

REPORT ON BOILERS.

Sl. No. 29,725
Hpl. No. 16607

Received at London Office 14 MAR 1928

Date of writing Report

192

When handed in at Local Office

12.3.

1928

Port of *West Hartlepool*

No. in Survey held at
Hpl. Book.

Hartlepool

Date, First Survey

18th Nov. 27

Last Survey

1st May 1928

on the

M.V. "SCHUYLKILL"

(Number of Visits

26)

Gross

8964

Net

5365

Built at *Sunderland* By whom built *Sir Jas Laing & Co Ltd* Yard No. *702* When built *1928*

Engines made at *Sunderland* By whom made *William Dugald Inglis Ltd* Engine No. *168* When made *1928*

Boilers made at *Hartlepool* By whom made *Richardsons Westgarth & Co Ltd* Boiler No. *D17A* When made *1928*

Nominal Horse Power *78* Owners *Anglo American Oil Co* Port belonging to *Sunderland*

MULTITUBULAR BOILERS - ~~MAIN~~, AUXILIARY, OR ~~DONKEY~~

Manufacturers of Steel *Messrs The Steel Co of Scotland*

(Letter for Record *(5)*)

Total Heating Surface of Boilers *1175.4 sqft*

Is forced draught fitted *Yes*

Coal or Oil fired *Oil*

No. and Description of Boilers *1 Single ended.*

Working Pressure *150 lbs*

Tested by hydraulic pressure to *275 lbs* Date of test *1-2-28* No. of Certificate *3728* Can each boiler be worked separately

Area of Firegrate in each Boiler *1* No. and Description of safety valves to each boiler *Double Spring Loaded*

Area of each set of valves per boiler *per Rule 10.68 as fitted 19.24* Pressure to which they are adjusted *155 lbs* Are they fitted with easing gear *Yes*

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

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 *-*

Is the bottom of the boiler insulated *Yes*

Largest internal dia. of boilers *12'-10"* Length *11'-5"*

Shell plates: Material *Steel* Tensile strength *28/32*

Thickness *29/32* Are the shell plates welded or flanged *No*

Description of riveting: circ. seams *Double Riv. lap*

Long. seams *Treble Riv. Double Butt Straps* Diameter of rivet holes in *circ. seams 1" long. seams 1"*

Pitch of rivets *3 1/8"*

Percentage of strength of circ. end seams *plate 68. rivets 45.4*

Percentage of strength of circ. intermediate seam *plate rivets*

Percentage of strength of longitudinal joint *plate 84 rivets 85.5 combined 89.4*

Working pressure of shell by Rules *150 lbs.*

Thickness of butt straps *outer 23/32 inner 21/32*

No. and Description of Furnaces in each Boiler *3 Morrison*

Material *Steel* Tensile strength *26/30*

Smallest outside diameter *3'-1 3/8"*

Length of plain part *top bottom* Thickness of plates *crown 7/16 bottom*

Description of longitudinal joint *Welded*

Dimensions of stiffening rings on furnace or c.c. bottom *-* Working pressure of furnace by Rules *167 lbs.*

End plates in steam space: Material *Steel* Tensile strength *26/30* Thickness *1"* Pitch of stays *16 3/4" x 18 1/8"*

How are stays secured *Double nuts* Working pressure by Rules *151.5 lbs.*

Tube plates: Material *front Steel back Steel* Tensile strength *26/30 26/30* Thickness *13/16 11/16*

Lean pitch of stay tubes in nests *9 1/32"* Pitch across wide water spaces *13 1/2"* Working pressure *front 165.5 lbs. back 191 lbs.*

Girders to combustion chamber tops: Material *Steel* Tensile strength *26/30* Depth and thickness of girder

centre *7 1/4"* *1 5/8"* Length as per Rule *2'-6 3/32"* Distance apart *Wing 9 1/4" Centre 6"* No. and pitch of stays

each *3* *7 1/4"* Working pressure by Rules *158 lbs.* Combustion chamber plates: Material *Steel*

Tensile strength *26/30* Thickness: Sides *9/16* Back *2 3/32* Top *9/16* Bottom *11/16*

Pitch of stays to ditto: Sides *7 1/4" x 8"* Back *8" x 9"* Top *7 1/4" x 9 1/4"* Are stays fitted with nuts or riveted over *Riveted & Nuts*

Working pressure by Rules *156 lbs* Front plate at bottom: Material *Steel* Tensile strength *26/30*

Thickness *13/16* Lower back plate: Material *Steel* Tensile strength *26/30* Thickness *3/4"*

Pitch of stays at wide water space *13 1/2"* Are stays fitted with nuts or riveted over *Nuts*

Working Pressure *184.5 lbs* Main stays: Material *Steel* Tensile strength *28/32*

Diameter *At body of stay, 2 1/2" & 2 5/8"* No. of threads per inch *6* Area supported by each stay *15 1/8" x 18 1/8" & 16 3/4" x 18 1/8"*

Working pressure by Rules *161 lbs. & 163 lbs.* Screw stays: Material *Steel* Tensile strength *26/30*

Diameter *At turned off part, 1 1/2"* No. of threads per inch *9* Area supported by each stay *8" x 9"*

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Working pressure by Rules *170 lbs.* Are the stays drilled at the outer ends *No* Margin stays: Diameter { At turned off part, *1 5/8"*
or Over threads *1 5/8"*
No. of threads per inch *9* Area supported by each stay *8" x 11 1/4"* Working pressure by Rules *169 lbs.*
Tubes: Material *Iron* External diameter { Plain *2 1/2"* Thickness { *Nº 8 I.W.G.* No. of threads per inch *9*
Stay *2 1/2"* *5/16" & 3/8"*
Pitch of tubes *3 3/4" x 3 3/4"* Working pressure by Rules *221 lbs.* Manhole compensation: Size of opening
shell plate *12" x 16"* Section of compensating ring *12" x 1 3/16"* No. of rivets and diameter of rivet holes *36. 1"*
Outer row rivet pitch at ends *6 1/4"* Depth of flange if manhole flanged
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
stays Inner radius of crown Working pressure by Rules
How connected to shell Size of doubling plate under dome Diameter of rivet holes and
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 a
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
Rules Pressure to which the safety valves are adjusted Hydraulic test pressure
tubes, castings and after assembly in place Are drain cocks or valves fit
to free the superheater from water where necessary
Have all the requirements of Sections 14 to 23 inclusive for boilers been complied with

The foregoing is a correct description,
For RICHARDSONS, WESTGARTH & Co. LIMITED

Dates { During progress of
of Survey { work in shops - - -
while { During erection on
building { board vessel - - -
See accompanying report on
Work Heat Str.
Are the approved plans of boiler and superheater forwarded herewith
(If not state date of approval.)
Total No. of visits *1*

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)
This boiler has been examined under Special Survey
The workmanship and materials are good.
On completion it satisfactorily withstood the
hydraulic test.
All the boiler mountings have been tested to 400 lbs.
The boiler is being despatched to Sunderland for
fitting on board.
The boiler has been satisfactorily fitted on board & the safety
valves adjusted under steam. For notation see machinery
report.

Survey Fee ... £ *7 : 16 : -* When applied for, *13th Mar 1928*
Travelling Expenses (if any) £ : : When received, *16-3-1928*
R.D. Philston & A. Daintith
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute
Assigned *See Sd P.B. rpt. No 29425*
TUES. 15 MAY 1928