

## REPORT ON BOILERS.

No. 59292

11 FEB 1938

JAN 19 1938

Received at London Office

Date of writing Report

19

When handed in at Local Office

15. 1. 1938

Port of

Glasgow

No. in Reg. Book.

Survey held at

Glasgow

Date, First Survey

Last Survey 14-1-

1938

on the

new steel S/S "NORMAN QUEEN"

(Number of Visits

✓)

Gross

Tons

Net

Master

Built at

Burntisland

By whom built

Burntisland SBCo

Yard No. 216

When built 1938

Engines made at

Glasgow

By whom made

David Rowan &amp; Co Ltd

Engine No. 1014

When made 1938

Boilers made at

Glasgow

By whom made

David Rowan &amp; Co Ltd

Boiler No. 1014

When made 1938

Nominal Horse Power

129 ✓

Owners

London &amp; Channel Islands S.S. Co Ltd

Port belonging to

London

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

Manufacturers of Steel

L Shille Ltd

(Letter for Record (S) ✓)

Total Heating Surface of Boilers

1953 sq ft ✓

Is forced draught fitted

yes ✓

Coal or Oil fired

coal ✓

No. and Description of Boilers

one single ended ✓

Working Pressure 200

Tested by hydraulic pressure to

350 ✓

Date of test

9-12-37

No. of Certificate

20069 ✓

Can each boiler be worked separately

-

Area of Firegrate in each Boiler

44 5/8 sq ft ✓

No. and Description of safety valves to each boiler

Two direct spring

Area of each set of valves per boiler

{ per Rule

11.35

{ as fitted

11.88

Pressure to which they are adjusted

200 lb/sq in

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

6'-0"

Is oil fuel carried in the double bottom under boilers

✓

Smallest distance between shell of boiler and tank top plating

No tank top

Is the bottom of the boiler insulated

yes ✓

Largest internal dia. of boilers

14'-9" ✓

Length

10'-6" ✓

Shell plates: Material

steel ✓

Tensile strength

29.33 tons ✓

Thickness

1 9/32 ✓

Are the shell plates welded or flanged

no ✓

Description of riveting: circ. seams

{ end

DR ✓

Long. seams

DBS TR ✓

Diameter of rivet holes in

{ circ. seams

F-1 1/4" B 1 3/8"

