

## REPORT ON BOILERS.

No. 63260

JAN -2 1941

Received at London Office

Date of writing Report

19

When handed in at Local Office

30:12:1940

Port of GLASGOW

No. in Survey held at  
Reg. Book.

Glasgow

Date, First Survey

15:2:40

Last Survey 21st Dec. 1940

(Number of Visits 74)

Gross 6000

Tons

Net

90211 on the S/S

"TRADER"

Built at

Glasgow

By whom built Chas. Connell &amp; Co. Ltd.

Yard No. 430 When built 1940

Engines made at

do-

By whom made David Power &amp; Co. Ltd.

Engine No. 1052 When made 1940

Boilers made at

do-

By whom made do-

Boiler No. 1052 When made 1940

Nominal Horse Power

524

Owners Clante S.S. Co. Ltd.

Port belonging to Liverpool

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

Manufacturers of Steel

The Steel Company of Scotland, Ltd.

(Letter for Record)

A

Total Heating Surface of Boilers

8208 sq ft

Is forced draught fitted

No

Coal or Oil fired

Coal

No. and Description of Boilers

2 Drift - ended

Working Pressure 210 lb.

Tested by hydraulic pressure to

365 lb.

Date of test 13-9-40

No. of Certificate 20639

Can each boiler be worked separately

Yes

Area of Firegrate in each Boiler

107.5 sq ft

No. and Description of safety valves to each boiler

1-4" drift spring

Area of each set of valves per boiler

per Rule 22.8 sq ft  
as fitted 25.120 sq ft

Pressure to which they are adjusted

210 lb.

Are they fitted with easing gear

Yes

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler

No

Smallest distance between boilers or uptakes and bunkers or woodwork

16"

Is oil fuel carried in the double bottom under boilers

No

Smallest distance between shell of boiler and tank top plating

2'-6"

Is the bottom of the boiler insulated

Yes

Largest internal dia. of boilers

15'-8 7/8"

Length 17'-6"

Shell plates: Material

Steel

Tensile strength

29/35 tons

Thickness of shell plates

F 1 1/16" C 1 1/32"

Are the shell plates welded or flanged

No

Description of riveting: circ. seams

end square  
inter. double

Long. seams DBS TR

Diameter of rivet holes in

circ. seams F 1 5/16" B+C 1 1/2"  
long. seams 1 1/2"

Pitch of rivets

B 4'-208" C 4'-213" F 3'-34"  
OUTER 10 7/16" INNER 10 1/4"

Percentage of strength of circ. end seams

plate B 64.3 F 60.7  
rivets 45.5 44.8

Percentage of strength of circ. intermediate seam

plate 64.4  
rivets 68.2

Percentage of strength of longitudinal joint

plate OUTER 85.6 INNER 85.36  
rivets 85.7 88.7 89.2  
combined 88.3 88.6

Thickness of butt straps

outer B 1 3/32" F 1 3/32"  
inner B 1 7/32" F 1 7/32"

No. and Description of Furnaces in each Boiler

6 Reighton

Material Steel

CEM. 1 1/16"

Tensile strength

26/30 tons

Smallest outside diameter

3'-8 9/32"

Length of plain part

top  
bottom

Thickness of plates

crown 4 1/16"  
bottom 1/16"

Description of longitudinal joint

welded

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

End plates in steam space: Material

Steel

Tensile strength

26/30 tons

Thickness

1 1/32"

Pitch of stays 21 3/4" x 22"

How are stays secured

D.N.

Tube plates: Material

front Steel  
back

Tensile strength

26/30 tons

Thickness

1 1/32"

Mean pitch of stay tubes in nests

W 12 3/16" C 12"

Pitch across wide water spaces

14 1/2"

Girders to combustion chamber tops: Material

Steel

Tensile strength

28/32 tons

Depth and thickness of girder

at centre 2 @ 12 1/8" x 7/8"

Length as per Rule

3'-9 15/16"

Distance apart

W 9 1/4" C 7 1/4"

No. and pitch of stays

in each 4 @ 9"

Combustion chamber plates: Material

Steel

Tensile strength

26/30 tons

Thickness: Sides

23/32"

Back

1 1/32"

Top

23/32"

Bottom

23/32"

Pitch of stays to ditto: Sides

9" x 9 1/4"

Back

Top 11 9/16" x 9 1/4"  
C 9" x 7 1/4"

Are stays fitted with nuts or riveted over

nuts

Front plate at bottom: Material

Steel

Tensile strength

26/30 tons

Thickness

1"

Lower back plate: Material

Steel

Tensile strength

26/30 tons

Thickness

1"

Pitch of stays at wide water space

Are stays fitted with nuts or riveted over

Main stays: Material

Steel

Tensile strength

28/32 tons

Diameter

At body of stay, 3 1/4" + 3 1/2"  
Over threads

No. of threads per inch

6

Screw stays: Material

Iron

Tensile strength

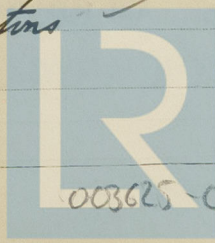
21 1/2 tons

Diameter

At turned off part, 1 3/4"  
Over threads

No. of threads per inch

9



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Lloyd's Register  
Foundation



Are the stays drilled at the outer ends No Margin stays: Diameter { At turned off part, or Over threads }  
No. of threads per inch -  
Tubes: Material Iron External diameter { Plain 3 1/2" Stay 3 1/2" Thickness { 7 W 4 3/8" No. of threads per inch 9  
Pitch of tubes W 4 7/8" x 4 7/8" C 4 7/8" x 4 3/4" Manhole compensation: Size of opening in shell plate 15 1/2" x 19 1/2" Section of compensating ring 10 1/4" 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 { Plate Rivets }  
Internal diameter Thickness of crown No. and diameter of stays  
How connected to shell Inner radius of crown  
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 Superheater Co. Ltd. Smokestack Manufacturers of { Tubes See Mech. Cert. H: 609 + 610 Steel forgings Chas. Lennox 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 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 210 lb. Hydraulic test pressure tubes forgings and castings and after assembly in place 420 lb. Are drain cocks 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. Manufacturer  
Arch. H. Grierson

Dates of Survey { During progress of work in shops - - } Are the approved plans of boiler and superheater forwarded herewith Yes (If not state date of approval.)  
while building { During erection on board vessel - - }  
**SEE ACCOMPANYING MACHINERY REPORT.**  
Total No. of visits

Is this Boiler a duplicate of a previous case No 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 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.

206  
30/12/40

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

A. J. Brown  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 31 DEC 1940  
**SEE ACCOMPANYING MACHINERY REPORT.**  
Assigned