

REPORT ON BOILERS.

No. 19161.

Received at London Office 12 MAR 1930

Date of writing Report 22nd FEB 1930 When handed in at Local Office

MARCH 1930

Port of Greenock

No. in Survey held at

Greenock

Date, First Survey

2nd JULY 1929

Last Survey

4th MARCH 1930

on the

S/S "Dalcroy"

(Number of Visits ✓)

Gross 4554.64

Net 2821.02

Master

Built at

Greenock

By whom built

Scott & B. E. Co. Ltd.

Yard No.

When built 1930

Engines made at

Greenock

By whom made

Scott & B. E. Co. Ltd.

Engine No. 614

When made 1930

Boilers made at

ditto

By whom made

ditto

Boiler No. 614

When made 1930

Nominal Horse Power

Owners

United Steam Navigation Co. Ltd.

Port belonging to

Newcastle

MULTITUBULAR BOILERS—MAIN,

Manufacturers of Steel

Steel Co of Scotland & (Raine Co Newcastle)

(Letter for Record R)

Total Heating Surface of Boilers

6200 sq ft

Is forced draught fitted

yes

Coal or Oil fired

Coal

No. and Description of Boilers

3 Single ended

Working Pressure 250

Tested by hydraulic pressure to

42.5

Date of test

29. 10. 29

No. of Certificate

1900

Can each boiler be worked separately

yes

Area of Firegrate in each Boiler

42.6 sq ft

No. and Description of safety valves to each boiler

Baker's Improved High Lift

Area of each set of valves per boiler

per Rule

49.45 sq ft

as fitted

Pressure to which they are adjusted

255

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

1' 3"

Is oil fuel carried in the double bottom under boilers

No

Smallest distance between shell of boiler and tank top plating

2' 1"

Is the bottom of the boiler insulated

yes

Largest internal dia. of boilers

13' 10 1/2"

Length

11' 3"

Shell plates: Material

S

Tensile strength

19-33

Thickness

1 7/32"

Are the shell plates welded or flanged

—

Description of riveting: circ. seams

end

DR

long. seams

TR & DBS

Diameter of rivet holes in

circ. seams

1 9/16"

long. seams

1 7/32"

Pitch of rivets

4-55"

10 437"

Percentage of strength of circ. end seams

plate

65.6

rivets

43

Percentage of strength of circ. intermediate seam

plate

65.6

rivets

43

Percentage of strength of longitudinal joint

plate

65.6

rivets

43

combined

84.6

Working pressure of shell by Rules

254

Thickness of butt straps

outer

1 3/16"

inner

1 5/16"

No. and Description of Furnaces in each Boiler

3 Deightons 3 1/2"

Material

S

Tensile strength

26-30

Smallest outside diameter

3' 2" 249"

Length of plain part

top

1 3/16"

bottom

1 5/16"

Thickness of plates

crown

2 1/32"

bottom

2 1/32"

Description of longitudinal joint

weld

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

—

Working pressure of furnace by Rules

252

End plates in steam space: Material

S

Tensile strength

26-30

Thickness

1 9/32"

Pitch of stays

18" 14"

How are stays secured

DN ✓

Working pressure by Rules

251

Tube plates: Material

front

S

back

S

Tensile strength

26-30

Thickness

7/8"

24/32"

Mean pitch of stay tubes in nests

10.312

Pitch across wide water spaces

14"

Working pressure

front 258

back 245

Girders to combustion chamber tops: Material

S

Tensile strength

29-33

Depth and thickness of girder

at centre

9' 7 1/8" (2)

Length as per Rule

31' 7 1/2"

Distance apart

8' 1/2"

No. and pitch of stays

in each

3 at 4' 1/2"

Working pressure by Rules

254

Combustion chamber plates: Material

S

Tensile strength

26-30

Thickness: Sides

1 1/16"

Back

1 1/16"

Top

1 1/16"

Bottom

7/8"

Pitch of stays to ditto: Sides

4 1/2" + 8 1/4"

Back

8" + 8"

Top

4 1/2" + 8 1/2"

Are stays fitted with nuts or riveted over

nuts

Working pressure by Rules

258

Front plate at bottom: Material

S

Tensile strength

26-30

Thickness

7/8"

Lower back plate: Material

S

Tensile strength

26-30

Thickness

1 5/16"

Doubler

Pitch of stays at wide water space

14 3/4"

Are stays fitted with nuts or riveted over

nuts

Working Pressure

260

Main stays: Material

S

Tensile strength

28-32

Diameter

At body of stay,

3

or

Over threads

No. of threads per inch

6

Area supported by each stay

306 sq in

Working pressure by Rules

300

Screw stays: Material

9 non

Tensile strength

21 1/2 tons min

Diameter

At turned off part,

1 3/4

or

Over threads

No. of threads per inch

9

Area supported by each stay

64 sq in

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Working pressure by Rules 283 Are the stays drilled at the outer ends 80 Margin stays: Diameter { At turned off part, 2" ✓
Over threads
No. of threads per inch 9 Area supported by each stay 91.5" Working pressure by Rules 242
Tubes: Material S External diameter { Plain 3" Thickness { 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 No. of threads per inch 9
Pitch of tubes 4 1/8" - 4 1/8" Working pressure by Rules 305 Manhole compensation: Size of opening in
shell plate 16" x 12" Section of compensating ring flanged in ends No. of rivets and diameter of rivet holes
Outer row rivet pitch at ends ✓ Depth of flange if manhole flanged 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
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 North Eastern Marine Manufacturers of { Tubes
Steel castings
Number of elements ✓ Material of tubes ✓ Internal diameter and thickness of tubes
Made out of ✓ Is a safety valve fitted to every part of the superheater which can be shut off from the boiler ✓
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 3.14" Are the safety valves fitted with easing gear ✓ Working pressure as per
Rules ✓ Pressure to which the safety valves are adjusted 250 Hydraulic test pressure:
tubes ✓ castings ✓ and after assembly in place 750.4 ✓ 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,
SCOTT'S SHIPBUILDING & ENGINEERING COMPANY LIMITED Manufacturer.

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

SEE MACHINERY REPORT.

Are the approved plans of boiler and superheater for use on board ✓
(If not state date of approval.)
Total No. of visits ✓

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 are now securely fitted on board.

This Report accompanies that of the Machinery

Survey Fee charged on Machinery Report
Traveling Expenses (if any)

When applied for, 192
When received, 192

W. Gordon-Mitchell

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 11 MAR 1930

Assigned See accompanying machinery report.



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