

## REPORT ON BOILERS

No. 30134  
13 SEP 1929

Received at London Office

Date of writing Report

192

When handed in at Local Office

17 SEP 1929

Port of Sunderland

No. in Survey held at  
Reg. Book

Sunderland.

Date, First Survey

Last Survey 16<sup>th</sup> Sep. 1929

on the

S.S. "GLAISDALE"

(Number of Visits

Gross

Tons

Net

Master

Built at

Sunderland

By whom built

Hijman &amp; Sons Ltd

When built

1929

Engines made at

Sunderland

By whom made

George Rank Ltd.

Engine No.

When made

1929

Boilers made at

Do

By whom made

Do

Boiler No.

When made

1929

Nominal Horse Power

341.

Owners

Hedlam &amp; Sons Ltd.

Port belonging to

Whitby

## MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY

Manufacturers of Steel Vercinglorius &amp; Co. Ltd. &amp; G. Hall &amp; Co. Ltd.

(Letter for Record S.)

Total Heating Surface of Boilers

5304 sq ft

Is forced draught fitted

No

Coal or Oil fired

Coal

No. and Description of Boilers

2 S.E. 6 ft. 6 in.

Working Pressure

180 lbs

Tested by hydraulic pressure to

320 lbs

Date of test

7/29

No. of Certificate

4042.

Can each boiler be worked separately

Yes

Area of Firegrate in each Boiler

75 sq ft

No. and Description of safety valves to each boiler

2 Spring loaded

Area of each set of valves per boiler

per Rule 8.65 sq in.

as fitted 8.94 sq in.

Pressure to which they are adjusted

185 lbs

Are they fitted with easing gear

Yes

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

No (See D.D. Report)

Smallest distance between boilers or uptakes and bunkers or woodwork

2'-0"

Is oil fuel carried in the double bottom under boilers

No

Smallest distance between shell of boiler and tank top plating

2'-0"

Is the bottom of the boiler insulated

Yes

Largest internal dia. of boilers

16'-3 1/2"

Length

11'-0"

Shell plates: Material

Steel

Tensile strength

29 to 33 tons

Thickness

1 3/4"

Are the shell plates welded or flanged

No

Description of riveting: circ. seams

end DR L

Long. seams

TR. D.B.S.

Diameter of rivet holes in

circ. seams 1 1/8"

long. seams 1 1/8"

Pitch of rivets

3 1/2" x 3 1/8"

Percentage of strength of circ. end seams

plate 64.4 FE 66.9 BE

rivets 42.6 " 42.4 "

Percentage of strength of circ. intermediate seam

plate

rivets

Percentage of strength of longitudinal joint

plate 85.21

rivets 88.1

combined 88

Working pressure of shell by Rules

18/185 lbs

Thickness of butt straps

outer 1 1/8"

inner 1 1/8"

No. and Description of Furnaces in each Boiler

4 Furnaces 4 ft. 4 in.

Material

Steel

Tensile strength

26 to 30 tons

Smallest outside diameter

39 1/2"

Length of plain part

top

bottom

Thickness of plates

crown 3 1/2"

bottom 3 1/2"

Description of longitudinal joint

Welded

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

Yes

Working pressure of furnace by Rules

18/185 lbs

End plates in steam space: Material

Steel

Tensile strength

26 to 30 tons

Thickness

1 1/2"

Pitch of stays

23 1/2" x 20 1/4"

How are stays secured

D.W.Y.W.

Working pressure by Rules

193 lbs

Tube plates: Material

front Steel

back Steel

Tensile strength

26 to 30 tons

Thickness

1 1/8" x 1 1/8"

Lean pitch of stay tubes in nests

10 3/8"

Pitch across wide water spaces

14 3/8"

Working pressure

front 185 lbs

back 180 "

Girders to combustion chamber tops: Material

Steel

Tensile strength

29 to 33 tons

Depth and thickness of girder

Centre

8 1/2" x 1 1/4"

Length as per Rule

2'-10 1/2"

Distance apart

10"

No. and pitch of stays

Each

2 @ 10"

Working pressure by Rules

183 lbs

Combustion chamber plates: Material

Steel

Tensile strength

26 to 30 tons

Thickness: Sides

23"

Back

23"

Top

23"

Bottom

23"

Pitch of stays to ditto: Sides

10 3/8" x 9 1/2"

Back

10 1/2" x 9 1/8"

Top

10" x 10"

Are stays fitted with nuts or riveted over

Nuts

Working pressure by Rules

183 &amp; 180 lbs

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 7/8" x 9 3/8"

Are stays fitted with nuts or riveted over

Nuts

Working Pressure

212 lbs

Main stays: Material

Steel

Tensile strength

28 to 32 tons

Diameter

At body of stay, 3 1/4" x 2 7/8"

or

Over threads, 3 5/8" x 3 1/4"

No. of threads per inch

6

Area supported by each stay

24 1/2" x 19 1/2"

Working pressure by Rules

195 lbs

Screw stays: Material

Steel

Tensile strength

26 to 30 tons

Diameter

At turn off part, 1 3/4"

or

Over threads, 1 3/4"

No. of threads per inch

9

Area supported by each stay

10 3/8" x 9 1/2"

Working pressure by Rules *184 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" x 2"*  
No. of threads per inch *9* Area supported by each stay *12 1/8" x 9"* Working pressure by Rules *186 lbs*  
Tubes: Material *SD Steel* External diameter *Plain 3 1/4" Stay 3 1/4"* Thickness *8 W.G. 3/8" 5/16" 1/4"* No. of threads per inch *9*  
Pitch of tubes *4 1/2" x 4 3/8"* Working pressure by Rules *205 lbs* Manhole compensation: Size of opening *16 x 12"*  
Shell plate *16 x 12"* 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 1/8"* 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 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 at any time *-*  
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 *-*  
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 22 inclusive for boilers been complied with *Yes*

The foregoing is a correct description,  
FOR GEORGE CLARK LIMITED

*W. G. M. M. M.* Manufacture

Dates of Survey *During progress of work in shops - - -* Please see Mech 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 materials & workmanship are good. On completion they were satisfactorily fitted in the vessel for notation see machinery report.*

Survey Fee ... £ : : When applied for, 192  
Travelling Expenses (if any) £ : : When received, 192

Committee's Minute

FRI. 20 SEP 1929

Assigned

*See Mech Rpt attached*

*W. G. M. M. M.*  
Engineer Surveyor to Lloyd's Register of Shipping



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