

Rpt. 5a.

## REPORT ON BOILERS.

10 APR 1929

No. 48486

Received at London Office

17 OCT 1928

Date of writing Report 8-10-1928

When handed in at Local Office

9/10/1928

Port of

Glasgow

No. in  
Reg. Book.

Surrey held at

Glasgow

Date, First Survey

21.6.28

Last Survey

8-10-1928

(Number of Visits 13)

Tons

Gross

Net

THE VICEROY

Master

Built at Troon

By whom built

Ailsa S B Col Ltd

Yard No. 407

When built 1928

Engines made at

Troon

By whom made

Ailsa S B Col Ltd

Engine No. 142

When made 1928

Boilers made at

Glasgow

By whom made

David Rowan &amp; Co Ltd

Boiler No. 362

When made 1928

Nominal Horse Power

Owners

Port belonging to

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

Manufacturers of Steel James Dunlop &amp; Co Ltd and David B. Hillebrandson Ltd (Letter for Record S)

Total Heating Surface of Boilers

2021 sq ft

Is forced draught fitted no

Coal or Oil fired coal

No. and Description of Boilers

one single ended marine

Working Pressure 200

Tested by hydraulic pressure to

350

Date of test

8-10-28

No. of Certificate 18068

Can each boiler be worked separately

Area of Firegrate in each Boiler

57 1/2 sq ft

No. and Description of safety valves to each boiler

Area of each set of valves per boiler

per Rule

Pressure to which they are adjusted

Are they fitted with easing gear

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

Is oil fuel carried in the double bottom under boilers

Smallest distance between shell of boiler and tank top plating

Is the bottom of the boiler insulated

Largest internal dia. of boilers

15'-0"

Length

10'-9"

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 DR

long. seams

DBS. TR

Diameter of rivet holes in

circ. seams

F 1 3/16" B 1 3/8"

Pitch of rivets

F 3.09

B 3.746

Percentage of strength of circ. end seams

plate

F 61.5 B 63.2

Percentage of strength of circ. intermediate seam

plate

rivets

Percentage of strength of longitudinal joint

plate

85.5

Working pressure of shell by Rules

200

Thickness of butt straps

outer 6 3/4"

inner 6 1/4"

No. and Description of Furnaces in each Boiler

Three Deighton

Material

steel

Tensile strength

26-30 tons

Smallest outside diameter

3'-11 5/16"

Length of plain part

top

Thickness of plates

crown

2 1/2"

Description of longitudinal joint

welded

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

Working pressure of furnace by Rules

203

End plates in steam space: Material

steel

Tensile strength

26-30 tons

Thickness

1 9/32"

Pitch of stays 19 1/2" x 19 7/8"

How are stays secured

DN

Working pressure by Rules

200

Tube plates: Material

front steel

Tensile strength

26-30 tons

Thickness

29/32"

49/64"

Mean pitch of stay tubes in nests

10 1/2"

Pitch across wide water spaces

14 1/4"

Working pressure

front 202

back 200

Girders to combustion chamber tops: Material

steel

Tensile strength

28-32 tons

Depth and thickness of girder

at centre

2 @ 1 1/8" x 8 1/2"

Length as per Rule

33.58"

Distance apart

9 1/2"

No. and pitch of stays

in each

2 @ 10 3/8"

Working pressure by Rules

203

Combustion chamber plates: Material

steel

Tensile strength

26-30 tons

Thickness: Sides

3/4"

Back

2 1/2"

Top

3/4"

Bottom

3/4"

Pitch of stays to ditto: Sides

10 3/8" x 9 1/4"

Back

9 1/4" x 8"

Top

10 3/8" x 9 1/2"

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

29/32"

Lower back plate: Material

steel

Tensile strength

26-30 tons

Thickness

25/32"

Pitch of stays at wide water space

13 1/2"

Are stays fitted with nuts or riveted over

nuts

Working Pressure

200

Main stays: Material

steel

Tensile strength

28-30 tons

Diameter

At body of stay,

3"

No. of threads per inch

6

Area supported by each stay

388 sq"

Working pressure by Rules

202

Screw stays: Material

steel

Tensile strength

26-30 tons

Diameter

At turned off part,

1 5/8"

No. of threads per inch

9

Area supported by each stay

74 sq"

Lloyd's Register  
Foundation

W991-0052

PILLARS, No.  
in  
in  
Centre-Line  
Stiffeners  
Plating  
TRINGERS  
Uppermost  
Stringer P  
Thickness  
in way  
Thickness  
in way  
Thickness  
H Sheath  
Second-D  
Stringer I  
STRAK  
T PLATE F  
DBI  
TOM PLAT  
f Strakes  
GE PLATIN  
trakes ...  
E PLATIN  
trakes ...  
ER DECI  
trake in  
ER DECI  
trake in  
AKE BEL  
trake in  
AKE BEL  
trake in  
e-Side P  
DGE SIDE  
EC'TLE S  
al No.  
SHIP  
"  
"  
"  
LLISH  
TER P  
EEL.

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" & 1 7/8"  
No. of threads per inch 9 Area supported by each stay 91 & 100" Working pressure by Rules 200 & 213  
Tubes: Material Iron External diameter { Plain 3 1/4" Stay 3 1/4" Thickness { 8 W.S. No. of threads per inch 9  
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 1/2" x 15 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 FOA Thickness of shell 3/16" Description of longitudinal joint  
Diameter of rivet holes 5/16" Pitch of rivets 5/16" Percentage of strength of joint { Plate Rivets  
Internal diameter 8 1/2" Working pressure by Rules 230 Thickness of crown 3/16" No. and diameter of  
stays 508 Inner radius of crown 4 1/2" Working pressure by Rules 230  
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 2 Material of tubes Iron Internal diameter and thickness of tubes  
Material of headers Iron Tensile strength FOA Thickness 3/16" 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 0.00 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 23 inclusive for boilers been complied with

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

Dates of Survey { During progress of work in shops - - - June 21 July 28 Aug 2 7 9 12 15 17 Are the approved plans of boiler and superheater forwarded herewith  
while building { During erection on board vessel - - - 28 Sep 5 13 Oct 28 (If not state date of approval.)  
Total No. of visits 13

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 in accordance with the Rules.  
This boiler has been securely fitted on board S/s The Viceroy (see Gls Rpt N° 49048)  
D.E.B.

Survey Fee ... £ 13 : 10 : 0 When applied for, 13 : 10 : 0 1928  
Travelling Expenses (if any) £ 0 : 0 : 0 When received, 16 : 10 : 0 1928

L. J. Davis  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 16 OCT 1928

Assigned TRANSMIT TO LONDON

See Glasgow Report No. 49048  
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