

## REPORT ON BOILERS.

No. 11889

Received at London Office 13 FEB 1937

Date of writing Report

19

When handed in at Local Office

12. 2. 1937

Port of *Belfast*  
Please see report 5a.No. in  
Reg. Book

Survey held at

*Belfast*

Date, First Survey

Last Survey *5 Feb*, 1937

(Number of Visits)

Gross *5694.99*Tons Net *3286.12*

on the

M.V. "SALACIA"

Built at

*Glasgow*

By whom built

*Harland & Wolff Ltd.*Yard No. *982G*When built *1937*

Engines made at

*Glasgow*

By whom made

*Harland & Wolff Ltd.*Engine No. *982*When made *1937*

Boilers made at

*Belfast*

By whom made

*Harland & Wolff Ltd.*

Boiler No.

When made *1937*

Owners

*Donaldson Line Ltd.*

Port belonging to

*Glasgow*

## VERTICAL DONKEY BOILER.

Made at *Belfast*

By whom made

*Harland & Wolff Ltd.*

Boiler No.

When made *1937*Where fixed *L.R. Top*

Manufacturers of Steel

*Colvilles Ltd.*

Total Heating Surface of Boiler

*900 sq*

Is forced draught fitted

*no.*Coal or Oil fired *Exh. gas* ✓

No. and Description of Boilers

*One Clarkson Thimble Tube*Working pressure *120 lbs*

Tested by hydraulic pressure to

*230 lb*

Date of test

*5-2-37*No. of Certificate *1027*

Area of Firegrate in each Boiler

✓

No. and Description of safety valves to each boiler

*One 2 3/4" double spring marine type*

Area of each set of valves per boiler

{ per rule *8.33 sq*  
as fitted *11.88 sq*

Pressure to which they are adjusted

*120 lb/0"*Are they fitted with easing gear *yes* ✓

State whether steam from main boilers can enter the donkey boiler

✓

Smallest distance between boiler or uptake and bunkers

or woodwork

✓

Is oil fuel carried in the double bottom under boiler

*no*

Smallest distance between base of boiler and tank top plating

Is the base of the boiler insulated

✓

Largest internal dia. of boiler

*7'-1"*Height *16'-6"*

Shell plates: Material

*S.M. Steel*

Tensile strength

*28/32*

Thickness

*7/8" + 5/8"*

Are the shell plates welded or flanged at ends &amp; butts

Description of riveting: circ. seams

{ end *DR*  
inter. ✓long. seams *DR butt straps*

Dia. of rivet holes in

{ circ. seams *1 1/4"*  
long. seams *1 1/8"*

Pitch of rivets

*3.55*  
*4.375*

Percentage of strength of circ. seams

{ plate *64.5*  
rivets *64.6*

of Longitudinal joint

{ plate *74.3*  
rivets *80.0*  
combined *84.5*

Working pressure of shell by rules

*by rivets 148 lb by Thimbles 168 lb*

Thickness of butt straps

{ outer *1 1/2"*  
inner *1 1/4"*

Shell Crown: Whether

*complete hemisphere, dished partial spherical, or flat**yes*

Material

*S*

Tensile strength

*26/30*

Thickness

*7/8"*

Radius

*6'-0"*

Working pressure by rules

*146 lb*

Description of Furnace: Plain, spherical, or dished crown

*Plain*

Material

Tensile strength

Thickness

External diameter

{ top  
bottom

Length as per rule

Working pressure by rules

Pitch of support stays circumferentially

and vertically

Are stays fitted with nuts or riveted over

Diameter of stays over thread

Radius of spherical or dished furnace crown

Working pressure by rule

Thickness of Ogee Ring

*1 1/32"*

Diameter as per rule

{ D *7'-1"*  
d *4'-5 1/2"*

Working pressure by rule

*122 lb*

Combustion Chamber: Material

*S*

Tensile strength

*26/30*

Thickness of top plate

*1 3/4"*

Radius if dished

*3'-6"*

Working pressure by rule

*160*

Thickness of back plate

*1 1/4"*

Diameter if circular

*4'-3"*

Length as per rule

*5'-10 7/8"*

Pitch of stays

Are stays fitted with nuts or riveted over

