

REPORT ON BOILERS.

No. 22534

Received at London Office

13 JAN 1944

Date of writing Report 7th JANUARY 1944 When handed in at Local Office 8th JANUARY 1944 Port of GREENOCKNo. in Survey held at
Book.

GREENOCK

Date, First Survey 13th JANUARY 1943 Last Survey 5th JANUARY 1944

on the

Tw. Sc. CLAN URQUHART

(Number of Visits)

Gross 9726.37

Tons Net 5607.25

Built at GREENOCK By whom built GREENOCK DOCKYARD CO L^{td} Yard No. When built 1944
 Engines made at GREENOCK By whom made JOHN G. KINCAID & CO L^{td} Engine No. 746 When made 1944
 Boilers made at GREENOCK By whom made JOHN G. KINCAID & CO L^{td} Boiler No. 746 When made 1944
 Nominal Horse Power 1283 Owners CLAN LINE STEAMERS L^{td} Port belonging to GLASGOW.

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Colvilles & Co

(Letter for Record (S))

Total Heating Surface of Boilers

3700 ft²

Is forced draught fitted

Yes

Coal or Oil fired

Oil

No. and Description of Boilers

1 cylindrical

Working Pressure 220

Tested by hydraulic pressure to 380 lb Date of test 14-6-43 No. of Certificate 2336 Can each boiler be worked separately

Area of Firegrate in each Boiler

9.85

No. and Description of safety valves to each boiler

2 3/4" double opening 144 lb

Area of each set of valves per boiler

per Rule 9.85

as fitted 11.88

Pressure to which they are adjusted

220 lb

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

4'-1 1/2"

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

No

Largest internal dia. of boilers

16'-6"

Length 12'-6 9/16"

Shell plates: Material

S

Tensile strength

30-34 tons

Thickness

1 9/16"

Are the shell plates welded or flanged

No

Description of riveting: circ. seams

DR

long. seams

T.R.D.B.S.

Diameter of rivet holes in

circ. seams 1 1/2"

long. seams 1 5/8"

Pitch of rivets

3.985"

11.0"

Percentage of strength of circ. end seams

plate 62.5

rivets 43.3

Percentage of strength of circ. intermediate seam

plate 85.23

rivets 86.5

Percentage of strength of longitudinal joint

plate 85.23

rivets 86.5

combined 87.76

Thickness of butt straps

outer 1 3/16"

inner 1 5/16"

No. and Description of Furnaces in each Boiler

Three Doughton corrugated

Material

S

Tensile strength

26/30 tons

Smallest outside diameter

4'-0 1/2"

Length of plain part

top

Thickness of plates

crown 3/4"

bottom 3/4"

Description of longitudinal joint

Weld

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

End plates in steam space: Material

S

Tensile strength

26/30 tons

Thickness

1 7/16"

Pitch of stays

18 5/8" x 22 1/2"

How are stays secured

DN

Tube plates: Material

front S

back S

Tensile strength

26/30 tons

Thickness

7/8"

Centre 23/32 Wings 3/4"

Mean pitch of stay tubes in nests

8'-6 8/5"

Pitch across wide water spaces

13 1/2"

Girders to combustion chamber tops: Material

S

Tensile strength

28/32 tons

Depth and thickness of girder

at centre 10 5/8" x 1 7/8"

Length as per Rule 3'-0 3/8"

Distance apart 10 1/4"

No. and pitch of stays

in each 3 @ 8 5/8" x 10 1/4"

Combustion chamber plates: Material

S

Tensile strength

26/30 tons

Thickness: Sides

25/32"

Back

1 1/16"

Top

25/32"

Bottom

7/8"

Pitch of stays to ditto: Sides

11 x 8 3/4"

Back

8 x 8 3/4"

Top

10 1/4 x 8 5/8"

Are stays fitted with nuts or riveted over

Nuts except shell

Front plate at bottom: Material

S

Tensile strength

26/30 tons

Thickness

7/8"

Lower back plate: Material

S

Tensile strength

26/30 tons

Thickness

7/8"

Pitch of stays at wide water space

14 x 8"

Are stays fitted with nuts or riveted over

Nuts

Main stays: Material

S

Tensile strength

28/32 tons

Diameter

At body of stay, or Over threads 3 1/2"

No. of threads per inch

6

Screw stays: Material

S

Tensile strength

26/30 tons

Diameter

At turned off part, or Over threads 1 3/4" & 1 7/8"

No. of threads per inch

9

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Lloyd's Register
Foundation

Are the stays drilled at the outer ends No Margin stays: Diameter { At turned off part, or Over threads 2" @ 2 1/8"

No. of threads per inch 9

Tubes: Material S External diameter { Plain 2 1/2 Stay 2 1/2 Thickness { 9/16 @ 3/8 No. of threads per inch 9

Pitch of tubes 3 3/4 x 3 3/4 Manhole compensation: Size of opening in shell plate 16 1/2 x 20 1/2 Section of compensating ring 2' 9" x 3' 1" x 1 9/16 No. of rivets and diameter of rivet holes 36 @ 1 1/2

Outer row rivet pitch at ends 11" 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 { Plate Rivets _____

Internal diameter _____ Thickness of crown _____ No. and diameter of stays _____ Inner radius of crown _____

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
- 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 _____

Pressure to which the safety valves are adjusted _____ Hydraulic test pressure: _____

tubes _____ forgings and 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 _____

The foregoing is a correct description,
For JOHN G. KINCAID & CO. LIMITED. Manufacturer.
Alcan Director.

Dates of Survey { During progress of work in shops - - } Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) ✓
while building { During erection on board vessel - - - } 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.)

This boiler has been built under Special Survey in accordance with the Rules & approved plans. The materials & workmanship are sound & good. Please see machinery report for recommendations.

Survey Fee £ _____ When applied for, _____ 19 _____
Travelling Expenses (if any) £ _____ When received, _____ 19 _____

See Machinery Report

Charles H. Hunter
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 11 JAN 1944

Assigned _____