

REPORT ON BOILERS.

No. 11976

Received at London Office

JUL 15 1937

Date of writing Report

19

When handed in at Local Office

19

Port of BelfastSee F.E. mch. report.No. in
Reg. Book

Survey held at

Belfast

Date, First Survey

Last Survey

6-7-37

19

on the

SINGLE SCREW"DELIUS"GIL ENGINES

(Number of Visits)

Gross 6065

Tons

Net 3749

Built at

Belfast

By whom built

Harland & Wolff LtdYard No. 980When built 1937

Engines made at

Belfast

By whom made

Harland & Wolff LtdEngine No. 980When made 1937

Boilers made at

Belfast

By whom made

Harland & Wolff LtdBoiler No. 980When made 1937

Owners

Lampert & Holt Ltd

Port belonging to

Liverpool

VERTICAL DONKEY BOILER.

Made at Belfast

By whom made

Harland & Wolff LtdBoiler No. 980When made 1937Where fixed E.R.

Manufacturers of Steel

Colvilles Ltd

Total Heating Surface of Boiler

750⁰

Is forced draught fitted

No

Cooler Oil fired and/or Gas

No. and Description of Boilers

One Clarkson Thimble TubeWorking pressure 120 lbs

Tested by hydraulic pressure to

230 lbs

Date of test

22-4-37No. of Certificate 1030

Area of Firegrate in each Boiler

No. and Description of safety valves to each boiler

One 2 1/2" double spring Marine ordinary lift

Area of each set of valves per boiler

per rule 6.94⁰
as fitted 9.82⁰

Pressure to which they are adjusted

120 lbs

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

or woodwork

Yes

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'-2 1/8"

Height

16'-3"

Shell plates: Material

S

Tensile strength

28/32 ton

Thickness

7/8"

Are the shell plates welded or flanged

Yes at butt joints

Description of riveting: circ. seams

end DR
inter. Yeslong. seams Double

Dia. of rivet holes in

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

Pitch of rivets

3.25"
4.29"

Percentage of strength of circ. seams

plate 67.3
rivets 51.4

of Longitudinal joint

plate 71.8
rivets 72.1
combined 79.9

Working pressure of shell by rules

150 lbs

Thickness of butt straps

outer 1 1/2"
inner 1 1/8"

Shell Crown: Whether

complete hemisphere, dished partial spherical, or flatYes

Material

S

Tensile strength

24/30

Thickness

1 1/8"

Radius

5'-6"Working pressure by rules 147.5

Description of Furnace: Plain, spherical, or dished crown

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

3/32

Diameter as per rule

D 6'-0 1/8"
d 3'-9 7/8"Working pressure by rule 123 lbs

Combustion Chamber: Material

S

Tensile strength

24/30 ton

Thickness of top plate

9/16"

Radius if dished

3'-0"Working pressure by rule 127.7

Thickness of back plate

3/32Diameter if circular 3'-7 15/16"

Length as per rule

6'-3"

Pitch of stays

Are stays fitted with nuts or riveted over

Diameter of stays over thread

Yes

Working pressure of back plate by rules

160 lbs

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

003233-003239-0101

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Lloyd's Register
Foundation

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 _____
Timber
Tubes: Material Steel External diameter { Shell 3 1/4" CC 3 1/4" Thickness { 9 B.W.G.
UP 9 1/2" UP 7"
 No. of threads per inch ✓ Pitch of tubes Shell No 6 3/4 CC No 6 4 28" 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" x 1 1/4" No. of rivets and diameter in crown _____
 of rivet holes 40 - 1 1/8" Outer row rivet pitch at ends 3.53 Depth of flange if manhole flanged 16 x 12 3 1/8"
Uptake: External diameter 1' - 10 3/16" 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 Manufacturer.
 Assistant Secretary.

Dates of Survey { During progress of work in shops - - } Is the approved plan of boiler forwarded herewith Yes
 while building { During erection on board vessel - - } (If not state date of approval.)
 Total No. of visits _____

Is this Boiler a duplicate of a previous case No 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 Permit & is an approved design. The materials & workmanship are good. It has been satisfactorily tested by hydraulic pressure, installed & fastened on a platform at the aft end of the engine room. The safety valves were adjusted under steam, the accumulation test was satisfactory. In our opinion this boiler is eligible for use on a classed vessel.

Survey Fee ... £ _____ : When applied for, _____ 19____
 Travelling Expenses (if any) £ _____ : When received, _____ 19____

Charles J. Hunter & *W. Lee Ames*
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute _____
 Assigned *Su. athen* F.E. rpt _____