

REPORT ON BOILERS.

No. 2224

Received at London Office

At 26th April 1927 When handed in at Local Office 29th April 1927 Port of Barrow-in-Furness

Cover jacket held at Barrow.

Date, First Survey 31st March / 22nd April 1927

Piston head Single screw motorship "Modavia"

(Number of Visits 20) Tons { Gross 4858 Net 2859

Built at Barrow By whom built Bickers Ltd. Yard No. 626 When built 1927

Barrow By whom made L. Engine No. 626 When made 1927

L. By whom made L. Boiler No. 626 When made 1927

Power 699 Owners Donaldson Line Ltd. Port belonging to Glasgow.

BULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

of Steel Wm Beardmore & Co. Ltd. David Colville & Sons Ltd. (Letter for Record (A) ✓)

Surface of Boilers 3300 Is forced draught fitted ho ✓ Coal or Oil fired Oil ✓

ption of Boilers Two single-ended cylindrical multitubular Working Pressure 120 lbs ✓

glic pressure to 230 lbs Date of test 14th & 23rd June 1926 No. of Certificate 40Y & 408 Can each boiler be worked separately 1/2 ✓

ate in each Boiler 62 No. and Description of safety valves to each boiler 2 direct spring loaded High lift ✓

et of valves per boiler { per Rule 13.4 ✓ as fitted 14.137 ✓ Pressure to which they are adjusted 125 lbs Are they fitted with easing gear 1/2 ✓

by boilers, state whether steam from main boilers can enter the donkey boiler ✓

ce between boilers on uptakes and bunkers on woodwork 14'-6" ✓ Is oil fuel carried in the double bottom under boilers ho ✓

ce between shell of boiler and tank top plating 1'-9" ✓ Is the bottom of the boiler insulated ho ✓

l dia. of boilers 12'-9" ✓ Length 11'-6" ✓ Shell plates: Material Steel ✓ Tensile strength 28 to 32 tons per sq. in. ✓

Are the shell plates welded or flanged ho ✓ Description of riveting: circ. seams { end A.K. lap ✓ inter. 3.019 ✓

R. Double Butt Straps ✓ Diameter of rivet holes in { circ. seams 29/32 ✓ long. seams 29/32 ✓ Pitch of rivets { 4.625 ✓

strength of circ. end seams { plate 40% ✓ rivets 44.95% ✓ Percentage of strength of circ. intermediate seam { plate 80.4% ✓ rivets 82.5% ✓

strength of longitudinal joint { plate 80.4% ✓ rivets 82.5% ✓ Working pressure of shell by Rules 123 lbs ✓

outer 1/2" ✓ inner 7/8" ✓ No. and Description of Furnaces in each Boiler 2 Morrison ✓

Steel ✓ Tensile strength 26 to 30 tons per sq. in. ✓ Smallest outside diameter 45.8125 ✓

Thickness of plates { crown 13/32 ✓ bottom 13/32 ✓ Description of longitudinal joint Weld ✓

stiffening rings on furnace or c.c. bottom ✓ Working pressure of furnace by Rules 126 lbs ✓

steam space: Material Steel ✓ Tensile strength 26 to 30 tons per sq. in. ✓ Thickness 29/32 ✓ Pitch of stays 14" x 18" ✓

Working pressure by Rules 122 lbs ✓

Material { front Steel ✓ back Steel ✓ Tensile strength { 26 to 30 tons per sq. in. ✓ Thickness { 29/32 ✓ 3/4 ✓

Working pressure { front 141.5 lbs ✓ back 121 lbs ✓

combustion chamber tops: Material Steel ✓ Tensile strength 28 to 32 tons per sq. in. ✓ Depth and thickness of girder

Length as per Rule 30 3/4 ✓ Distance apart 9" ✓ No. and pitch of stays

Working pressure by Rules 128 lbs ✓ Combustion chamber plates: Material Steel ✓

Thickness: Sides 9/16 ✓ Back 9/16 ✓ Top 9/16 ✓ Bottom 3/4 ✓

Are stays fitted with nuts or riveted over nuts ✓

Front plate at bottom: Material Steel ✓ Tensile strength 26 to 30 tons per sq. in. ✓

Lower back plate: Material Steel ✓ Tensile strength 26 to 30 tons per sq. in. ✓ Thickness 25/32 ✓

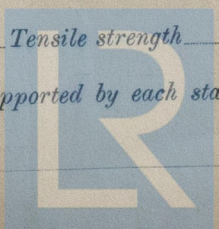
Are stays fitted with nuts or riveted over nuts ✓

Main stays: Material Steel ✓ Tensile strength 28 to 32 tons per sq. in. ✓

No. of threads per inch 6 ✓ Area supported by each stay 306 sq. in. ✓

Screw stays: Material Iron ✓ Tensile strength 21 1/2 tons per sq. in. ✓

No. of threads per inch 9 ✓ Area supported by each stay 84.45 sq. in. ✓



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Working pressure by Rules 144 lb Are the stays drilled at the outer ends no Margin stays: Diameter { At turned off part, 1 7/8 ✓
or
Over threads 1 7/8 ✓

No. of threads per inch 9 ✓ Area supported by each stay 107.5 ✓ Working pressure by Rules 144 lb

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

Pitch of tubes 4 1/8" x 4 1/8" ✓ Working pressure by Rules 140 lb Manhole compensation: Size of opening in
shell plate 19 3/4" x 15 3/4" ✓ Section of compensating ring 7 1/8" x 25 1/32" ✓ Flanged No. of rivets and diameter of rivet holes 50 29/32 ✓

Outer row rivet pitch at ends 5" ✓ 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 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 _____ 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 _____

FOR VICKERS LIMITED The foregoing is a correct description,
H. Johnson Manufacturer.

Dates of Survey { During progress of work in shops - - } 1926 March 31 April 16. 21. 23. 27 May 7. 19. 26. 27 June 7. 11. 17. 22. 23 Aug 27. 30
while building { During erection on board vessel - - } 1926 Nov 8 1927 Feb 4, 14 April 22 Are the approved plans of boiler and superheater forwarded herewith Yes ✓
(If not state date of approval.)

Total No. of visits 20

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

These boilers have been built under special survey: the materials and workmanship are good. They have been efficiently mounted and fitted on board and their safety valves adjusted as above noted.

The boilers are designed to burn oil fuel: all the requirements of Sec. 35 of the Rules have been complied with I.P. above 150° F.

Survey Fee ... £ 22 : 0 : 0 | When applied for, 28 April 1927
Travelling Expenses (if any) £ : : | When received, 2.5.1927

Wm Lewis
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 6 MAY 1927

Assigned see minute on Brw Rpt
No 2227 attached



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Foundation