

## REPORT ON BOILERS.

No. 63330

JAN 16 1941

Received at London Office

Date of writing Report

19

When handed in at Local Office

14: 1: 41

Port of GLASGOW

No. in Reg. Book.

Survey held at

Glasgow

Date, First Survey

18: 1: 40

Last Survey

4th Jan. 1941

9809 on the

5/5

"REMBRANDT"

(Number of Visits

✓)

Gross

5559

Tons

Net 3306

Built at PA Glasgow

By whom built

Lithgow's Ltd.

Yard No. 937 When built 1941

Engines made at

Glasgow

By whom made

David Brown &amp; Co. Ltd.

Engine No. 1061 When made 1941

Boilers made at

do-

By whom made

do-

Boiler No. 1061 When made 1941

Nominal Horse Power 516

Owners Bilton Steam Shipping Co. Ltd. Port belonging to London

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

Manufacturers of Steel Grilles Ltd.

(Letter for Record 5 ✓)

Total Heating Surface of Boilers

7161 ft<sup>2</sup> ✓

Is forced draught fitted

Yes ✓

Coal or Oil fired

Coal ✓

No. and Description of Boilers

3 Single-ended

Working Pressure 220 lb. ✓

Tested by hydraulic pressure to

380 lb. ✓

Date of test

PORT 7-10-40

No. of Certificate

20650

Can each boiler be worked separately

Yes ✓

Area of Firegrate in each Boiler

56 ft<sup>2</sup> ✓

No. and Description of safety valves to each boiler

1-3" double spring

Area of each set of valves per boiler

(per Rule 12.7 ft<sup>2</sup> ✓

Pressure to which they are adjusted

220 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 boiler uptakes and bunkers

