Percentage of strength of circ. intermediate seam { plate - rivets -

Percentage of strength of longitudinal joint { plate 85.6 rivets 92.2 combined 89.6 Working pressure of shell by Rules 190 lbs./sq in

Thickness of butt straps { outer 27/32" inner 1" No. and Description of Furnaces in each Boiler Three plain

Material Steel Tensile strength 26/30 tons/sq in Smallest outside diameter 39 1/2"

Length of plain part { top 83" bottom 88" Thickness of plates { crown 3/4" bottom 3/4" Description of longitudinal joint Weld

Dimensions of stiffening rings on furnace bottom One 3 1/2 x 3 1/2 x 3/4" Working pressure of furnace by Rules 181 lbs./sq in

End plates in steam space: Material Steel Tensile strength 26/30 tons/sq in Thickness 1/8" Pitch of stays 18" x 18"

How are stays secured D. Nuts Working pressure by Rules 181 lbs./sq in

Tube plates: Material { front Steel back Steel Tensile strength { 26/30 tons/sq in Thickness { 1 1/32" 27/32"

Mean pitch of stay tubes in nests 10.68" Pitch across wide water spaces 14 1/2" Working pressure { front 214 lbs./sq in back 225 lbs./sq in

Girders to combustion chamber tops: Material Steel Tensile strength 28/32 tons/sq in Depth and thickness of girder at centre 8 1/4" x 20 9/16" Length as per Rule 27 1/2" Distance apart 7 1/2" No. and pitch of stays in each 20 9/2" Working pressure by Rules 245 lbs./sq in Combustion chamber plates: Material Steel

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

Pitch of stays to ditto: Sides 9 1/2" x 8 1/4" Back 8" x 9 1/2" Top 9 1/2" x 7 1/2" Are stays fitted with nuts or riveted over Nuts

Working pressure by Rules 194 lbs./sq in Front plate at bottom: Material Steel Tensile strength 26/30 tons/sq in

Thickness 1 1/32" Lower back plate: Material Steel Tensile strength 26/30 tons/sq in Thickness 29/32"

Pitch of stays at wide water space 14 1/4" x 9 1/2" Are stays fitted with nuts or riveted over Nuts

Working Pressure 224 lbs./sq in Main stays: Material Steel Tensile strength 28/32 tons/sq in

Diameter { At body of stay, - or Over threads 3" No. of threads per inch 6 Area supported by each stay 324 sq in

Working pressure by Rules 207 lbs./sq in Screw stays: Material Steel Tensile strength 26/30 tons/sq in

Diameter { At turned off part, - or Over threads 1 5/8" No. of threads per inch 9 Area supported by each stay 78.375 sq in

Working pressure by Rules 194 lbs. Are the stays drilled at the outer ends 20 Margin stays: Diameter { At turned off part -  
or Over threads 1 3/4" ✓  
No. of threads per inch 9 ✓ Area supported by each stay 103.2 Working pressure by Rules 180 lbs./sq"  
Tubes; Material L.W.W.1. ✓ External diameter { Plain 3 1/2" ✓ Thickness { 8 W.G. ✓ No. of threads per inch 9 ✓  
Stay 3 1/2" ✓ 5/16" ✓  
Pitch of tubes 4 3/4" x 4 3/4" ✓ Working pressure by Rules 215 lbs./sq" Manhole compensation: Size of opening in  
shell plate 19" x 15" Section of compensating ring 8 1/2" x 1 1/8" No. of rivets and diameter of rivet holes 30 R. 1 1/4" dia. Holes  
Outer row rivet pitch at ends 8 1/4" ✓ Depth of flange if manhole flanged Comp. R. flanged to 16" x 12" dia. 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 - 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 None 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 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 23 inclusive for boilers been complied with Yes.  
FOR JOHN LEWIS & SONS, LTD.,  
(The foregoing is a correct description,  
John S. Donald Supt. Manufacturer.

Dates of Survey { During progress of 1925: MAR. 31. APR. 7. 14. 20. 23. 29. Are the approved plans of boiler and superheater forwarded herewith Yes ✓  
work in shops - - MAY: 12. 19. JUNE: 2. 8. 11. 16. 18. 24. (If not state date of approval.)  
while building { During erection on 1925: JULY: 8. 9. 10. 11. 14. 16. Total No. of visits 20  
board vessel - - -

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) This boiler has been constructed under  
Special Survey in accordance with the rules and approved plan; the materials and  
workmanship are good. The boiler has been satisfactorily fitted on board the vessel, the  
safety valves adjusted under steam; boiler examined under full working conditions and  
found satisfactory.

Survey Fee ... .. £ See included When applied for, 192  
Travelling Expenses (if any) £ on Machinery When received, 192  
Report.

A. B. Forster  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute 24 JUL 1925  
Assigned

