

## REPORT ON BOILERS.

Sld. No. 31780

Hull No. 15557

27 FEB 1936

14 DEC 1935

Received at London Office

12.12.35

12.12.35

Port of MIDDLESBROUGH.

Writing Report

When handed in at Local Office

Survey held at

STOCKTON

Date, First Survey

1<sup>st</sup> Nov

Last Survey

12.12.1935

Book.

on the

Steel Screw motor ship "RUGELEY"

(Number of Visits 8)

Gross 4985

Tons Net 3061

Built at Sunderland

By whom built

Wm. Duxford &amp; Sons Ltd.

Yard No. 618

When built

1936

Made at

Sunderland

By whom made

Wm. Duxford &amp; Sons Ltd.

Engine No.

618

When made

1936

Made at

Stockton

By whom made

Stockton Chem. Engs. &amp; Riley, Boilers Ltd.

Boiler No.

647

When made

1935

Horse Power

Owners

The Red "R" Steamship Co Ltd.

Port belonging to

Newcastle

## TUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

The Steel Company of Scotland

(Letter for Record S. ✓)

Heating Surface of Boilers

1626 sq. ft.

Is forced draught fitted

no.

Coal or Oil fired

oil

Description of Boilers

188.

Working Pressure

120 lbs. ✓

Tested by hydraulic pressure to

230 lbs.

Date of test

12.12.35

No. of Certificate

6886

Can each boiler be worked separately

✓

Firegrate in each Boiler

No. and Description of safety valves to each boiler

2 Safety Spring.

Pressure of each set of valves per boiler

per Rule

15.3 sq. in.

Pressure to which they are adjusted

120

Are they fitted with easing gear

Geo. ✓

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

✓

Least distance between boilers or uptakes and bunkers or woodwork

Is oil fuel carried in the double bottom under boilers

no.

Least distance between shell of boiler and tank top plating

2' 10"

Is the bottom of the boiler insulated

Geo.

Least internal dia. of boilers

11' 10 5/8"

Length

11' 6"

Shell plates: Material

Steel

Tensile strength

29/33

Thickness

11/16"

Are the shell plates welded or flanged

no

Description of riveting: circ. seams

end

D.R.

Seams

T.R.D.B.S. (4 rivets)

Diameter of rivet holes in

circ. seams

1 1/16"

long. seams

13"

Pitch of rivets

3 3/8"

5 3/8"

Percentage of strength of circ. end seams

plate

68.5

rivets

45.6

Percentage of strength of circ. intermediate seam

plate

84.9

rivets

83.8

Percentage of strength of longitudinal joint

plate

84.9

rivets

83.8

combined

Working pressure of shell by Rules

123 lbs.

Thickness of butt straps

outer

9/16"

inner

11/16"

No. and Description of Furnaces in each Boiler

2 c.f.

Material

Steel

Tensile strength

26/30

Smallest outside diameter

3' 11 1/2"

3' 8 1/2"

Thickness of plain part

top

✓

bottom

Thickness of plates

crown

13"

bottom

32

Description of longitudinal joint

weld.

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

✓

Working pressure of furnace by Rules

121 lbs.

Plates in steam space: Material

Steel

Tensile strength

26/30

Thickness

27"

Pitch of stays

17" x 16"

Are stays secured

D.N.W. ✓

Working pressure by Rules

142 lbs.

Plates: Material

front

Steel

back

Tensile strength

26/30

Thickness

13 1/16"

Pitch of stay tubes in nests

9 3/8"

Pitch across wide water spaces

14"

Working pressure

front

157 lbs.

back

249 lbs.

Plates to combustion chamber tops: Material

Steel

Tensile strength

28/32

Depth and thickness of girder

Centre of T x 5/8 (double)

✓

Length as per Rule

30 1/2"

Distance apart

9"

No. and pitch of stays

Each

2 - 9 1/2"

Working pressure by Rules

126 lbs.

Combustion chamber plates: Material

Steel

Tensile strength

26/30

Thickness: Sides

19"

Back

7"

Top

19"

Bottom

7"

8"

Pitch of stays to ditto: Sides

9" x 9 7/8" (mean)

Back

9 1/4" x 8 1/4"

Top

9" x 9 1/2"

Are stays fitted with nuts or riveted over

nuts ✓

Working pressure by Rules

129 lbs.

