

Received at London Office

OCT -6 1937

Date of writing Report

When handed in at Local Office

Port of

LIVERPOOL

No. in Reg. Book

Survey held at

Birkenhead

Date, First Survey

9/11/37

Last Survey

17/9/37

on the

MV Aldersdale

(Number of Visits)

123

Gross Tons

8402

Net Tons

5009

Master

Built at

Birkenhead

By whom built

Cammell Laird & Co. Ltd

Yard No.

1025

When built

1937

Engines made at

Sunderland

By whom made

Wm Duxford & Sons Ltd

Engine No.

200

When made

1937

Boilers made at

Birkenhead

By whom made

Cammell Laird & Co. Ltd

Boiler No.

1025

When made

1937

Nominal Horse Power

687

Owners

Admiralty

Port belonging to

London

WASTE HEAT

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Colville Ltd

Slayden

Consett Iron Co. Ltd

(Letter for Record)

5

Total Heating Surface of Boilers

2677 sq ft

Is forced draught fitted

Yes

Coal or Oil fired

Waste heat

No. and Description of Boilers

One Cylindrical multitubular

Working Pressure

150 lb sq in

Tested by hydraulic pressure to

275 lb sq in

Date of test

21.4.37

No. of Certificate

2470

Can each boiler be worked separately

Yes

Area of Firegrate in each Boiler

✓

No. and Description of safety valves to each boiler

2 spring loaded high lift

Area of each set of valves per boiler

per Rule 10.1 sq in

as fitted 11.87 sq in

Pressure to which they are adjusted

150 lb 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 or woodwork

3'-0"

Is oil fuel carried in the double bottom under boilers

Yes

Smallest distance between shell of boiler and tank top plating

2'-0"

Is the bottom of the boiler insulated

Yes

Largest internal dia. of boilers

13'-4 1/2"

Length

11'-6"

Shell plates: Material

Steel

Tensile strength

29-33 tons sq in

Thickness

29/32"

Are the shell plates welded or flanged

No

Description of riveting: circ. seams

end DR lap

inter.

✓

Percentage of strength of circ. end seams

plate 63.5

rivets 46

combined 85.6

Percentage of strength of circ. intermediate seam

plate 87.4

rivets 88.6

combined 88.6

Working pressure of shell by Rules

152 lb sq in

No. and Description of Furnaces in each Boiler

Two Corrugated

Tensile strength

26-30 tons sq in

Smallest outside diameter

3'-2 7/8"

Length of plain part

top ✓

bottom ✓

Thickness of plates

crown 7/16"

bottom 7/16"

Description of longitudinal joint

Weld

Dimensions of stiffening rings on furnace or c.c. bottom

None

Working pressure of furnace by Rules

16 1/4 lb sq in

End plates in steam space: Material

Steel

Tensile strength

26-30 tons sq in

Thickness

1"

Pitch of stays

19 x 18"

How are stays secured

Double nuts & plain washers

Working pressure by Rules

157 1/4 lb sq in

Tube plates: Material

front Steel

back Steel

Tensile strength

26-30 tons sq in

Thickness

3/4"

Lean pitch of stay tubes in nests

9 3/8"

Pitch across wide water spaces

13 1/2 x 7 1/2"

Working pressure

front 439 lb sq in

back 228 lb sq in

Girders to combustion chamber tops: Material

Steel

Tensile strength

28-32 tons sq in

Depth and thickness of girder

2 plates 8 x 7/8"

Length as per Rule

30.5"

Distance apart

8"

No. and pitch of stays

each two @ 9 1/2"

Working pressure by Rules

164 lb sq in

Combustion chamber plates: Material

Steel

Tensile strength

26-30 tons sq in

Thickness: Sides

5/8"

Back

3/4"

Top

5/8"

Bottom

7/8"

Pitch of stays to ditto: Sides

9 1/2 x 9"

Back

9 1/2 x 8 3/8"

Top

9 1/2 x 8"

Are stays fitted with nuts or riveted over

Welded

Working pressure by Rules

158 lb sq in

Front plate at bottom: Material

Steel

Tensile strength

26-30 tons sq in

Thickness

1"

Lower back plate: Material

Steel

Tensile strength

26-30 tons sq in

Thickness

1"

Pitch of stays at wide water space

14 7/16 x 9 1/2"

Are stays fitted with nuts or riveted over

Nuts

Working Pressure

160 lb sq in

Main stays: Material

Steel

Tensile strength

28-32 tons sq in

Diameter

At body of stay, 2 3/4"

No. of threads per inch

6

Area supported by each stay

342 sq in

Working pressure by Rules

161 lb sq in

Screw stays: Material

Steel

Tensile strength

26-30 tons sq in

Diameter

At end of part, 1 1/2 x 1 7/8"

No. of threads per inch

9

Area supported by each stay

80.86 sq in

Working pressure by Rules 155 lb Are the stays drilled at the outer ends no Margin stays: Diameter 1 1/4"
No. of threads per inch 9 Area supported by each stay 108 sq in Working pressure by Rules 170 lb
Tubes: Material B.B. Iron External diameter 2 1/2" Thickness 10/16" No. of threads per inch 9
Pitch of tubes 3 3/4" x 3 3/4" Working pressure by Rules 204 lb Manhole compensation: Size of opening in
shell plate 17 1/4" x 21 1/4" Section of compensating ring 7 1/16" x 1 7/16" No. of rivets and diameter of rivet holes 44 21"
Outer row rivet pitch at ends 6 3/4" Depth of flange if manhole flanged 3 1/4" 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 ✓
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 ✓
Number of elements ✓ Material of tubes ✓ Tubes ✓
Material of headers ✓ Tensile strength ✓ Steel castings ✓
the boiler be worked separately ✓ Thickness ✓ Internal diameter and thickness of tubes ✓
Area of each safety valve ✓ Is a safety valve fitted to every part of the superheater which can be shut off from the boiler ✓
Rules ✓ Pressure to which the safety valves are adjusted ✓ Can the superheater be shut off and
tubes ✓ and after assembly in place ✓ Working pressure as per
to free the superheater from water where necessary ✓ Hydraulic test pressure:
Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with Yes Are drain cocks or valves fitted

Dates of Survey
while building
During progress of
work in shops - - -
During erection on
board vessel - - -

See Machinery Report

Are the approved plans of boiler and superheater forwarded herewith
(If not state date of approval.)
Total No. of visits

Is this Boiler a duplicate of a previous case Yes

If so, state Vessel's name and Report No. British Fortitude LWR 10897

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

This boiler has been constructed under special survey, and is in accordance with the Rules and the approved plan. The workmanship is good throughout. It has been satisfactorily fitted on board and examined under steam, & is eligible in my opinion for record of D.B. 150 lbs in Register book.

Survey Fee 2 boiler £ 26. 6. 0
Travelling Expenses (if any) £

When applied for, 29 SEP 1937
When received, 11.10.1937

J. Milton

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute LIVERPOOL - 5 OCT 1937

Assigned See Machinery Rpt.



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