

REPORT ON BOILERS.

No. 29,555

Received at London Office 21 NOV 1927

Date of writing Report

192

When handed in at Local Office 15 NOV. 1927

Port of Sunderland.

No. in Reg. Book.

Sunderland

Date, First Survey

Last Survey Nov. 8 1927

(Number of Visits)

Gross 4385
Net 2598

Master

Built at Sunderland

By whom built Wm. Pickering & Co.

Yard No. 219 When built 1927

Engines made at

Sunderland

By whom made

George Black Ltd.

Engine No. 1148

When made 1927

Boilers made at

do

By whom made

do

Boiler No. 1148

When made 1927

Nominal Horse Power

387

Owners

International South American Steamship Co. Ltd.

Port belonging to

Newcastle

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

The Steel Co. of Scotland Ltd.

(Letter for Record S)

Total Heating Surface of Boilers

6363 sq ft

Is forced draught fitted

no

Coal or Oil fired coal

No. and Description of Boilers

Three cyl. m.t.b.

Working Pressure 180

Tested by hydraulic pressure to

320

Date of test

19/7/27

No. of Certificate

3946

Can each boiler be worked separately

yes

Area of Firegrate in each Boiler

62.9 sq ft

No. and Description of safety valves to each boiler

Two spring loaded

Area of each set of valves per boiler

per Rule 2.2 sq in. 10.12 sq in. as fitted 3.3 sq in. 14.12 sq in.

Pressure to which they are adjusted

185 lb.

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

8'-0"

Is oil fuel carried in the double bottom under boilers

yes

Smallest distance between shell of boiler and tank top plating

3'-0"

Is the bottom of the boiler insulated

no

Largest internal dia. of boilers

14'-9 1/8"

Length 11'-0"

Shell plates: Material

Steel

Tensile strength 28-32 tons

Thickness

1 1/2"

Are the shell plates welded or flanged

no

Description of riveting: circ. seams

end D.R.L.

long. seams

T.R. D.B.S.

Diameter of rivet holes in

circ. seams 1 3/16"

long. seams 1 1/4"

Pitch of rivets

3 7/8" front 4 3/4" back

Percentage of strength of circ. end seams

plate 65.5% rivets 43.6%

Percentage of strength of circ. intermediate seam

plate rivets

Percentage of strength of longitudinal joint

plate 85.81% rivets 87.5% combined 89.2%

Working pressure of shell by Rules 182 lb.

Thickness of butt straps

outer 1 5/8" inner 1 1/4"

No. and Description of Furnaces in each Boiler

Three Reighton

Material

Steel

Tensile strength 26 to 30 tons

Smallest outside diameter 3'-8 3/8"

Length of plain part

top bottom

Thickness of plates

crowns 3 7/8" bottoms 3 7/8"

Description of longitudinal joint

Welded

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

Working pressure of furnace by Rules 183

End plates in steam space: Material

Steel

Tensile strength

26 to 30 tons

Thickness

1 5/8"

Pitch of stays 20" x 22 1/4"

How are stays secured

D.R.W.

Working pressure by Rules 180

Tube plates: Material

front back Steel

Tensile strength

26-30

Thickness

1 3/8"

Mean pitch of stay tubes in nests

10 1/4"

Pitch across wide water spaces 14 1/4" x 8 3/4"

Working pressure front 226 lb. back 192 "

Girders to combustion chamber tops: Material

Steel

Tensile strength 28 to 32 tons

Depth and thickness of girder

at centre

7 7/8" x 1 3/4"

Length as per Rule

2'-8"

Distance apart 10"

No. and pitch of stays

in each

2 x 10"

Working pressure by Rules

182 lb.

Combustion chamber plates: Material

Steel

Tensile strength

26 to 30 tons

Thickness: Sides

23 1/2"

Back 11"

Top 23 1/2"

Bottom 23 1/2"

Pitch of stays to ditto: Sides

10" x 10"

Back 9" x 10"

Top 10" x 10"

Are stays fitted with nuts or riveted over NUTS

Working pressure by Rules

7 1/2 sides 181

Front plate at bottom: Material

Steel

Tensile strength 26 to 30 tons

Thickness

1 3/8"

Lower back plate: Material

Steel

Tensile strength 26 to 30 tons

Thickness 1 5/8"

Pitch of stays at wide water space

15 1/4" x 8 3/4"

Are stays fitted with nuts or riveted over NUTS

Working Pressure

218

Main stays: Material

Steel

Tensile strength 28-32 tons

Diameter

At body of stay, 3 1/8"

Over threads 3 1/2"

No. of threads per inch 6

Area supported by each stay 443 sq in.

Working pressure by Rules

191 lb.

Screw stays: Material

Steel

Tensile strength 26 to 30 tons

Diameter

At turned off part, 3 1/8"

Over threads 3 1/2"

No. of threads per inch 9

Area supported by each stay 100 sq in.

W166-0061

Working pressure by Rules 180 ⁷⁰⁰ Are the stays drilled at the outer ends No ^{CORNER} Margin stays: Diameter { At turned off part 2 1/4 or Over threads 1 1/8 }
 No. of threads per inch 9 Area supported by each stay 159 Working pressure by Rules 202
 Tubes: Material S. D. STEEL External diameter { Plain 3 1/4 Stay 3 1/4 } Thickness { 8 ^{1/16} 5 ^{1/16} 1 ^{1/4} } No. of threads per inch 9
 Pitch of tubes 4 3/8 x 4 3/8 Working pressure by Rules 230 Manhole compensation: Size of opening in
 shell plate 12 x 16 Section of compensating ring - 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 - Manufacturers of { Tubes - 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 - 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 23 inclusive for boilers been complied with Yes

The foregoing is a correct description,

FOR GEORGE CLARK LIMITED

Manufacturer.

Dates of Survey { During progress of work in shops - - } Please see Mach. Rpt. 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 -

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

These boilers have been built under Special Survey & the workmanship and materials are good. On completion they were satisfactorily fitted in the vessel & the safety valves adjusted under steam. For recommendation regarding notation see machinery report.

Survey Fee ... £ : : When applied for, 192

Travelling Expenses (if any) £ : : When received, 192

J. H. Biddle
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUES 22 NOV 1937

Assigned

See Rpt attached



© 2020

Lloyd's Register Foundation