

## REPORT ON BOILERS.

No. 29760

Received at London Office

15 JUN 1928

Writing Report

102

When handed in at Local Office

14 JUNE 1928

Port of *Sunderland.*

Survey held at

*Sunderland.*

Date, First Survey

Last Survey

13 June 1928

on the

*S.S. "KIRKPOOL"*

(Number of Visits)

Gross *4840.*  
Net *3012.*Built at *Sunderland.*

By whom built

*W. J. & Co. Ltd.*Yard No. *699*When built *1928.*es made at *Sunderland*

By whom made

*George Black Ltd*Engine No. *1158*When made *1928.*s made at *Do*By whom made *Do*Boiler No. *1158*When made *1928.*al Horse Power *491*

Owners

*The Ropner Shipping Co. Ltd.*

Port belonging to

*W. J. & Co. Ltd.*

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

Manufacturers of Steel

*David Colville & Sons.*(Letter for Record *S*)

Heating Surface of Boilers

*7308 sq ft*

Is forced draught fitted

*Yes*Coal or Oil fired *Coal*

and Description of Boilers

*3 S.E. 8 ft Multi**350.*Working Pressure *180 LBS.*

d by hydraulic pressure to

*320 LBS.*Date of test *6/3/28.*No. of Certificate *3981.*

Can each boiler be worked separately

*Yes.*

of Firegrate in each Boiler

*58 sq ft*

No. and Description of safety valves to each boiler

*Two Spring loaded.*

of each set of valves per boiler

*2*

Pressure to which they are adjusted

*15.8 LBS.*

Are they fitted with easing gear

*Yes.*

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

*Yes*

least distance between boilers or uptakes and bunkers or woodwork

*1-8"*

Is oil fuel carried in the double bottom under boilers

*No*

least distance between shell of boiler and tank top plating

*2-6"*

Is the bottom of the boiler insulated

*Yes.*

least internal dia. of boilers

*15-9 1/2"*

Length

*11-0"*

Shell plates: Material

*STEEL*Tensile strength *28 to 32 TONS*

Thickness

*1 1/8"*

Are the shell plates welded or flanged

*No*

Description of riveting: circ. seams

*end D.R.L.*

seams

*T.R.D.B.S.*

Diameter of rivet holes in

*circ. seams 1 1/8"**long. seams 1 1/8"*

Pitch of rivets

*4" x 3 1/2"*

Percentage of strength of circ. end seams

*plate**85.99%*

Percentage of strength of circ. intermediate seam

*plate**86.2%*

Percentage of strength of longitudinal joint

*plate**85.99%*

Working pressure of shell by Rules

*182 LBS.*

Thickness of butt straps

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

No. and Description of Furnaces in each Boiler

*3 C. Seights.**3 C. F.*

Material

*STEEL.*

Tensile strength

*26 to 30 TONS.*

Smallest outside diameter

*4 1/8"*

Length of plain part

*top**bottom*

Thickness of plates

*crow 1 1/8"**bottom 3/2"*

Description of longitudinal joint

*WELDED.*

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

*—*

Working pressure of furnace by Rules

*183 LBS.*

plates in steam space: Material

*STEEL*

Tensile strength

*26 to 30 TONS*

Thickness

*1 3/8"*Pitch of stays *22 1/2" x 2 1/4"*

are stays secured

*J.N. & W.*

Working pressure by Rules

*184 LBS.*

e plates: Material

*front**back**STEEL.*

Tensile strength

*26 to 30 TONS*

Thickness

*1 1/2"*

pitch of stay tubes in nests

*1 1/8"*

Pitch across wide water spaces

*14 1/2" x 8 3/4"*

Working pressure

*front 187 LBS.**back 190*

ders to combustion chamber tops: Material

*STEEL.*

Tensile strength

*28 to 32 TONS*

Depth and thickness of girder

centre

*8 1/4" x 1 3/4"*

Length as per Rule

*33"*

Distance apart

*10"*

No. and pitch of stays

back

*2 @ 10"*

Working pressure by Rules

*185 LBS.*

Combustion chamber plates: Material

*STEEL.*

sile strength

*26 to 30 TONS.*

Thickness: Sides

*23/32"*

Back

*1 1/8"*

Top

*23/32"*

Bottom

*23/32"*

ch of stays to ditto: Sides

*10" x 10"*

Back

*10" x 9 1/8"*

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 1/2"*

Lower back plate: Material

*STEEL.*

Tensile strength

*26 to 30 TONS*

Thickness

*1 1/8"*

ch of stays at wide water space

*16" x 9 1/2"*

Are stays fitted with nuts or riveted over

*MARGIN, NUTS, C. RIVETTED*

Working Pressure

*208 LBS.*

Main stays: Material

*STEEL*

Tensile strength

*28 to 32 TONS*

meter

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

No. of threads per inch

*6*

Area supported by each stay

*380 x 408"*

Over threads

*3 1/2" x 3 1/8"*

Working pressure by Rules

*189 x 192 LBS.*

Screw stays: Material

*STEEL*

Tensile strength

*26 to 30 TONS*

meter

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

No. of threads per inch

*9*

Area supported by each stay

*100"*Lloyd's Register  
Foundation

W275-0088



Working pressure by Rules 180 <sup>185</sup> Are the stays drilled at the outer ends No Margin stays: Diameter { At turned off part, 1 7/8" or 2" Over threads 1 7/8" }  
No. of threads per inch 10 Area supported by each stay 115 Working pressure by Rules 185 <sup>185</sup>  
Tubes: Material S.T. STEEL External diameter { Plain 3 1/2" Stay 3 1/4" } Thickness 9/16" No. of threads per inch 9  
Pitch of tubes 4 1/2" x 4 3/8" Working pressure by Rules 208 <sup>185</sup> Manhole compensation: Size of opening in shell plate - 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" <sup>END PLATE</sup> 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 None 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. S. Smith Manufacturer.

Dates of Survey { During progress of work in shops - - - } Please see Mch. 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 & the safety valves adjusted under steam. For notation see machinery report.

Survey Fee ... £ 1 : : } When applied for, 192  
Travelling Expenses (if any) £ 1 : : } When received, 192

Garbott  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

FRI. 22 JUN 1928

Assigned see minute on

Sld. Rpt 29760 attached



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