

REPORT ON BOILERS.

No. 11976

JUL 15 1937

Received at London Office

Date of writing Report

192

When handed in at Local Office

14. 7. 37

Port of

Belfast

No. in Survey held at
Reg. Book.

Belfast

Date, First Survey

Last Survey

6-7-37

192

(Number of Visits)

Gross 6065

Tons

Net 3749

on the

SINGLE SCREW

DELIUS GIL ENGINES

Master

Built at

Belfast

By whom built

Harland & Wolffs

Yard No.

When built

Engines made at

Belfast

By whom made

Harland & Wolffs

Engine No.

When made

Boilers made at

Belfast

By whom made

Harland & Wolffs

Boiler No.

When made

Nominal Horse Power

898

Owners

Lampson & Holt L^d

Port belonging to

Liverpool.

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Colvilles L^d

(Letter for Record S ✓)

Total Heating Surface of Boilers

1525⁰

Is forced draught fitted

No ✓

Coal or Oil fired

Yes ✓

No. and Description of Boilers

One S.E. Cylindrical

Working Pressure 120 lbs

Tested by hydraulic pressure to

230 ✓

Date of test

11-3-37

No. of Certificate

1028

Can each boiler be worked separately

Yes ✓

Area of Firegrate in each Boiler

✓

No. and Description of safety valves to each boiler

1-2 1/2" double opening H.L. (app^d) ✓

Area of each set of valves per boiler

{ per Rule

7.06⁰

{ as fitted

7.9⁰

Pressure to which they are adjusted

120 ✓

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 bunkers or woodwork

16" ✓

Is oil fuel carried in the double bottom under boilers

Yes ✓

Smallest distance between shell of boiler and tank top plating

2'-3" ✓

Is the bottom of the boiler insulated

Yes ✓

Largest internal dia. of boilers

12'-6" ✓

Length

10'-6" ✓

Shell plates: Material

S ✓

Tensile strength

28/32 tons ✓

Thickness

23/32 ✓

Are the shell plates welded or flanged

No ✓

Description of riveting: circ. seams

end D.P. ✓

long. seams

T.P.D.B. ✓

Diameter of rivet holes in

{ circ. seams

15/16 ✓

{ long. seams

15/16 ✓

Pitch of rivets

2.95" ✓

Percentage of strength of circ. end seams

{ plate

68.37 ✓

{ rivets

51.67 ✓

Percentage of strength of circ. intermediate seam

{ plate

✓

Percentage of strength of longitudinal joint

{ plate

82.7 ✓

{ rivets

121.5 ✓

{ combined

92.5 ✓

Working pressure of shell by Rules

124 lbs ✓

Thickness of butt straps

{ outer 9/16" ✓

{ inner 1 1/16" ✓

No. and Description of Furnaces in each Boiler

Two Morrison ✓

Material

S ✓

Tensile strength

24/30 tons ✓

Smallest outside diameter

40 7/8" ✓

Length of plain part

{ top ✓

{ bottom ✓

Thickness of plates

{ crown 7/16" ✓

{ bottom 7/16" ✓

Description of longitudinal joint

Weld ✓

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

✓

Working pressure of furnace by Rules

152 lbs ✓

End plates in steam space: Material

S ✓

Tensile strength

24/30 tons ✓

Thickness

15/16" ✓

Pitch of stays

18 1/2" x 16" ✓

How are stays secured

Double nuts ✓

Working pressure by Rules

127.9 lbs ✓

Tube plates: Material

{ front S ✓

{ back S ✓

Tensile strength

24/30 tons ✓

Thickness

{ 13/16" ✓

{ 3/4" ✓

Mean pitch of stay tubes in nests

11 1/4" ✓

Pitch across wide water spaces

14 1/2" ✓

Working pressure

{ front 154 lbs ✓

{ back 158.5 lbs ✓

Girders to combustion chamber tops: Material

S ✓

Tensile strength

28/32 tons ✓

Depth and thickness of girder

at centre

7 3/8" x 1 1/2" ✓

Length as per Rule

29 15/16" ✓

Distance apart

11" ✓

No. and pitch of stays

in each

3 at 7" ✓

Working pressure by Rules

128 lbs ✓

Combustion chamber plates: Material

S ✓

Tensile strength

24/30 tons ✓

Thickness: Sides

9/16" ✓

Back

9/16" ✓

Top

9/16" ✓

Bottom

5/8" ✓

Pitch of stays to ditto: Sides

10 1/2" x 8" ✓

Back

9" x 9 3/4" ✓

Top

11" x 7" ✓

Are stays fitted with nuts or riveted over

Nuts ✓

Working pressure by Rules

123 lbs ✓

Front plate at bottom: Material

S ✓

Tensile strength

24/30 tons ✓

Thickness

13/16" ✓

Lower back plate: Material

S ✓

Tensile strength

24/30 ✓

Thickness

3/4" ✓

Pitch of stays at wide water space

13" ✓

Are stays fitted with nuts or riveted over

nuts ✓

Working Pressure

172 lbs ✓

Main stays: Material

S ✓

Tensile strength

28/32 tons ✓

Diameter

{ At body of stay, or

over threads

2 1/2" ✓

No. of threads per inch

6 ✓

Area supported by each stay

356⁰ ✓

Working pressure by Rules

124 lbs ✓

Screw stays: Material

S ✓

Tensile strength

24/30 tons ✓

Diameter

{ At turned off part, or

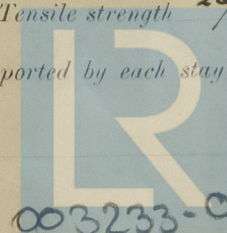
over threads

1 1/2" 1 5/8" 1 3/4" ✓

No. of threads per inch

9 ✓

Area supported by each stay

87.75⁰ ✓

Lloyd's Register

003233-003239-0102

Working pressure by Rules 143 lb 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 107.25 Working pressure by Rules 145 lb
Tubes: Material W.I. External diameter { Plain 3 1/4"
Stay 3 1/4" Thickness { 8 W.G.
1/4" 9/32" 5/16" No. of threads per inch 9

Pitch of tubes 4 1/2" x 4 1/2" Working pressure by Rules 171 Manhole compensation: Size of opening in
shell plate 16 1/2" x 12 1/2" Section of compensating ring 36" x 32" x 1/16" No. of rivets and diameter of rivet holes 28 - 1 1/8"

Outer row rivet pitch at ends 9" Depth of flange if manhole flanged ✓ 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

Number of elements Material of tubes Manufacturers of { Tubes
Steel castings
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 22 inclusive for boilers been complied with

The foregoing is a correct description,
For HARLAND AND WOLFE LIMITED
Manufacturer.

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

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) This boiler was built under Special Permit
This boiler has been efficiently installed & fastened on a seat on the tank top at the
Starboard end of the engine room, the safety valves were adjusted under steam
the accumulation test was satisfactory. In my opinion the boiler is eligible
for use in a vessel classed with the Society. The materials and workmanship
are good.

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

See minute

Charles V. Hunter.
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI 30 JUL 1937

Assigned See other F.E. npt