*Combustion Chamber*

Diameter of stays over thread

Working pressure of back plate by rules

*235 lb*

Tube Plates: Material

{ front  
back

Tensile strength

Thickness

Mean pitch of stay tubes in nests

If comprising shell, Dia. as per rule

{ front  
back

Pitch in outer vertical rows

Dia. of tube holes FRONT

{ stay  
plain

BACK

{ stay  
plain

Is each alternate tube in outer vertical rows a stay tube

Working pressure by rules

{ front  
back

Girders to combustion chamber tops: Material

Tensile strength

Depth and thickness of girder at centre

Length as per rule

Distance apart

No. and pitch of stays in each

Working pressure by rule

© 2020

Lloyd's Register  
Foundation

005293-005300-0232



**Crown stays:** Material \_\_\_\_\_ Tensile strength \_\_\_\_\_ Diameter { at body of stay, \_\_\_\_\_  
or  
over threads, \_\_\_\_\_  
No. of threads per inch \_\_\_\_\_ Area supported by each stay \_\_\_\_\_ Working pressure by rules \_\_\_\_\_

**Screw stays:** Material \_\_\_\_\_ Tensile strength \_\_\_\_\_ Diameter { at turned off part, \_\_\_\_\_  
or  
over threads, \_\_\_\_\_ No. of threads per inch \_\_\_\_\_  
Area supported by each stay \_\_\_\_\_ Working pressure by rules \_\_\_\_\_ Are the stays drilled at the outer ends \_\_\_\_\_

**Thimbles** ✓

**Tubes:** Material S. External diameter { Shell 3 1/4" ✓  
VP 9" ✓ VP 8 3/4" ✓ C.C. 4" ✓ Thickness { 6 B4C ✓  
9 B4C ✓  
No. of threads per inch ✓ Pitch of tubes Shell HP 7 1/8" C.C. HP 7 1/4" Working pressure by rules \_\_\_\_\_

**Manhole Compensation:** Size of opening in shell plate 16 x 12" ✓ Section of compensating ring 28 1/4" x 24 1/4" ✓ No. of rivets and diameter \_\_\_\_\_  
of rivet holes 40 ✓ Outer row rivet pitch at ends 3.53" ✓ Depth of flange if manhole flanged 16 x 12" 3 1/8" ✓

**Uptake:** External diameter 2'-3 7/16" ✓ Thickness of uptake plate 5/8" ✓

**Cross Tubes:** No. ✓ External diameters { \_\_\_\_\_ Thickness of plates ✓

Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with \_\_\_\_\_

The foregoing is a correct description,  
For HARLAND AND WOLFF, LIMITED.  
*A. J. Marshall* Manufacturer.  
Assistant Secretary.

Dates { During progress of }  
of Survey { work in shops - - }  
while { During erection on }  
building { board vessel - - }

Is the approved plan of boiler forwarded herewith Yes  
(If not state date of approval.)  
Total No. of visits \_\_\_\_\_

Is this Boiler a duplicate of a previous case \_\_\_\_\_ If so, state Vessel's name and Report No. \_\_\_\_\_

**GENERAL REMARKS** (State quality of workmanship, opinions as to class, &c.)

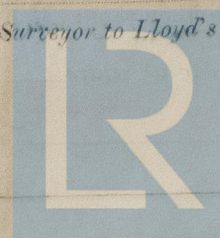
This Boiler has been constructed under special survey to an approved plan. The materials and workmanship are sound and good. It has been subjected to a hydraulic pressure test in accordance with the rules with satisfactory results. It is being fitted in a vessel building at Glasgow.

This boiler has been efficiently fitted & secured in position on board the M.V. "SALACIA", tried under working conditions, and found good. The safety valves have been adjusted under steam & tried for accumulation with satisfactory results.

Survey Fee ... £ 6 : - : When applied for, 12. 2. 19 37  
Travelling Expenses (if any) £ : : When received, 12. 3. 19 37

*R. Lee Annett. H. Campbell.*  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **GLASGOW 24 AUG 1937**  
Assigned *See Glasgow Report No. 58710*



Lloyd's Register  
Foundation