Front plate at bottom: Material

Steel

Tensile strength

26/30

Thickness

27"

Lower back plate: Material

Steel

Tensile strength

26/30

Thickness

27"

Pitch of stays at wide water space

13 1/2" x 9 1/4"

Are stays fitted with nuts or riveted over

nuts ✓

Working Pressure

201 lbs.

Main stays: Material

Steel

Tensile strength

28/32

Pitch of meter

At body of stay,

2 1/4"

Over threads

No. of threads per inch

6

Area supported by each stay

288.4 sq. in.

Working pressure by Rules

120 lbs.

Screw stays: Material

Steel

Tensile strength

26/30

Pitch of meter

At turned off part,

1 3/8"

Over threads

No. of threads per inch

9

Area supported by each stay

84 sq. in.

010012-010023-0263

010012-010023-0264

Lloyd's Register  
Foundation



Working pressure by Rules 120 lbs Are the stays drilled at the outer ends no Margin stays: Diameter { At turned off part, 1 1/8 or Over threads 1 1/8 ✓ 5e.

No. of threads per inch 9 Area supported by each stay 100 sq Working pressure by Rules 152 lbs

Tubes: Material lapwelded iron External diameter { Plain 2 3/4 to 2 3/16 ✓ Thickness 8 w.g. No. of threads per inch 9 ✓  
 { Stay 2 3/4 to 1 3/4 ✓

Pitch of tubes 3 3/4" x 3 3/4" Working pressure by Rules 275 lbs s. - 276 lbs Manhole compensation: Size of open 15 of writing

shell plate 20" x 16" Section of compensating ring 7" x 1" No. of rivets and diameter of rivet holes 44 - 76 ✓ o. in Book.

Outer row rivet pitch at ends 6 1/4" Depth of flange if manhole flanged — Steam Dome: Material — ter

Tensile strength — Thickness of shell — Description of longitudinal joint — ter

Diameter of rivet holes — Pitch of rivets — Percentage of strength of joint { Plate Rivets — ers ma

Internal diameter — Working pressure by Rules — Thickness of crown — No. and diam — ers

stays — Inner radius of crown — Working pressure by Rules —

How connected to shell — Size of doubling plate under dome — Diameter of rivet holes and — CERTI

of rivets in outer row in dome connection to shell — e at A

Type of Superheater — Manufacturers of { Tubes — Steel castings — of safe

Number of elements — Material of tubes — Internal diameter and thickness of tubes — the d

Material of headers — Tensile strength — Thickness — Can the superheater be shut off — ge of t

the boiler be worked separately — Is a safety valve fitted to every part of the superheater which can be shut off from the boiler — led d

Area of each safety valve — Are the safety valves fitted with easing gear — Working pressure — 1 1/2

Rules — Pressure to which the safety valves are adjusted — Hydraulic test pres —

tubes —, castings — and after assembly in place — Are drain cocks or valves — ace—

to free the superheater from water where necessary — sure o

Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with Y. 16 For and on behalf of

Stockton Chemical Engineers & Dry Docking Ltd.  
 The foregoing is a correct description,  
W. H. Hiley Manuf

Dates of Survey { During progress of work in shops - - 1935-1 Nov 1-6, 14, 22, 27 Dec 4-9, 12 Are the approved plans of boiler and superheater forwarded herewith Y. 16 T. Internal  
 while building { During erection on board vessel - - - — (If not state date of approval.)

Total No. of visits 8 rking 28

Is this Boiler a duplicate of a previous case No. except that of so, state Vessel's name and Report No. "KIRRIEMOOR" Mar Rpt 15364  
minor alteration

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)

The materials and workmanship are good.  
This boiler has been built under special survey in accordance with the Rules and Approved Plan. It will be fitted aboard in Sunderland.

This boiler has been securely fixed on board the vessel  
Examined under steam, safety valves adjusted to working  
pressure & accumulation test carried out satisfactorily.  
For recommendation please see Encl. Rpt.

W. H. Hiley

Survey Fee ... £ 10 + 18 + 0. When applied for, 13-12-1935  
 Travelling Expenses (if any) £ : : When received, 19 Feb 1936

P. J. M. A.  
 Engineer Surveyor to Lloyd's Register of Ship

Committee's Minute TUE. 3 MAR 1936

Assigned See old J.E.  
31780



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 Foundation