

pt. 5a.

# REPORT ON BOILERS.

No. 57480

Received at London Office 30 SEP 1936

Date of writing Report

19

When handed in at Local Office

25.9.36

1036

Port of

Glasgow

No. in Survey held at

Glasgow

Date, First Survey

7-10-29

Last Survey

22.9.36

(Number of Visits)

3670

Tons Gross 3670 Net 2254

on the

new steel ship "COULDEG"

Master

Built at

Irvine

By whom built

Alphine Dockyard Co

Yard No.

518

When built

1936

Engines made at

Glasgow

By whom made

Davie Rowan & Co Ltd

Engine No.

924

When made

1936

Boilers made at

Glasgow

By whom made

Davie Rowan & Co Ltd

Boiler No.

924

When made

1936

Nominal Horse Power

346

Owners

Dornoch Shipping Co Ltd

Port belonging to

Glasgow

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

Manufacturers of Steel

Jas Dunlop & Co Ltd

(Letter for Record (S) ✓)

Total Heating Surface of Boilers

1223

Is forced draught fitted

no

Coal or Oil fired

coal

No. and Description of Boilers

one single ended

Working Pressure

100

Tested by hydraulic pressure to

200

Date of test

3-6-36

No. of Certificate

19742

Can each boiler be worked separately

no

Area of Firegrate in each Boiler

36

No. and Description of safety valves to each boiler

Two direct spring

Area of each set of valves per boiler

per Rule 13.28

as fitted 14.13

Pressure to which they are adjusted

105

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

18

Is oil fuel carried in the double bottom under boilers

no

Smallest distance between shell of boiler and tank top plating

2' 0"

Is the bottom of the boiler insulated

yes

Largest internal dia. of boilers

11' 6"

Length

10' 6"

Shell plates: Material

steel

Tensile strength

29-33 tons

Thickness

21/32"

Are the shell plates welded or flanged

no

Description of riveting: circ. seams

end

inter.

long. seams

Lap TR

Diameter of rivet holes in

circ. seams 15/16"

long. seams 15/16"

Pitch of rivets

2.79"

4.916"

Percentage of strength of circ. end seams

plate

66.3

rivets

59.9

Percentage of strength of circ. intermediate seam

plate

78.2

rivets

77.5

Percentage of strength of longitudinal joint

plate

78.2

rivets

77.5

combined

73.7

Working pressure of shell by Rules

104

Lap of shellplate

6 7/8"

Thickness of butt straps

1/2"

No. and Description of Furnaces in each Boiler

Two plain

Material

steel

Tensile strength

26-30 tons

Smallest outside diameter

40.5625"

Length of plain part

top 7' 8"

bottom 84.375"

Thickness of plates

top 19/32"

bottom 32"

Description of longitudinal joint

welded

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

none

Working pressure of furnace by Rules

107

End plates in steam space: Material

steel

Tensile strength

26-30 tons

Thickness

1"

Pitch of stays

14 7/8" x 25 7/8"

How are stays secured

WTH

Working pressure by Rules

103

Tube plates: Material

front steel

back "

Tensile strength

26-30 tons

Thickness

25/32"

1/16"

Mean pitch of stay tubes in nests

12.39"

Pitch across wide water spaces

14 1/4"

Working pressure

front 107

back 108

Girders to combustion chamber tops: Material

steel

Tensile strength

28-32 tons

Depth and thickness of girder

at centre

2 @ 6 7/8" x 5/8"

Length as per Rule

31.78"

Distance apart

10"

No. and pitch of stays

in each

2 @ 10 7/8"

Working pressure by Rules

101

Combustion chamber plates: Material

steel

Tensile strength

26-30 tons

Thickness: Sides

9/16"

Back

1 1/2"

Top

9/16"

Bottom

9/8"

7/8"

Pitch of stays to ditto: Sides

10 3/8" x 9 1/4"

Back

9 7/8" x 9 5/8"

Top

10 1/8" x 10"

Are stays fitted with nuts or riveted over

nuts

Working pressure by Rules

103

Front plate at bottom: Material

steel

Tensile strength

26-30 tons

Thickness

25/32"

Lower back plate: Material

steel

Tensile strength

26-30 tons

Thickness

19/32"

Pitch of stays at wide water space

13 1/2" x 9 9/8"

Are stays fitted with nuts or riveted over

nuts

Working Pressure

101

Main stays: Material

steel

Tensile strength

28-32 tons

Diameter

At body of stay, 2 1/4"

No. of threads per inch

6

Area supported by each stay

3740"

Working pressure by Rules

114

Screw stays: Material

steel

Tensile strength

26-30 tons

Diameter

At turned off part, 1 3/8"

No. of threads per inch

9

Area supported by each stay

1010"

Lloyd's Register Foundation



Working pressure by Rules 100 ✓ Are the stays drilled at the outer ends no ✓ Margin stays: Diameter { At turned off part, or Over threads 1 1/2" ✓  
No. of threads per inch 9 ✓ Area supported by each stay 111 0" ✓ Working pressure by Rules 112 ✓  
Tubes: Material Iron ✓ External diameter { Plain 3 1/4" ✓ Stay 3 1/4" ✓ Thickness 9 w.g. ✓ No. of threads per inch 9 ✓  
Pitch of tubes 4 1/2 x 4 3/8" ✓ Working pressure by Rules 180 ✓ Manhole compensation: Size of opening  
shell plate 19" x 15" ✓ Section of compensating ring 6 1/2 x 3/4" ✓ No. of rivets and diameter of rivet holes 32 @ 1 5/16" ✓  
Outer row rivet pitch at ends 4 1/2" ✓ Depth of flange if manhole flanged 3" ✓ Steam Dome: Material none ✓  
Tensile strength Thickness of shell Description of longitudinal joint  
Diameter of rivet holes 8 1/2" ✓ Pitch of rivets Percentage of strength of joint { Plate Rivets  
Internal diameter Working pressure by Rules Thickness of crown No. and diameter  
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 none ✓ Manufacturers of { Tubes 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 Working pressure as per  
Rules Pressure to which the safety valves are adjusted Hydraulic test pressure  
tubes, 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  
Archd. N. Grierson Manufacturer

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.

Is this Boiler a duplicate of a previous case yes ✓ If so, state Vessel's name and Report No. Boulmore glb Rpt. N. 57480

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)  
The materials and workmanship are good.  
The boiler has been constructed under special survey satisfactorily fitted to the vessel and its safety valves adjusted under steam.  
25/9/36.

Survey Fee £ 8 : 4 : When applied for, 25.9.1936  
Travelling Expenses (if any) £ : : When received, 2.10.1936

S. Schans.  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 29 SEP 1936  
Assigned SEE ACCOMPANYING MACHINERY REPORT