

REPORT ON BOILERS.

Received at London Office 21 NOV 1929

Date of writing Report

192

When handed in at Local Office

20 NOV 1929

Port of Sunderland

No. in Reg. Book

Survey held at

Sunderland

Date, First Survey

Last Survey

11th Nov 1929

on the

S.S. "TORCHBEARER"

(Number of Visits)

Gross

1267

Net

684

Master

Built at

Sunderland

By whom built

J. Frank Ltd

Yard No.

182

When built

1929

Engines made at

Sunderland

By whom made

George Clark Ltd.

Engine No.

1174

When made

1929

Boilers made at

Sunderland

By whom made

Do

Boiler No.

1174

When made

1929

Nominal Horse Power

156

Owners

Gas Light Coal Co

Port belonging to

London

RETAIN

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Verenigte Stahlwerke AG, Essen (Letter for Record S)

Total Heating Surface of Boilers 2490 sq ft Is forced draught fitted No Coal or Oil fired Coal

No. and Description of Boilers One S.E. of hull Working Pressure 180 lbs

Tested by hydraulic pressure to 320 lbs Date of test 26/7/29 No. of Certificate 4046 Can each boiler be worked separately -

Area of Firegrate in each Boiler 75 sq ft No. and Description of safety valves to each boiler Two spring loaded

Area of each set of valves per boiler 15.8 sq ft 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

Smallest distance between boilers or uptakes and bunkers or woodwork 8'-6" Is oil fuel carried in the double bottom under boilers No

Smallest distance between shell of boiler and tank top plating 2'-1 1/2" Is the bottom of the boiler insulated No

Largest internal dia. of boilers 16'-6" Length 10'-6" Shell plates: Material Steel Tensile strength 28 to 32 tons

Thickness 1 3/4" Are the shell plates welded or flanged No Description of riveting: circ. seams DR

long. seams T.R. JBS Diameter of rivet holes in circ. seams 1 1/4" Pitch of rivets 3 3/8" & 4 1/8"

Percentage of strength of circ. end seams 42.3% Percentage of strength of circ. intermediate seam -

Percentage of strength of longitudinal joint 85.6% Working pressure of shell by Rules 180 lbs

Thickness of butt straps 1 1/8" No. and Description of Furnaces in each Boiler 4 on (Jeigatung) 4 CF

Material Steel Tensile strength 26 to 30 tons Smallest outside diameter 3'-3 3/4"

Length of plain part - Thickness of plates 3 1/2" Description of longitudinal joint Welded

Dimensions of stiffening rings on furnace or c.c. bottom - Working pressure of furnace by Rules 181 lbs

End plates in steam space: Material Steel Tensile strength 26 to 30 tons Thickness 1 3/8" Pitch of stays 19 1/4" x 2 1/2"

How are stays secured DNW Working pressure by Rules 183 lbs

Tube plates: Material Steel Tensile strength 26 to 30 tons Thickness 1 3/8"

Mean pitch of stay tubes in nests 10 1/4" Pitch across wide water spaces 14 1/4" Working pressure 226 lbs

Girders to combustion chamber tops: Material Steel Tensile strength 28 to 32 tons Depth and thickness of girder

at centre 7 7/8" & 1 3/4" Length as per Rule 32" Distance apart 10" No. and pitch of stays

in each 2 @ 10" Working pressure by Rules 182 lbs Combustion chamber plates: Material Steel

Tensile strength 26 to 30 tons Thickness: Sides 2 3/32" Back 1/8" Top 2 3/32" Bottom 2 3/32"

Pitch of stays to ditto: Sides 10" x 10" Back 10 1/8" x 8 7/8" Top 10" x 10" Are stays fitted with nuts or riveted over Nuts

Working pressure by Rules 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"

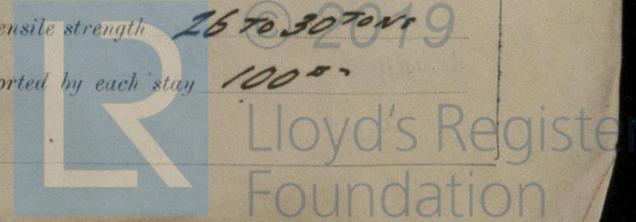
Pitch of stays at wide water space 16" x 8 7/8" Are stays fitted with nuts or riveted over Nuts

Working Pressure 216 lbs Main stays: Material Steel Tensile strength 28 to 32 tons

Diameter 3 1/2" & 3" No. of threads per inch 6 Area supported by each stay 441 sq in

Working pressure by Rules 192 lbs Screw stays: Material Steel Tensile strength 26 to 30 tons

Diameter 1 3/4" No. of threads per inch 9 Area supported by each stay 100 sq in



W433-0129

Working pressure by Rules 181 ⁴³⁵⁰ Are the stays drilled at the outer ends Yes Margin stays: Diameter At turned off part, 1 1/8" or Over threads 1 1/8"

No. of threads per inch 9 Area supported by each stay 116" Working pressure by Rules 185 ⁴³⁵⁰

Tubes: Material Steel External diameter Plain 3 1/4" Stay 3 1/4" Thickness 8 W.G. 1/4, 5/16, 3/8 No. of threads per inch 9

Pitch of tubes 4 1/2 x 4 3/8 Working pressure by Rules 191 ⁴³⁵⁰ Manhole compensation: Size of opening in END shell plate 12 x 16 Section of compensating ring FLANGED 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 - 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 22 inclusive for boilers been complied with Yes

The foregoing is a correct description,
FOR GEORGE CLARK LIMITED,
W. G. Spence Manufacturer.

Dates of Survey During progress of work in shops - - Please see Machinery 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.) This boiler has been built under Special Survey & the materials & workmanship are good. The boiler has been 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

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

Committee's Minute TUE. 26 NOV '29
Assigned See M. Rpt. attached



Date of writing
No. in Reg. Book
Master
Boilers made
Owners
VERTICAL
Made at
tested by
No. of safes
enter the d
Range of t
drilled
rules
furnace—
pressure of
crown plat
plates
Diameter of
External
Working p
ring

Dates of Survey while building

GENERAL SURVEY
The
This
The
valve
For

Survey
Travelling

Comm
Assign