

REPORT ON BOILERS.

No. 55948

24 JUL 1935

Received at London Office

Writing Report

10

When handed in at Local Office

17.7.35 Port of Glasgow

Survey held at

Glasgow

Date, First Survey

1.3.35

Last Survey

10.7.35

1935

(Number of Visits)

32

Gross

Tons

Net

on the

new steel ship

AURETTA

Built at Burntisland By whom built Burntisland S B Co Yard No. 186 When built 1935

made at

Glasgow

By whom made

David Rowan & Co Ltd

Engine No.

980

When made 1935

made at

Glasgow

By whom made

David Rowan & Co Ltd

Boiler No.

980

When made 1935

Horse Power

283

Owners

Port belonging to

TUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Bohills Ltd

(Letter for Record (S))

Heating Surface of Boilers

1050 sq ft

Is forced draught fitted

no

Coal or Oil fired

coal

Description of Boilers

one single ended

Working Pressure

220

Tested by hydraulic pressure to

380

Date of test

6-6-35

No. of Certificate

19553

Can each boiler be worked separately

—

of Firegrate in each Boiler

34 sq ft

No. and Description of safety valves to each boiler

1 1/2" Improved High lift

of each set of valves per boiler

per Rule 2.792.5

as fitted 3.52.5

Pressure to which they are adjusted

Are they fitted with easing gear

yes

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

Least distance between boilers or uptakes and bunkers or woodwork

6'-6"

Is oil fuel carried in the double bottom under boilers

No

Least distance between shell of boiler and tank top plating

2'-6"

Is the bottom of the boiler insulated

Yes

Least internal dia. of boilers

11'-0"

Length

10'-6"

Shell plates: Material

steel

Tensile strength

29-33 tons

Thickness

1 1/2"

Are the shell plates welded or flanged

no

Description of riveting: circ. seams

inter.

seams

D.B.S. T.R.

Diameter of rivet holes in

circ. seams

all 1 1/8"

Pitch of rivets

3.069

Percentage of strength of circ. end seams

plate

63.3

rivets

48.2

Percentage of strength of circ. intermediate seam

plate

—

rivets

Percentage of strength of longitudinal joint

plate

85.24

rivets

90.7

combined

88.7

Working pressure of shell by Rules

222 lbs

Thickness of butt straps

outer 1 3/16"

inner 1 5/16"

No. and Description of Furnaces in each Boiler

Two Deighton

Material

steel

Tensile strength

26-30 tons

Smallest outside diameter

3'-2 5/8"

Thickness of plain part

top

bottom

Thickness of plates

crown

7 3/4"

bottom

6 1/4"

Description of longitudinal joint

welded

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

Working pressure of furnace by Rules

220 lbs

Plates in steam space: Material

steel

Tensile strength

26-30 tons

Thickness

3 1/2"

Pitch of stays 14" x 14"

Are stays secured

D.N.

Working pressure by Rules

221 lbs

Front plates: Material

front

steel

Tensile strength

26-30 tons

Thickness

3 1/2"

25"

5/2"

Pitch of stay tubes in nests

9.7"

Pitch across wide water spaces

14"

Working pressure

front

back

246 lbs

232 lbs

Boilers to combustion chamber tops: Material

steel

Tensile strength

28-32 tons

Depth and thickness of girder

Centre

2 @ 6 3/4" x 7/8"

Length as per Rule

2'-4 1/2"

Distance apart

7 1/2"

No. and pitch of stays

Each

2 @ 9"

Working pressure by Rules

227

Combustion chamber plates: Material

steel

Tensile strength

26-30 tons

Thickness: Sides

2 3/32"

Back

2 3/32"

Top

2 3/32"

Bottom

2 3/32"

Pitch of stays to ditto: Sides

9" x 7 1/2"

Back

9 1/2" x 8 7/8"

Top

9" x 7 1/2"

Are stays fitted with nuts or riveted over

nuts

Working pressure by Rules

221

Front plate at bottom: Material

steel

Tensile strength

26-30 tons

Thickness

3 1/2"

Lower back plate: Material

steel

Tensile strength

26-30 tons

Thickness

3 1/2"

Pitch of stays at wide water space

13 1/2"

Are stays fitted with nuts or riveted over

nuts

Working Pressure

302 lbs

Main stays: Material

steel

Tensile strength

28-32 tons

At body of stay, or

Over threads

2 1/4"

No. of threads per inch

6

Area supported by each stay

196 sq in

Working pressure by Rules

220

Screw stays: Material

steel

Tensile strength

26-30 tons

At turned off part, or

Over threads

1 1/8"

1 3/4"

1 7/8"

No. of threads per inch

9

Area supported by each stay

67.5; 81.8; 94.5 sq in

W230-0297

Working pressure by Rules 225 lb Are the stays drilled at the outer ends no Margin stays: Diameter { At turned off part, or Over threads 1 7/8" ✓
No. of threads per inch 9 Area supported by each stay 94.50" Working pressure by Rules 224
Tubes: Material Iron External diameter { Plain 3" Thickness { 8 w.g. No. of threads per inch 9
Pitch of tubes 4 1/8" x 4 3/16" Working pressure by Rules 250 Manhole compensation: Size of open
shell plate 19 1/2" x 15 1/2" Section of compensating ring 8 1/2" x 1 1/2" No. of rivets and diameter of rivet holes 34 @ 1 3/16"
Outer row rivet pitch at ends 8" Depth of flange if manhole flanged 3" Steam Dome: Material Iron
Tensile strength _____ Thickness of shell _____ Description of longitudinal joint _____
Diameter of rivet holes 0.81 Pitch of rivets _____ Percentage of strength of joint { Plate Rivets
Internal diameter 0.80 Working pressure by Rules _____ Thickness of crown _____ No. and diam
stays _____ Inner radius of crown _____ Working pressure by Rules _____
How connected to shell _____ Size of doubling plate under dome _____ Diameter of rivet holes and
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
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 a
Rules _____ Pressure to which the safety valves are adjusted _____ Hydraulic test pres
tubes _____, castings _____ and after assembly in place _____ Are drain cocks or valves
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. H. Grierson

Dates { During progress of work in shops - - - Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.)
of Survey 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.)
The materials and workmanship are good.
The boiler has been constructed under special survey and is being sent to
Burntisland to be fitted in the vessel.

17/7/35
This boiler has been efficiently fitted on board, examined under steam,
safety valves adjusted & found satisfactory.

Survey Fee £ 7 : . : When applied for, 22 JUL 1935
Travelling Expenses (if any) £ _____ : . : When received, 6/9/1935
Sch. Davis
Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute GLASGOW 23 JUL 1935
Assigned SEE ACCOMPANYING MACHINERY REPORT
Lloyd's Register Foundation