

# REPORT ON BOILERS.

No. 12103

Received at London Office MAR -8 1938

Date of writing Report

19

When handed in at Local Office

7. 3.

1938

Port of *Belfast*

Please see 7.8. *Wich. 45*

No. in Reg. Book

Survey held at

*Belfast*

Date, First Survey

Last Survey

*3/3/38*

19

30386 on the

TWIN SCREW

**"MUNSTER"**

OIL ENGINES

(Number of Visits)

Gross *4302*

Tons Net *2319*

Built at

*Belfast*

By whom built

*Harland & Wolff Ltd*

Yard No. *996*

When built *1938*

Engines made at

*Belfast*

By whom made

*Harland & Wolff Ltd*

Engine No. *996*

When made *1938*

Boilers made at

*Belfast*

By whom made

*Harland & Wolff Ltd*

Boiler No. *996*

When made *1938*

Owners *The British & Irish Steam Packet Co 1936 Ltd*

Port belonging to

*Liverpool*

## VERTICAL DONKEY BOILER.

Made at *Belfast* By whom made *Harland & Wolff Ltd* Boiler No. *996* When made *1938* Where fixed *Platform above E.R.*

Manufacturers of Steel *Colvilles Ltd*

Total Heating Surface of Boiler *1175 sq ft*

Is forced draught fitted *No*

Oil fired *and Exh gas*

No. and Description of Boilers *One Clarkson Thimble tube*

Working pressure *80 lbs/sq in*

Tested by hydraulic pressure to *160 lbs/sq in*

Date of test *20/10/37*

No. of Certificate *1037*

Area of Firegrate in each Boiler

No. and Description of safety valves to each boiler *Two improved high lift 2 1/2 dia*

Area of each set of valves per boiler *per rule 28 15.4*  
as fitted *9.8 sq in*

Pressure to which they are adjusted *80 lbs/sq in* Are they fitted with easing gear *Yes*

State whether steam from main boilers can enter the donkey boiler *Yes*

Smallest distance between boiler or uptake and bunkers

woodwork

Is oil fuel carried in the double bottom under boiler *Yes*

Smallest distance between base of boiler and tank top plating

Is the base of the boiler insulated *No*

Largest internal dia. of boiler *6'-11 1/8"* Height *17'-6"*

Shell plates: Material *S*

Tensile strength *28/32 tons*

Thickness *7/8"*

Are the shell plates welded or flanged at butt straps *Yes*

Description of riveting: circ. seams *DR*

long. seams *DR strapped*

Dia. of rivet holes in *circ. seams 1 1/8"*  
*long. seams 1 1/8"* Pitch of rivets *3.3"*

Percentage of strength of circ. seams *plate 65.9*  
*rivets 56.3* of Longitudinal joint *plate 74.2*  
*rivets 79.6*  
combined *88.32*

Working pressure of shell by rules *145 lbs*

Thickness of butt straps *outer 1 1/2"*  
*inner 1 1/2"*

Shell Crown: Whether complete hemisphere, dished partial spherical, or flat *Yes*

Material *S*

Tensile strength *26/30 tons*

Thickness *1 1/2"*

Radius *72"*

Working pressure by rules *92 lbs*

Description of Furnace: *Plain, spherical, or dished crown with thimble tubes*

Material *S*

Tensile strength *26/30*

Thickness *1 5/16"*

External diameter *top 53 7/8"*  
*bottom 53 1/2"*

Length as per rule *7'-4"*

Working pressure by rules *300 lbs*

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 *3/4"*

Diameter as per rule *D 82 1/2"*  
*d 53 5/8"*

Working pressure by rule *87 lbs*

Combustion Chamber: Material

Tensile strength

Thickness of top plate

Radius if dished

Working pressure by rule

Thickness of back plate

Diameter if circular

Length as per rule

Pitch of stays

Are stays fitted with nuts or riveted over

Diameter of stays over thread

Working pressure of back plate by rules

Tube Plates: Material

front

Tensile strength

Thickness

Mean pitch of stay tubes in nests

comprising shell, Dia. as per rule

front

Pitch in outer vertical rows

Dia. of tube holes FRONT

stay

BACK

stay

each alternate tube in outer vertical rows a stay tube

Working pressure by rules

Orders to combustion chamber tops: Material

Tensile strength

Depth and thickness of girder at centre

Length as per rule

Stanchion part

No. and pitch of stays in each

Working pressure by rule

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W456-0091



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

Thimble

Tubes: Material S

External diameter

Inner 4" /  
outer 2 3/4" /

Thickness

9 B W G /  
9 B W G /

No. of threads per inch

Pitch of tubes Inner 8 3/4" Outer 6" /

Working pressure by rules 90 lbs (by steam pipe rule)

Manhole Compensation: Size of opening in shell plate

16 x 12

Section of compensating ring

6" x 1 1/4"

No. of rivets and diameter

of rivet holes 40 - 1 1/8"

Outer row rivet pitch at ends 3.53"

Depth of flange if manhole flanged 2 7/8"

Uptake: External diameter

27 7/16"

Thickness of uptake plate 1/2"

Cross Tubes: No.

External diameters

Thickness of plates

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

Yes

The foregoing is a correct description,

For HARLAND AND WOLFF, LIMITED.

A. G. Marshall  
Secretary

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

Is the approved plan of boiler forwarded herewith 25/2/37  
(If not state date of approval.)

Total No. of visits

Is this Boiler a duplicate of a previous case

Yes

If so, state Vessel's name and Report No.

Leinster Bel up N° 12030 3/11

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

This boiler has been constructed to an approved plan under special survey. The materials & workmanship are good. The boiler has been tested by hydraulic pressure in accordance with the Rules and efficiently installed on an upper deck in the Main Motor room. The safety valves were adjusted under steam, the accumulation test was satisfactory. In our opinion this boiler is eligible for use on a vessel classed with the Society.

Survey Fee

Travelling Expenses (if any)

When applied for, 19

When received, 19

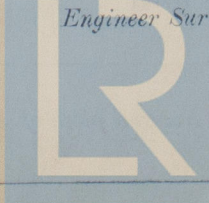
Committee's Minute

FRI 11 MAR 1938

Assigned

See other F.B. report

Charles W. Hunter, Rlee Am  
Engineer Surveyor to Lloyd's Register of Shipping.



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