

REPORT ON BOILERS.

No. 19932.

Received at London Office 27 MAR 1935

Date of writing Report

1935 When handed in at Local Office 23rd MARCH 1935.

Port of Glasgow

No. in Survey held at
eg. Book.

Glasgow

Date, First Survey 13th DECEMBER 1929. Last Survey 22nd MARCH 1935.

S/S 'VOREDA'

(Number of Visits ☒) Gross 4216.35.
Tons Net 4372.99.

on the

Master

Built at

Glasgow

By whom built

Glasgow Dyl.

Yard No. 420

When built 1935

Engines made at

Glasgow

By whom made

John & Macdonald & Co.

Engine No. 672

When made 1935

Boilers made at

ditto

By whom made

ditto

Boiler No. 672

When made 1935

Nominal Horse Power

Owners Voreda Steamship Co. Ltd.

Port belonging to

Glasgow

RETAIN

MULTITUBULAR BOILERS—MAIN,

Manufacturers of Steel Scottish S. & C. L. & Co. Ltd. Balville L. Steel Co. of Scotland

(Letter for Record S)

Total Heating Surface of Boilers

10596 ft^2

Is forced draught fitted

yes

Coal or Oil fired Both

No. and Description of Boilers

3 Single Ended

Working Pressure 220

Tested by hydraulic pressure to

380

Date of test 22/8/30

No. of Certificate

Pat 1963

Can each boiler be worked separately yes

Area of Firegrate in each Boiler

78.46 ft^2

No. and Description of safety valves to each boiler

Boekler's Improved High Lift (3)

Area of each set of valves per boiler

12.52

Pressure to which they are adjusted

225

Are they fitted with easing gear yes

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

yes

Smallest distance between boilers or uptakes and bunkers or woodwork

2'-1"

Is oil fuel carried in the double bottom under boilers

No

Smallest distance between shell of boiler and tank top plating

2'-9"

Is the bottom of the boiler insulated

No

Largest internal dia. of boilers

4'-4.38"

Length

12'-6"

Shell plates: Material

S

Tensile strength

29.33

Thickness

1 2/32"

Are the shell plates welded or flanged

No

Description of riveting: circ. seams

DR

long. seams

TR & DBS

Diameter of rivet holes in

circ. seams

1 11/16"

Pitch of rivets

1 1/4"

Percentage of strength of circ. end seams

65.4

Percentage of strength of circ. intermediate seam

43.8

Percentage of strength of longitudinal joint

86

Working pressure of shell by Rules

220

Thickness of butt straps

1 1/4"

No. and Description of Furnaces in each Boiler

4 Deeghtons

Material

S

Tensile strength

26-30

Smallest outside diameter

3'-8 3/8"

Length of plain part

1 1/4"

Thickness of plates

1 1/16"

Description of longitudinal joint

weld

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

Working pressure of furnace by Rules

224

End plates in steam space: Material

S

Tensile strength

26-30

Thickness

1 1/32"

Pitch of stays

2 3/4 x 16 1/2"

How are stays secured

DN

Working pressure by Rules

226

Tube plates: Material

Steel

Tensile strength

26-30

Thickness

29/32"

Mean pitch of stay tubes in nests

9.47"

Pitch across wide water spaces

13 1/2"

Working pressure

231

Girders to combustion chamber tops: Material

S

Tensile strength

29-33

Depth and thickness of girder

at centre

12'-7 7/8"

Length as per Rule

46.13/32"

Distance apart

8 1/2"

No. and pitch of stays

in each

4-8 7/8"

Working pressure by Rules

233

Combustion chamber plates: Material

S

Tensile strength

26-30

Thickness: Sides

23/32"

Back

1 1/16"

Top

23/32"

Bottom

1"

Pitch of stays to ditto: Sides

8 7/8 x 8 3/4"

Back

8 3/4 x 8 3/8"

Top

8 7/8 x 8 1/2"

Are stays fitted with nuts or riveted over

Nuts

Working pressure by Rules

233

Front plate at bottom: Material

S

Tensile strength

26-30

Thickness

3 1/32"

Lower back plate: Material

Steel

Tensile strength

26-30

Thickness

29/32"

Pitch of stays at wide water space

14 1/2"

Are stays fitted with nuts or riveted over

Nuts

Working Pressure

248

Main stays: Material

S

Tensile strength

28-32

Diameter

3 1/4"

No. of threads per inch

6

Area supported by each stay

358 in^2

Working pressure by Rules

223

Screw stays: Material

S

Tensile strength

26-30

Diameter

1 7/8"

No. of threads per inch

9

Area supported by each stay

77.6 in^2

Lloyd's Register
W436-0180

Working pressure by Rules 238 Are the stays drilled at the outer ends Yes Margin stays: Diameter 2 1/8"
 No. of threads per inch 9 Area supported by each stay 94.35 Working pressure by Rules 293
 Tubes: Material Iron External diameter 2 1/2" Thickness 3/8 + 5/16" No. of threads per inch 9
 Pitch of tubes 3 1/16 + 3 3/4" Working pressure by Rules 278 Manhole compensation: Size of opening 12 1/32"
 shell plate 16 1/2 + 20 1/2" Section of compensating ring 3-3 + 3-0 + 1 3/32" No. of rivets and diameter of rivet holes 36 at 1 2 1/32"
 Outer row rivet pitch at ends 1 1/4" Depth of flange if manhole flanged 3 3/4" Steam Dome: Material —
 Tensile strength Thickness of shell Description of longitudinal joint
 Diameter of rivet holes Pitch of rivets Percentage of strength of joint Plate
 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 Manufacturers of Tubes
 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 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 22 inclusive for boilers been complied with Yes

The foregoing is a correct description,
 FOR JOHN G. KIRKALD & CO. LIMITED.
W. Carter Director. Manufacturer.

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

SEE MACHINERY REPORT

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.) These Boilers have been built under special survey in accordance with the approved plans & the workmanship, material are of good quality. They have now been securely fitted on board. Thus Report acknowledges that of the Machinery

Survey Fee charged on Machinery Report
 Travelling Expenses (if any) £

When applied for, 19
 When received, 19

W. Carter London-Machine
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 26 MAR 1935

Assigned See accompanying Mach. Report.