

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 Reg. Book. Survey held at Glasgow Date, First Survey 27-5-29 Last Survey 3-5-30
on the S.S. "City of Barcelona" (Number of Visits 94) Gross 5698 Tons Net 3525
Master Glasgow Built at Glasgow By whom built Barclay Curle & Co. Ltd. Yard No. 636 When built 1930
Engines made at Glasgow By whom made Barclay Curle & Co. Ltd. Engine No. 636 When made 1930
Boilers made at Glasgow By whom made Barclay Curle & Co. Ltd. Boiler No. 636 When made 1930
Nominal Horse Power The Kellerman Lines Ltd. Port belonging to Liverpool

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

Manufacturers of Steel Wm Beardmore & Co. Ltd. (Letter for Record (5))
Total Heating Surface of Boilers 1680 sq. ft. Is forced draught fitted yes Coal or Oil fired coal
No. and Description of Boilers 1 S.B. Working Pressure 265 lb.
Tested by hydraulic pressure to 448 lb. Date of test 16-10-29 No. of Certificate 18480 Can each boiler be worked separately yes
Area of Firegrate in each Boiler 39.9 sq. ft. 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 7.5 x 5 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 yes
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 12'-6" Length 12'-0" Shell plates: Material Steel Tensile strength 30-34 Ton.
Thickness 1 13/32" Are the shell plates welded or flanged no Description of riveting: circ. seams DR L.
long. seams T.R.-D.B.S. Diameter of rivet holes in circ. seams 1 1/16" Pitch of rivets 3.835"
Percentage of strength of circ. end seams plate 62.45% Percentage of strength of circ. intermediate seam plate 46.15%
Percentage of strength of longitudinal joint plate 85.25% Working pressure of shell by Rules 266 lb.
Thickness of butt straps outer 1 3/32" No. and Description of Furnaces in each Boiler 2 Brighton Section 2C
Material Steel Tensile strength 26-30 Ton. Smallest outside diameter 45.25"
Length of plain part top 1 1/32" Thickness of plates bottom 1 1/16" Description of longitudinal joint weld
Dimensions of stiffening rings on furnace or e.c. bottom yes Working pressure of furnace by Rules 265 lb.
End plates in steam space: Material Steel Tensile strength 26-30 Ton. Thickness 1 1/16" Pitch of stays 18 x 16 3/4"
How are stays secured D.N. Working pressure by Rules 267 lb.
Tube plates: Material Steel Tensile strength 26-30 Ton. Thickness 1 1/32"
Mean pitch of stay tubes in nests 8-9 1/4" Pitch across wide water spaces 14 5/16" Working pressure front 265 lb.
Girders to combustion chamber tops: Material Steel Tensile strength 28-32 Ton. Depth and thickness of girder back 488 lb.
at centre 10 1/2" x 1 7/8" Length as per Rule 37 1/4" Distance apart 8 1/2" No. and pitch of stays Steel
in each 4 @ 8" Working pressure by Rules 295 lb. Combustion chamber plates: Material Steel
Tensile strength 26-30 Ton. Thickness: Sides 2 3/32" Back 2 3/32" Top 2 3/32" Bottom 3 1/32"
Pitch of stays to ditto: Sides 9" x 7 3/8" Back 8 3/4" x 7 3/4" 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 Ton.
Thickness 1 1/32" Lower back plate: Material Steel Tensile strength 26-30 Ton. Thickness 6 1/64"
Pitch of stays at wide water space 14 5/16" Are stays fitted with nuts or riveted over nuts
Working Pressure 265 lb. Main stays: Material Steel Tensile strength 28-32 Ton.
Diameter At body of stay, 3 1/4" No. of threads per inch 6 Area supported by each stay 301.5 sq. in.
Working pressure by Rules 265 lb. Screw stays: Material Steel Tensile strength 26-30 Ton.
Diameter At turned off part, 1 3/4" No. of threads per inch 9 Area supported by each stay 68 sq. in.

Working pressure by Rules **267 lb.** Are the stays drilled at the outer ends **no** Margin stays: Diameter **2 1/4" x 2 1/8"**
No. of threads per inch **9** Area supported by each stay **1210"** Working pressure by Rules **268 lb.**
Tubes: Material **Iron** External diameter **3"** Thickness **5/16"-7/16"-1/2"** No. of threads per inch **9**
Pitch of tubes **4 3/16" 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 **26" x 1 3/32"** No. of rivets and diameter of rivet holes **40 @ 1 7/16"**
Outer row rivet pitch at ends **9 3/4"** Depth of flange if manhole flanged **4 1/4"** 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 **NEM (Smoke Tube)** Manufacturers of Tubes **Sunderland Rpt**
Number of elements **5** Material of tubes **S** Internal diameter and thickness of tubes
Material of headers **S** Tensile strength 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 **✓** castings **✓** 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 BARCLAY, CURLE & CO., LTD.

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 **machy Report.** 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.)

This boiler has been built under Special Survey, to approved plans, in accordance with the Society's Rules. Materials and workmanship are good. It has been properly fitted on board the vessel, and the Safety valves adjusted under steam to 265 lbs. per square inch.

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

H. L. Sutherst.

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **GLASGOW 13 MAY 1930**

Assigned **See Accompanying machy. Report**



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