

REPORT ON BOILERS.

No. 20522.

Date of writing Report 26.2.38

When handed in at Local Office 5th March 1938

Received at London Office MAR -9 1938

No. in Survey held at Reg. Book.

Greenwich

Port of Greenwich

on the

S/S "Portsea"

Date, First Survey 9th June 1934

Last Survey 1st March 1938

(Number of Visits ✓)

Tons { Gross Net

Master

Built at Burutisland

By whom built Burutisland & Co

Yard No. 218

When built 1938

Engines made at

Greenwich

By whom made

Raukui Blackmore & Co

Engine No. 456

When made 1938

Boilers made at

ditto

By whom made

ditto

Boiler No. 456

When made 1938

Nominal Horse Power

Owners

Port belonging to

MULTITUBULAR BOILERS - MAIN,

Manufacturers of Steel

Cowell Scottish Iron & Steel Co

Total Heating Surface of Boilers

2400 sq ft

Is forced draught fitted

(Letter for Record S)

No. and Description of Boilers

2 Single Ended

Coal or Oil fired Coal

Tested by hydraulic pressure to

350

Date of test 1-2-38

No. of Certificate 2139

Working Pressure 200

Area of Firegrate in each Boiler

32.5 sq ft

No. and Description of safety valves to each boiler

2 Cochran's Improved High Lift

Area of each set of valves per boiler

per Rule 4.2 sq ft

as fitted 4.8 sq ft

Pressure to which they are adjusted

200 lbs/sq in

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

Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork

9" PORT SIDE, 18" STARBOARD SIDE

Smallest distance between shell of boiler and tank top plating

18"

Is oil fuel carried in the double bottom under boilers No

Largest internal dia. of boilers

11-6"

Length 11-0"

Is the bottom of the boiler insulated

Yes

Thickness

1 1/32"

Are the shell plates welded or flanged

Shell plates: Material S

Tensile strength 29.33

Direction of rivets

TR, D, BS

Diameter of rivet holes in

circ. seams 13/16"

Description of riveting: circ. seams

end DR

Percentage of strength of circ. end seams

plate 64.8

rivets 45.7

Percentage of strength of circ. intermediate seam

plate 85.7

rivets 85.7

combined 88.56

Thickness of butt straps

outer 13/16"

inner 15/16"

No. and Description of Furnaces in each Boiler

2 Reighton

Material

S

Tensile strength

26-30

Smallest outside diameter

3-4 1/8"

Length of plain part

top

bottom

Thickness of plates

crown 9/16"

bottom

Description of longitudinal joint

weld

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

Working pressure of furnace by Rules

203

Material of plates in steam space

S

Tensile strength

26-30

Thickness

1 1/16"

Pitch of stays 16 3/4" x 15 1/4"

Are stays secured

DN, W

Working pressure by Rules

204

Material of stay plates

front S

back S

Tensile strength

26-30

Thickness

25/32"

Pitch of stay tubes in nests

7.47"

Pitch across wide water spaces

14"

Working pressure

front 239

back 204

Material of girders to combustion chamber tops

S

Tensile strength

29.33

Depth and thickness of girder

Length as per Rule

34 9/16"

Distance apart

8 1/2"

No. and pitch of stays

Working pressure by Rules

204

Combustion chamber plates: Material

S

Thickness: Sides

21/32"

Back

21/32"

Top

21/32"

Bottom

13/16"

Are stays fitted with nuts or riveted over

Nuts

Material of front plate at bottom

S

Tensile strength

26-30

Thickness

7/8"

Material of lower back plate

S

Tensile strength

26-30

Thickness

7/8"

Are stays fitted with nuts or riveted over

Nuts

Material of main stays

S

Tensile strength

28-32

No. of threads per inch

6

Area supported by each stay

265 sq in

Material of screw stays

S

Tensile strength

26-30

No. of threads per inch

9

Area supported by each stay

74-25 sq in

Working pressure by Rules

203

Material of stay tubes

At body of stay, or Over threads

23/4"

Material of stay tubes

At turned off part, or Over threads

15/8"

2020

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W256-0092

Working pressure by Rules **205** Are the stays drilled at the outer ends **No** Margin stays: Diameter **17/8"**
 No. of threads per inch **9** Area supported by each stay **92"** Working pressure by Rules **209**
 Tubes: Material **Iron** External diameter **3"** Thickness **3/16"** No. of threads per inch **9**
 Pitch of tubes **4 1/8" + 4 1/8"** Working pressure by Rules **234** Manhole compensation: Size of opening
 shell plate **16 + 12"** Section of compensating ring **2.434 + 2.8 1/4 + 1/2"** No. of rivets and diameter of rivet holes **36 at 1 1/2"**
 Outer row rivet pitch at ends **8** Depth of flange if manhole flanged **-** Steam Dome: Material
 Tensile strength Thickness of shell Description of longitudinal joint
 Diameter of rivet holes Pitch of rivets Percentage of strength of joint
 Internal diameter Working pressure by Rules Thickness of crown No. and diameter
 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 **North British Marine** Manufacturers of
 for further particulars see Newcastle Cal. **1065** attached
 Number of elements **Not fitted in boiler here** Material of tubes
 Material of heads 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 as
 Rules Pressure to which the safety valves are adjusted Hydraulic test pressure
 tubes forgings and castings and after assembly in place Are drain cock
 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,
 RANKIN & BLACKMORE, LTD. Manufacturing Director

Dates of Survey { During progress of work in shops - - }
 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 **1**
 See Machinery Report

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 shipped to Rountoulana for fitting on board. This Report accompanies that of the Draughtsman.**
These boilers have been efficiently fitted on board, examined under steam and the safety valves adjusted to 200 lbs 90."
 J. J. Campbell

Survey Fee **charged on Draughtsman's Report**
 Travelling Expenses (if any) **-**
 When applied for, 19
 When received, 19
 J. J. Gordon - Maclellan
 Engineer Surveyor to Lloyd's Register of Shipping
 TOE. 26 APR 1938
 Committee's Minute **GLASGOW 8-MAR 1938**
 Assigned **SEE ACCOMPANYING MACHINERY REPORT.**
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