

REPORT ON BOILERS.

No. 61274

Received at London Office JUN 28 1939

Date of writing Report

19

When handed in at London Office

19

Port of

Glasgow

No. in
Reg. Book.

Survey held at

Glasgow

Date, First Survey

26th Jan. 39

Last Survey

13-6-

1939

(Number of Visits 35)

Tons { Gross
Net

on the new S/S "CEFNY-BRYN"

Master

Built at

Bumtisdland

By whom built

Bumtisdland S B Co Ltd

Yard No. 227

When built 1939

Engines made at

Glasgow

By whom made

David Rowan & Co Ltd

Engine No. 1031

When made 1939

Boilers made at

Glasgow

By whom made

David Rowan & Co Ltd

Boiler No. 1031

When made 1939

Nominal Horse Power

Owners

Port belonging to

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Steel Company of Scotland Ltd

(Letter for Record S)

Total Heating Surface of Boilers

5322 sq

Is forced draught fitted

yes

Coal or Oil fired coal

No. and Description of Boilers

Two single ended

P 20388

Working Pressure 220

Tested by hydraulic pressure to

380

Date of test

21.5.39

No. of Certificate

20386

Can each boiler be worked separately

yes

Area of Firegrate in each Boiler

63.25 sq

No. and Description of safety valves to each boiler

2 spring loaded (ordinary)

Area of each set of valves per boiler

{ per Rule 14.5 sq
as fitted 16.58 sq

Pressure to which they are adjusted

220 lbs/sq

Are they fitted with easing gear

yes

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

Smallest distance between boilers or uptakes and bunkers or woodwork

10"

DISTANCE FRONT OF BOILERS TO BULKHEAD = 9'-9"

Is oil fuel carried in the double bottom under boilers

No.

Smallest distance between shell of boiler and tank top plating

2'-5"

Is the bottom of the boiler insulated

yes

Largest internal dia. of boilers

16'-0"

Length

11'-6"

Shell plates: Material

S

Tensile strength 29.33 tons

Thickness

1 3/32"

Are the shell plates welded or flanged

no

Description of riveting: circ. seams

end WR

long. seams

WBS. TR

Diameter of rivet holes in

{ circ. seams F 1 7/16" B 1 9/16"
long. seams 1 9/16"

Pitch of rivets

{ F 3-7/8" B 4-1/4"
10 1/2"

Percentage of strength of circ. end seams

{ plate F 61.9 B 60
rivets F 45.2 B 45.8

Percentage of strength of circ. intermediate seam

{ plate
rivets

Percentage of strength of longitudinal joint

{ plate 85.1
rivets 89.6
combined 88

Working pressure of shell by Rules

221

Thickness of butt straps

{ outer 1 9/16"
inner 1 7/16"

No. and Description of Furnaces in each Boiler

Three Deighton

Material

S

Tensile strength

26-30 tons

Smallest outside diameter

3-11 1/32"

Length of plain part

{ top
bottom

Thickness of plates

{ crown 4 1/4"
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

227

End plates in steam space: Material

S

Tensile strength

26-30 tons

Thickness

1 7/16"

Pitch of stays 21 5/8" x 20 3/8"

How are stays secured

WN

Working pressure by Rules

220

Tube plates: Material

{ front S
back S

Tensile strength

26-30 tons

Thickness

{ 15/16" 29/32"
229

Mean pitch of stay tubes in nests

9.7"

Pitch across wide water spaces

14"

Working pressure

{ front 229
back 232

Girders to combustion chamber tops: Material

S

Tensile strength

28-32 tons

Depth and thickness of girder

at centre

2 @ 9" x 7/8"

Length as per Rule

34 1/2"

Distance apart

8 1/4"

No. and pitch of stays

in each

3 @ 8 1/4"

Working pressure by Rules

224

Combustion chamber plates: Material

S

Tensile strength

26-30 tons

Thickness: Sides

21/32"

Back

23/32"

Top

21/32"

Bottom

27/32"

Pitch of stays to ditto: Sides

8 1/4" x 8/4"

Back

10" x 8"

Top

8 1/4" x 8/4"

Are stays fitted with nuts or riveted over

nuts

Working pressure by Rules

220

Front plate at bottom: Material

S

Tensile strength

26-30 tons

Thickness

15/16"

Lower back plate: Material

S

Tensile strength

26-30 tons

Thickness

53/64"

Pitch of stays at wide water space

13 1/2"

Are stays fitted with nuts or riveted over

nuts

Working Pressure

227

Main stays: Material

Steel

Tensile strength

28-32 tons

Diameter

{ At body of stay,
or
Over threads

3 1/4" & 3 1/2"

No. of threads per inch

6

Area supported by each stay

408" & 460"

Working pressure by Rules

228 & 236

Screw stays: Material

Steel

Tensile strength

26-30 tons

Diameter

{ At turned off part,
or
Over threads

1 7/8" & 1 3/4"

No. of threads per inch

9

Area supported by each stay

68" & 80"

Working pressure by Rules 223.226 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 940" Working pressure by Rules 228
Tubes: Material Iron External diameter { Plain 3" Thickness { 8 w.s. No. of threads per inch 9
Pitch of tubes 4 3/16" x 4 1/8" Working pressure by Rules 250 Manhole compensation: Size of opening in
shell plate 19 1/2" x 15 1/2" Section of compensating ring 11" x 1 33/64" No. of rivets and diameter of rivet holes 34 @ 1 9/16"
Outer row rivet pitch at ends 10 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 of
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 Smoke tube Manufacturers of { For particulars see Nue Rpt. No. 8635 ✓
Steel forgings _____ copy here with
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 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 1.760" Are the safety valves fitted with easing gear yes Working pressure as per
Rules _____ Pressure to which the safety valves are adjusted 220 lbs/sq. in. Hydraulic test pressure: _____
tubes _____ forgings and castings _____ and after assembly in place 440 lbs/sq. in. 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 _____

The foregoing is a correct description,
For David Rowan & Co. Ltd.
Archd. H. 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.)
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 boilers have been constructed under special survey and have been sent to Burntisland to be fitted in the vessel.
These boilers have been efficiently fitted on board and the safety valves adjusted to 220 lbs/sq. in.
Erb
26/6/39
J. I. Campbell

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

Sh. Davis
Engineer Surveyor to Lloyd's Register of Shipping.
TUE 29 AUG 1939
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Committee's Minute GLASGOW 27 JUN 1939
Assigned SEE ACCOMPANYING MACHINERY REPORT.