7'-1 1/2" ✓

Is oil fuel carried in the double bottom under boilers

No ✓

Smallest distance between shell of boiler and tank top plating

29" ✓

Is the bottom of the boiler insulated

Yes ✓

Largest EXTERNAL dia. of boilers

15'-6" ✓

Length

11'-6" ✓

Shell plates: Material

steel ✓

Tensile strength

29/33 tons ✓

Thickness

1 15/32" ✓

Are the shell plates welded or flanged

No ✓

Description of riveting: circ. seams

end double

long. seams

DBS TR ✓

Diameter of rivet holes in

circ. seams

F 1 3/8" B 1 1/2" ✓

Pitch of rivets

3.45" 4.08" ✓

Percentage of strength of circ. end seams

plate F 63 B 63.2

rivets 46.6 47

Percentage of strength of circ. intermediate seam

plate

Percentage of strength of longitudinal joint

plate 85.6

rivets 85.74

combined 88.3

Thickness of butt straps

outer 1 7/16" ✓

inner 1 15/16" ✓

No. and Description of Furnaces in each Boiler

3 Deighton ✓

Material

steel ✓

Tensile strength

26/30 tons ✓

Smallest outside diameter

3'-10 7/32" ✓

Length of plain part

top

bottom

Thickness of plates

crown

4 5/16" ✓

bottom

64

Description of longitudinal joint

welded ✓

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

—

End plates in steam space: Material

steel ✓

Tensile strength

26/30 tons ✓

Thickness

1 3/8" ✓

Pitch of stays

18 1/2" x 2 1/2" ✓

How are stays secured

D.N. ✓

Tube plates: Material

front

steel ✓

back

Tensile strength

26/30 tons ✓

Thickness

1 5/16" ✓

2 5/32" ✓

Mean pitch of stay tubes in nests

9.56" ✓

Pitch across wide water spaces

14" ✓

Girders to combustion chamber tops: Material

steel ✓

Tensile strength

28/32 tons ✓

Depth and thickness of girder

at centre

2 @ 9 3/8" x 7/8" ✓

Length as per Rule

34 1/2" ✓

Distance apart

9" ✓

No. and pitch of stays

in each

3 @ 8 1/4" ✓

Combustion chamber plates: Material

steel ✓

Tensile strength

26/30 tons ✓

Thickness: Sides

1 1/16" ✓

Back

2 3/32" ✓

Top

1 1/16" ✓

Bottom

2 7/32" ✓

Pitch of stays to ditto: Sides

8 1/4" x 9" ✓

Back

8" x 10" ✓

Top

8 1/4" x 9" ✓

Are stays fitted with nuts or riveted over

nuts ✓

Front plate at bottom: Material

steel ✓

Tensile strength

26/30 tons ✓

Thickness

1 5/16" ✓

Lower back plate: Material

steel ✓

Tensile strength

26/30 tons ✓

Thickness

1 3/16" ✓

Pitch of stays at wide water space

13 7/16" ✓

Are stays fitted with nuts or riveted over

nuts ✓

Main stays: Material

steel ✓

Tensile strength

28/32 tons ✓

Diameter

At body of stay, 3 1/4" + 3" ✓

Over threads

No. of threads per inch

6 ✓

Screw stays: Material

steel ✓

Tensile strength

26/30 tons ✓

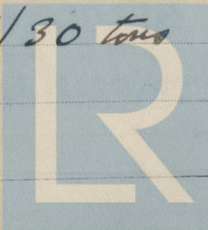
Diameter

At turned off part, 1 3/4" ✓

Over threads

No. of threads per inch

9 ✓



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Are the stays drilled at the outer ends no Margin stays: Diameter <sup>At turned off part,</sup> 1 7/8"  
 No. of threads per inch 9  
 Tubes: Material steel External diameter <sup>Plain</sup> 3 1/4" <sup>Stay</sup> 3" Thickness <sup>8 WG</sup> 1/4", 5/16" & 3/8" No. of threads per inch 9  
 Pitch of tubes 4 3/16" x 4 1/8" Manhole compensation: Size of opening in  
 shell plate 19 1/2" x 15 1/2" Section of compensating ring 10 1/2" x 1 5/32" No. of rivets and diameter of rivet holes 34 @ 1 1/2"  
 Outer row rivet pitch at ends 10 7/16" Depth of flange if manhole flanged 3" 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 <sup>Plate</sup> \_\_\_\_\_ <sup>Rivets</sup> \_\_\_\_\_  
 Internal diameter \_\_\_\_\_ Thickness of crown \_\_\_\_\_ No. and diameter of  
 stays \_\_\_\_\_ Inner radius of crown \_\_\_\_\_  
 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 Smoke tube Manufacturers of <sup>Tubes</sup> See Spec. Ppt. C 709 & C 710  
<sup>Steel forgings</sup> copy sent <sup>Steel castings</sup> \_\_\_\_\_  
 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 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 1.76 sq" Are the safety valves fitted with easing gear Yes  
 Pressure to which the safety valves are adjusted 220 lb. Hydraulic test pressure \_\_\_\_\_  
 tubes \_\_\_\_\_ forgings and castings \_\_\_\_\_ and after assembly in place 440 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 Yes

The foregoing is a correct description,  
 For David Rowan & Co. Ltd.  
 Archd. W. Grierson. Manufacture

Dates of Survey <sup>During progress of</sup> work in shops - -  
<sup>while</sup> <sup>During erection on</sup> board vessel - - -

SEE ACCOMPANYING MACHINERY REPORT

Are the approved plans of boiler and superheater forwarded herewith Yes  
 (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. "RIBERA" GLS.RPT 62293

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) These boilers have been  
built under special survey in accordance with the Rules  
and approved plans, and the materials and workmanship  
are good. They have been satisfactorily installed in the  
vessel and the safety valves have been adjusted to the  
working pressure.

Eob  
 14/1/41

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

W. Brown.  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 14 JAN 1941

Assigned SEE ACCOMPANYING MACHINERY REPORT.



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