

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

10

Port of

Glasgow

No. in Survey held at

Glasgow

Date First Survey

7-10-29

Last Survey

22-9-36

on the new steel S/S "COULBEG"

(Number of Visits)

✓

Gross 3670

Net 2254

Master

Built at Irvine

By whom built

Ayrshire Dockyard & Co

Yard No. 518

When built 1936

Engines made at

Glasgow

By whom made

David Rowan & Co Ltd

Engine No. 924

When made 1936

Boilers made at

Glasgow

By whom made

David 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

Witkowitz Bergbau- und Eisenhütten-Gesellschaft in Witkowitz

(Letter for Record (S))

Total Heating Surface of Boilers

4802 sq ft

Is forced draught fitted

yes

Coal or Oil fired coal

No. and Description of Boilers

Two single ended

Working Pressure 200

Tested by hydraulic pressure to

350

Date of test 3-6-36

No. of Certificate 19741

Can each boiler be worked separately yes

Area of Firegrate in each Boiler

59 sq ft

No. and Description of safety valves to each boiler

Two direct spring

Area of each set of valves per boiler

per Rule 14 sq in

as fitted 14.13 sq in

Pressure to which they are adjusted 205

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

15"

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

14-9"

Length 11-6"

Shell plates: Material

steel

Tensile strength 29-33 tons

Thickness

1 5/16"

Are the shell plates welded or flanged no

Description of riveting: circ. seams

end NR

Long. seams

NR35. TR

Diameter of rivet holes in

circ. seams

F 1 1/4"

B 1 3/8"

Pitch of rivets

F 3.2"

B 3.75"

Percentage of strength of circ. end seams

plate

F 60.9

B 63.3

Percentage of strength of circ. intermediate seam

plate

✓

Percentage of strength of longitudinal joint

plate

85.5

88.3

Working pressure of shell by Rules

203

Thickness of butt straps

outer 1"

inner 1 1/8"

No. and Description of Furnaces in each Boiler

Three Weighton

Material

steel

Tensile strength

26-30 tons

Smallest outside diameter

44.156"

Length of plain part

top

bottom

Thickness of plates

crown 3/4"

bottom 5/8"

Description of longitudinal joint

welded

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

✓

Working pressure of furnace by Rules

200

End plates in steam space: Material

steel

Tensile strength

26-30 tons

Thickness

1 1/4"

Pitch of stays 17 3/4" x 20 1/4"

How are stays secured

DN

Working pressure by Rules

201

Tube plates: Material

front

back

steel

Tensile strength

26-30 tons

Thickness

2 1/2"

2 3/4"

Mean pitch of stay tubes in nests

9 1/4"

Pitch across wide water spaces

13 1/2"

Working pressure

front 206

back 215

Girders to combustion chamber tops: Material

steel

Tensile strength

28-32 tons

Depth and thickness of girder

at centre

20 7 1/8" x 7 1/8"

Length as per Rule

32.6"

Distance apart

8 5/8"

No. and pitch of stays

in each

20 10 5/16"

Working pressure by Rules

205

Combustion chamber plates: Material

steel

Tensile strength

26-30 tons

Thickness: Sides

3/32"

Back

1/16"

Top

2 3/32"

Bottom

2 3/32"

Pitch of stays to ditto: Sides

10 5/16" x 8 7/8"

Back

9 5/8" x 8"

Top

10 5/16" x 8 7/8"

Are stays fitted with nuts or riveted over

nuts

Working pressure by Rules

201

Front plate at bottom: Material

steel

Tensile strength

26-30 tons

Thickness

2 1/2"

Lower back plate: Material

steel

Tensile strength

26-30 tons

Thickness

2 5/8"

Pitch of stays at wide water space

13 1/2" x 8"

Are stays fitted with nuts or riveted over

nuts

Working Pressure

200

Main stays: Material

steel

Tensile strength

28-32 tons

Diameter

At body of stay, or over threads

3"

No. of threads per inch

6

Area supported by each stay

334

Working pressure by Rules

235

Screw stays: Material

steel

Tensile strength

26-30 tons

Diameter

At turned off part, or over threads

1 5/8"

No. of threads per inch

9

Area supported by each stay

75.0"

Working pressure by Rules **200** Are the stays drilled at the outer ends **no** Margin stays: Diameter { At turned off part, or Over threads **1 3/4"**
No. of threads per inch **9** Area supported by each stay **92.5 sq"** Working pressure by Rules **207**
Tubes: Material **Iron** External diameter { Plain **2 1/2"** Thickness { **9 w.s.** No. of threads per inch **9**
Pitch of tubes **3 3/4" x 3 7/8"** Working pressure by Rules **230** Manhole compensation: Size of opening
shell plate **15 1/2" x 19 1/2"** Section of compensating ring **9 1/2" x 19 1/16"** No. of rivets and diameter of rivet holes **32 @ 1 3/8"**
Outer row rivet pitch at ends **9 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 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 Smoke tube** N.E. Marine. Manufacturers of { Tubes { For particulars see Rule book C388 obcopy herewith. Steel castings **Frodingham Steel Co.**
Number of elements **132** Material of tubes **Steel** Internal diameter and thickness of tubes **14 1/4" / 1/2"**
Material of headers **Steel** Tensile strength **70-30 ton** Thickness **3/4"** Can the superheater be shut off and
the boiler be worked separately **no** 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 **1.77 sq"** Are the safety valves fitted with easing gear **yes** Working pressure as per
Rules **200 lb.** Pressure to which the safety valves are adjusted **207 lb.** Hydraulic test pressure
tubes **1500 lb.** castings **600 lb.** and after assembly in place **400** 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
Arch^d N. Grierson Manufacturer

Dates { During progress of work in shops - - }
of Survey { while building { During erection on board vessel - - }

Are the approved plans of boiler and superheater forwarded herewith **yes**
(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. E/R Rpt. No 57200**

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)

The materials and workmanship are good.

The boilers have been constructed under special survey satisfactorily fitted in the vessel and their safety valves adjusted under steam.

25/9/36.

Survey Fee £ **See under Rpt** When applied for, **19**
Travelling Expenses (if any) £ **See under Rpt** When received, **19**

S. J. Davis

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **GLASGOW 29 SEP 1936**

Assigned **SEE ACCOMPANYING MACHINERY REPORT.**



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