

## REPORT ON BOILERS.

Sld. No. 29528

Received at London Office

11 OCT 1927

Date of writing Report

192

When handed in at Local Office 10 OCT. 1927

Port of *Liverpool*

No. in Surrey held at Reg. Book.

*Liverpool*

Date, First Survey

Last Survey 6 Oct 1927

on the

*S.S. "LADY OLGA"*

(Number of Visits)

Gross 1266

Net 583

Master

Built at

*Liverpool*

By whom built

*S.P. Austin & Sons Ltd.*

Yard No.

*312*When built *1927*

Engines made at

*Liverpool*

By whom made

*Geoff. Rank Ltd.*

Engine No.

*1153*When made *1927*

Boilers made at

*do*

By whom made

*do*

Boiler No.

*1153*When made *1927*

Nominal Horse Power

*156*

Owners

*Gas Light & Coke Co*

Port belonging to

*Liverpool*

## MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

*David Colville & Sons Ltd.*(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. Smith*Working Pressure *180*

Tested by hydraulic pressure to

*320*

Date of test

*12/8/27*

No. of Certificate

*3950*

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 @ 3 1/4"*

Area of each set of valves per boiler

*per Rule 15.8 sq. ft.*

Pressure to which they are adjusted

*185*

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

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

*28-32 Tons*

Thickness

*1 1/4"*

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 1/4" & 1 3/8"**long. seams 1 3/8"*

Pitch of rivets

*3 3/8" & 4 1/8"*

Percentage of strength of circ. end seams

*plate 65**rivets 42.3*

Percentage of strength of circ. intermediate seam

*plate**rivets*

Percentage of strength of longitudinal joint

*plate 85.63**rivets 89.6**combined 87.8*

Working pressure of shell by Rules

*180*

Thickness of butt straps

*outer 1"**inner 1 1/8"*

No. and Description of Furnaces in each Boiler

*4 Feighton*

Material

*Steel*

Tensile strength

*26 to 30 Tons*

Smallest outside diameter

*3'-3 3/4"*

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

Working pressure of furnace by Rules

*181*

End plates in steam space: Material

*Steel*

Tensile strength

*26 to 30 Tons*

Thickness

*1 3/8"*

Pitch of stays

*19 1/4" x 24 1/2"*

How are stays secured

*D.N.Y.W.*

Working pressure by Rules

*183 lbs.*

Tube plates: Material

*front Steel**back 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

*front 226**back 191*

Girders to combustion chamber tops: Material

*Steel*

Tensile strength

*28 to 32 Tons*

Depth and thickness of girder

at centre

*7 1/8" x 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

*23"**32"*

Back

*11"**16"*

Top

*23"**32"*

Bottom

*23"**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*

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 3/8"*

Pitch of stays at wide water space

*16" x 8 7/8"*

Are stays fitted with nuts or riveted over

*Nuts*

Working Pressure

*216*

Main stays: Material

*Steel*

Tensile strength

*28 to 32 Tons*

Diameter

*At body of stay, 3 1/8" & 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

*At turned off part, 1 3/4"*

No. of threads per inch

*9*

Area supported by each stay

*100 sq. in.*



Working pressure by Rules 185 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" ✓

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

Tubes: Material Steel External diameter { Plain 3 1/4" Stay 3 1/4" Thickness { 8 W.G. 4, 5, 10, 18" No. of threads per inch 9 ✓

Pitch of tubes 4 1/2" x 4 3/8" ✓ Working pressure by Rules 191 lbs ✓ Manhole compensation: Size of opening in ENR 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 1/2" ✓ 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** W. J. Quinn manufacturer.

Dates of Survey { During progress of work in shops - - - Please see M. & E. 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 as stated in the report. For recommendation regarding notation see machinery report.

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

Sanbottle  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 14 OCT 1927  
Assigned See minute on Sld Rpt  
29528 attached