

## REPORT ON BOILERS.

No. 50356

14 MAY 1930

Received at London Office

Date of writing Report 23-4-30 When handed in at Local Office 10-5-30 Port of Glasgow

No. in Survey held at Glasgow

Date, First Survey 27-5-29 Last Survey 3-5-30

Reg. Book.

on the

S.S. City of Barcelona

(Number of Visits 94)

Gross 5698

Tons Net 3525

Master

Built at Glasgow

By whom built

Barclay Curle &amp; Co. Ltd

Yard No. 636

When built 1930

Engines made at

Glasgow

By whom made

Barclay Curle &amp; Co. Ltd

Engine No. 636

When made 1930

Boilers made at

Glasgow

By whom made

Barclay Curle &amp; Co. Ltd

Boiler No. 636

When made 1930

Nominal Horse Power

Owners

The Ellerman Lines Ltd

Port belonging to Liverpool

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

Manufacturers of Steel

Wm Beardmore &amp; Co. Ltd

(Letter for Record

(S) ✓

Total Heating Surface of Boilers

5596 ft<sup>2</sup>

Is forced draught fitted

yes ✓

Coal or Oil fired

Coal ✓

No. and Description of Boilers

2 S.B.

Working Pressure

265 lb.

Tested by hydraulic pressure to

448 lb.

Date of test 31-10-29

No. of Certificate 18499

Can each boiler be worked separately

yes ✓

Area of Firegrate in each Boiler

69 ft<sup>2</sup>

No. and Description of safety valves to each boiler

2 S.L. (Improved High Lift)

Area of each set of valves per boiler

per Rule 12.4

as fitted 6.28 ft<sup>2</sup>

Pressure to which they are adjusted

265 lb.

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

well clear

Is oil fuel carried in the double bottom under boilers

no

Smallest distance between shell of boiler and tank top plating

well clear

Is the bottom of the boiler insulated

yes ✓

Largest internal dia. of boilers

15'-7 1/2"

Length

12'-8"

Shell plates: Material

Steel

Tensile strength

31-35 Tons

Thickness

1 1/16"

Are the shell plates welded or flanged

no

Description of riveting: circ. seams

end

D.R.L.

Long. seams

T.R.-D.B.S.

Diameter of rivet holes in

circ. seams

1 3/4"

Pitch of rivets

4.645"

inter. 11.625"

Percentage of strength of circ. end seams

plate

62.32

rivets

45.52

Percentage of strength of circ. intermediate seam

plate

84.94

rivets

Percentage of strength of longitudinal joint

plate

85.25

rivets

86.94

Working pressure of shell by Rules

265 lb.

Thickness of butt straps

outer 1 1/16"

inner 1 1/16"

No. and Description of Furnaces in each Boiler

4. Brighton Section 4 cf

Material

Steel

Tensile strength

26-30 Tons

Smallest outside diameter

39 9/16"

Length of plain part

top ✓

bottom ✓

Thickness of plates

crown 23/32"

bottom 3/32"

Description of longitudinal joint

weld

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

Working pressure of furnace by Rules

267 lb.

End plates in steam space: Material

Steel

Tensile strength

26-30 Tons

Thickness

1 3/64"

Pitch of stays

18" x 22"

How are stays secured

D.N.

Working pressure by Rules

268 lb.

Tube plates: Material

front Steel

back

Tensile strength

26-30 Tons

Thickness

1 1/32"

Can pitch of stay tubes in nests

9"

Pitch across wide water spaces

14 5/16"

Working pressure

front 266 lb.

back 312 "

Orders to combustion chamber tops: Material

Steel

Tensile strength

28-32 Tons

Depth and thickness of girder

centre

11" x 15/16" double

Length as per Rule

40 1/2"

Distance apart

8 1/2"

No. and pitch of stays

each

4 @ 8"

Working pressure by Rules

265 lb.

Combustion chamber plates: Material

Steel

Tensile strength

26-30 Tons

Thickness: Sides

23/32"

Back

13/32"

Top

23/32"

Bottom

29/32"

Pitch of stays to ditto: Sides

8 1/2" x 8"

Back

8 7/8" x 7 1/2"

Top

8 1/2" x 8"

Are stays fitted with nuts or riveted over

nuts

Working pressure by Rules

266 lb.

Front plate at bottom: Material

Steel

Tensile strength

26-30 Tons

Thickness

1 1/32"

Lower back plate: Material

Steel

Tensile strength

26-30 Tons

Thickness

31/32"

Pitch of stays at wide water space

14 5/16"

Are stays fitted with nuts or riveted over

nuts

Working Pressure

272 lb.

Main stays: Material

Steel

Tensile strength

28-32 Tons

Diameter

At body of stay, 3 3/4"

Over threads

No. of threads per inch

6

Area supported by each stay

396 ft<sup>2</sup>

Working pressure by Rules

278 lb.

Screw stays: Material

Steel

Tensile strength

26-30 Tons

Diameter

At turned off part, 1 3/4"

Over threads

No. of threads per inch

9

Area supported by each stay

68 ft<sup>2</sup>

002750-002753-0032

Lloyd's Register  
Foundation



Working pressure by Rules 267 lb. Are the stays drilled at the outer ends no Margin stays: Diameter 2 1/8" + 2 1/4"  
No. of threads per inch 9 Area supported by each stay 87 sq Working pressure by Rules 293 lb.  
Tubes: Material W. Iron External diameter 3" Thickness 7/16" No. of threads per inch 9  
Pitch of tubes 4 1/4" x 4 1/4" Working pressure by Rules 300 lb. Manhole compensation: Size of opening in  
shell plate 19 1/2" x 15 1/2" Section of compensating ring 27.5" x 1 1/16" No. of rivets and diameter of rivet holes 40 - 1 3/4"  
Outer row rivet pitch at ends 11 7/8" 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 ✓  
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 N.E.M. (Smoke-Tube) Manufacturers of Sunderland Rft.  
Number of elements 5ld Rft. Material of tubes S. Internal diameter and thickness of tubes ✓  
Material of headers S. Tensile strength ✓ Thickness ✓ Can the superheater be shut off and  
the boiler be worked separately yes Is a safety valve fitted to every part of the superheater which can be shut off from the boiler yes  
Area of each safety valve 3.14 sq Are the safety valves fitted with easing gear yes Working pressure as per  
Rules 265 lb Pressure to which the safety valves are adjusted 265 lb Hydraulic test pressure:  
tubes 495 lb castings 495 lb and after assembly in place 450 lb Are drain cocks or valves fitted  
to free the superheater from water where necessary yes

Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with ✓  
**FOR BAROLAY, CURLE & CO, LTD.**

John H. Sutherland  
GENERAL MANAGER ENGINE WORKS

The foregoing is a correct description, ✓ Manufacturer.

Dates of Survey See Accompanying Are the approved plans of boiler and superheater forwarded herewith yes  
while building ✓ (During erection on board vessel - - -) ✓ (If not state date of approval.)  
Total No. of visits 94

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

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) These boilers have been  
built under Special Survey, to approved plans, in accordance with  
the Society's Rules. Materials and workmanship are good.  
They have been properly fitted on board the vessel, and the safety  
valves adjusted under steam to 265 lb per square inch.

10/5/30.

Survey Fee £ : : When applied for, 19  
Travelling Expenses (if any) £ : : When received, 19

H. L. Sutherland  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 13 MAY 1930  
Assigned See Accompanying Machy Report