{ long. seams

1 3/8" ✓

Pitch of rivets

{ F 3.209 B 3.68" ✓

{ 9 5/16" ✓

Percentage of strength of circ. end seams

{ plate

F 61 B 62.6

{ rivets

F 52.3 B 50

Percentage of strength of circ. intermediate seam

{ plate

-

{ rivets

-

Percentage of strength of longitudinal joint

{ plate

85.2 ✓

{ rivets

92.1 ✓

{ combined

88.4 ✓

Working pressure of shell by Rules

201 ✓

Thickness of butt straps

{ outer

3 1/32" ✓

{ inner

1 3/32" ✓

No. and Description of Furnaces in each Boiler

Three Weighton ✓

Material

steel ✓

Tensile strength

26-30 tons ✓

Smallest outside diameter

3'-7 3/16" ✓

Length of plain part

{ top

-

{ bottom

-

Thickness of plates

{ crown

1 1/32" ✓

{ bottom

1 1/32" ✓

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

1/4" ✓

Pitch of stays 19 1/4" x 19" ✓

How are stays secured

DN ✓

Working pressure by Rules

200 ✓

Tube plates: Material

{ front

steel ✓

{ back

" ✓

Tensile strength

{ 26-30 tons ✓

{ " " ✓

Thickness

{ 29" ✓

{ 32" ✓

{ 25" ✓

{ 32" ✓

Mean pitch of stay tubes in nests

10 1/32" ✓

Pitch across wide water spaces

14 1/4" ✓

Working pressure

{ front

202 ✓

{ back

209 ✓

Girders to combustion chamber tops: Material

steel ✓

Tensile strength

28-32 tons ✓

Depth and thickness of girder

at centre 2 @ 8 3/8" x 7/8" ✓

Length as per Rule

2'-7 11/32" ✓

Distance apart

9 1/2" ✓

No. and pitch of stays

in each

3 @ 7 1/2" ✓

Working pressure by Rules

201 ✓

Combustion chamber plates: Material

steel ✓

Tensile strength

26-30 tons ✓

Thickness: Sides

23/32" ✓

Back

11/16" ✓

Top

23/32" ✓

Bottom

23/32" ✓

Pitch of stays to ditto: Sides

10 1/8" x 8 3/4" ✓

Back

9 1/4" x 8 1/4" ✓

Top

9 1/2" x 7 1/2" ✓

Are stays fitted with nuts or riveted over

nuts ✓

Working pressure by Rules

203 ✓

Front plate at bottom: Material

steel ✓

Tensile strength

26-30 tons ✓

Thickness

29/32" ✓

Lower back plate: Material

steel ✓

Tensile strength

26-30 tons ✓

Thickness

51/64" ✓

Pitch of stays at wide water space

13 1/2" ✓

Are stays fitted with nuts or riveted over

nuts ✓

Working Pressure

205 ✓

Main stays: Material

steel ✓

Tensile strength

28-32 tons ✓

Diameter

{ At body of stay,

3" ✓

{ Over threads

-

No. of threads per inch

6 ✓

Area supported by each stay

389 sq in ✓

Working pressure by Rules

202 ✓

Screw stays: Material

steel ✓

Tensile strength

26-30 tons ✓

Diameter

{ At turned off part,

15/8" &amp; 1 3/4" ✓

{ Over threads

-

No. of threads per inch

9 ✓

Area supported by each stay

763 &amp; 88.5 sq in ✓

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Working pressure by Rules 200 & 205 1/4 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 93.5 sq" ✓ Working pressure by Rules 227 ✓  
Tubes: Material Iron ✓ External diameter { Plain 3 1/4" ✓ Thickness { 8 W.S. ✓  
Pitch of tubes 4 1/2" x 4 3/8" ✓ Working pressure by Rules 230 ✓ Manhole compensation: Size of opening in shell plate 15 1/2" x 19 1/2" ✓ Section of compensating ring 9 1/4" x 1 9/32" ✓ No. of rivets and diameter of rivet holes 32 @ 1 3/8" ✓  
Outer row rivet pitch at ends 9 9/16" ✓ 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 \_\_\_\_\_ 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 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 \_\_\_\_\_ Working pressure as per Rules \_\_\_\_\_  
Pressure to which the safety valves are adjusted \_\_\_\_\_ Hydraulic test pressure \_\_\_\_\_  
tubes \_\_\_\_\_ forgings and castings \_\_\_\_\_ and after assembly in place \_\_\_\_\_ Are drain cocks on 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 \_\_\_\_\_

The foregoing is a correct description,  
For David Rowan & Co. Ltd Manufacturer  
Arch. H. Grierson

Dates of Survey { During progress of work in shops - - }  
while building { During erection on board vessel - - - }  
SEE ACCOMPANYING MACHINERY REPORT.  
As the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) yes  
Total No. of visits \_\_\_\_\_

Is this Boiler a duplicate of a previous case yes ✓ If so, state Vessel's name and Report No. Jersey Queen. Also Rpt No. 57644.

#### 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. It is being sent to Burntisland to be fitted in the vessel ✓

15/1/38

This boiler has been efficiently fitted on board, examined under steam and safety valves adjusted to 200 lb/sq. in.

J. I. Campbell

Survey Fee ... £ See Machinery Dept } When applied for, 10  
Travelling Expenses (if any) £ : : } When received, 10

L. Davis

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 18 JAN 1938

Assigned SEE ACCOMPANYING MACHINERY REPORT.

FRI. 18 FEB 1938

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