

REPORT ON BOILERS.

No. 63260

Received at London Office JAN -2 1941

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

90811 on the S/S

"TRADER"

(Number of Visits

74)

Gross 6000

Tons Net

Built at

Glasgow

By whom built

Chas. Connell & Co. Ltd.

Yard No. 430

When built 1940

Engines made at

-do-

By whom made

David Rowan & 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

83

Owners

Charon SS. Co. Ltd.

Port belonging to

Liverpool

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel The Steel Company of Scotland, Ltd.

(Letter for Record T ✓)

Total Heating Surface of Boilers

1242 sq ft

Is forced draught fitted

No

Coal or Oil fired

Coal

No. and Description of Boilers

One Single-ended

Working Pressure 120 lb.

Tested by hydraulic pressure to

230 lb.

Date of test

2-10-40

No. of Certificate

20646

Can each boiler be worked separately

-

Area of Firegrate in each Boiler

35 sq ft

No. and Description of safety valves to each boiler

1-2 3/4" draft spring

Area of each set of valves per boiler

per Rule 11.50 sq in
as fitted 11.86 sq in

Pressure to which they are adjusted

120 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

Is oil fuel carried in the double bottom under boilers

No

Smallest distance between shell of boiler and tank top plating

Boiler fitted on upper deck

Is the bottom of the boiler insulated

Yes

Largest internal dia. of boilers

12'-6"

Length

10'-6"

Shell plates: Material

Steel

Tensile strength

28/32 tons

Thickness

23/32"

Are the shell plates welded or flanged

No

Description of riveting: circ. seams

end draft
inter.

Long. seams

DBS TR

Diameter of rivet holes in

circ. seams 13/16"
long. seams 7/8"

Pitch of rivets

2-36 7/8"
5-55 1/4"

Percentage of strength of circ. end seams

plate 65.7
rivets 50.2

Percentage of strength of circ. intermediate seam

plate
rivets

Percentage of strength of longitudinal joint

plate 84.24
rivets 92.5
combined 91.6

Thickness of butt straps

outer 9/16"
inner 11/16"

No. and Description of Furnaces in each Boiler

2 Plain

Material

Steel

Tensile strength

26/30 tons

Smallest outside diameter

3'-7 1/4"

Length of plain part

top
bottom

Thickness of plates

crown 5/8"
bottom

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 1/16"

Pitch of stays

17 1/4" x 23 3/4"

How are stays secured

D.N.

Tube plates: Material

front Steel
back

Tensile strength

26/30 tons

Thickness

13/16"

23/32"

Mean pitch of stay tubes in nests

12 3/16"

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 @ 7 1/4" x 5/8"

Length as per Rule

2'-6 23/32"

Distance apart

9 7/8"

No. and pitch of stays

in each

2 @ 9 3/4"

Combustion chamber plates: Material

Steel

Tensile strength

26/30 tons

Thickness: Sides

19/32"

Back

9/16"

Top

19/32"

Bottom

15/16"

Pitch of stays to ditto: Sides

8 1/2" x 11" Max.

Back

9" x 9"

Top

9 3/4" x 9 7/8"

Are stays fitted with nuts or riveted over

nuts

Front plate at bottom: Material

Steel

Tensile strength

26/30 tons

Thickness

13/16"

Lower back plate: Material

Steel

Tensile strength

26/30 tons

Thickness

5/8"

Pitch of stays at wide water space

13"

Are stays fitted with nuts or riveted over

nuts

Main stays: Material

Steel

Tensile strength

28/32 tons

Diameter

At body of stay,
or
Over threads

2 1/2"

No. of threads per inch

6

Screw stays: Material

Iron

Tensile strength

2 1/2 tons

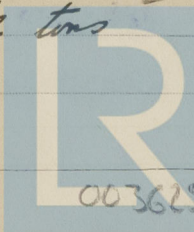
Diameter

At turned off part,
or
Over threads

1 3/8"

No. of threads per inch

9



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Are the stays drilled at the outer ends *No* Margin stays: Diameter ^{At turned off part,} *1 1/2"*
No. of threads per inch *9*
Tubes: Material *Iron* External diameter ^{Plain} *3 1/2"* ^{Stay} *3 1/2"* Thickness ^{8 W 9} *1/4" + 5/16"* No. of threads per inch *9*
Pitch of tubes *4 7/8" x 4 7/8"* Manhole compensation: Size of opening in
shell plate *15" x 19"* Section of compensating ring *7" x 2 3/32"* No. of rivets and diameter of rivet holes *38 @ 1 5/16"*
Outer row rivet pitch at ends *5 15/16"* 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 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 *none* Manufacturers of ^{Tubes} ^{Steel forgings} ^{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 Is a safety valve fitted to every part of the superheater which can be shut off from the boiler
Area of each safety valve Are the safety valves fitted with easing gear
Pressure to which the safety valves are adjusted Hydraulic test pressure:
tubes forgings and castings and after assembly in place Are drain cocks or
valves fitted to free the superheater from water where necessary

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*
^{while} ^{building} ^{During erection on} ^{board vessel - - -} ^(If not state date of approval.)
SEE ACCOMPANYING MACHINERY REPORT. Total No. of visits

Is this Boiler a duplicate of a previous case *Yes* If so, state Vessel's name and Report No. *"CUSTODIAH" GLS. R 48174*

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

Rob
30/12/40

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

M. J. Brown
Engineer Secretary to Lloyd's Register of Shipping.

Committee's Minute *GLASGOW* 31 DEC 1940

Assigned **SEE ACCOMPANYING MACHINERY REPORT.**



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