

REPORT ON BOILERS.

No. 32349

Received at London Office

APR 19 1938

Date of writing Report

193

When handed in at Local Office

16 APR 1938

Port of

SUNDERLAND.

No. in Survey held at

SUNDERLAND.

Date, First Survey

Last Survey

Apr 8 1938

No. in Survey held at

(Number of Visits)

Gross

4986

Tons

2947

on the

S.S. "AELYBRYN"

Master

Built at

Sunderland

By whom built

H. J. Lunn & Co. Ltd.

Yard No.

719

When built

1938

Engines made at

Sunderland

By whom made

H. J. Lunn & Co. Ltd.

Engine No.

2886

When made

1938

Boilers made at

Sunderland

By whom made

H. J. Lunn & Co. Ltd.

Boiler No.

2886

When made

1938

Nominal Horse Power

353

Owners

Minister S.S. Co. Ltd

Port belonging to

London

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

Manufacturers of Steel

The Steel Company of Scotland

(Letter for Record

S)

Total Heating Surface of Boilers

1235 sq ft

Is forced draught fitted

no

Coal or Oil fired

coal

No. and Description of Boilers

One cylindrical multitubular

Working Pressure

220 lbs

Tested by hydraulic pressure to

280 lbs

Date of test

21/4/38

No. of Certificate

4261

Can each boiler be worked separately

yes

Area of Firegrate in each Boiler

34.37 sq ft

No. and Description of safety valves to each boiler

2 Direct Spring

Area of each set of valves per boiler

as fitted

7.8 sq ft

Pressure to which they are adjusted

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

Is oil fuel carried in the double bottom under boilers

no

Smallest distance between shell of boiler and tank top plating

2'-4"

Is the bottom of the boiler insulated

Largest internal dia. of boilers

11'-9 23/32"

Length

10'-6"

Shell plates: Material

Steel

Tensile strength

24/33 tons/sq in

Thickness

1 9/16"

Are the shell plates welded or flanged

no

Description of riveting: circ. seams

end D.R.L.

Long. seams

T.R.D.B.S.

Diameter of rivet holes in

circ. seams

1 3/16"

Pitch of rivets

3 1/2"

8 3/8"

Percentage of strength of circ. end seams

plate

66

rivets

44

Percentage of strength of circ. intermediate seam

plate

—

Percentage of strength of longitudinal joint

plate

85.82

rivets

86.21

combined

88.76

Working pressure of shell by Rules

220.3 lbs.

Thickness of butt straps

outer 1/8"

inner 1"

No. and Description of Furnaces in each Boiler

2 Brighten. Stephen Garvey makes

Material

Steel

Tensile strength

26/30 tons/sq in

Smallest outside diameter

3'-5 1/2"

Length of plain part

top —

bottom —

Thickness of plates

crown 3 1/4"

bottom 3 1/4"

Description of longitudinal joint

weld

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

Working pressure of furnace by Rules

226 lbs.

End plates in steam space: Material

Steel

Tensile strength

26/30 tons/sq in

Thickness

1 1/6"

Pitch of stays

5 9/8" x 15"

How are stays secured

double nuts

Working pressure by Rules

223 lbs.

Tube plates: Material

front 3 Steel

back 3 Steel

Tensile strength

26/30 tons/sq in

Thickness

1 1/6"

13/16"

Mean pitch of stay tubes in nests

10'-12"

Pitch across wide water spaces

14 1/4" x 9"

Working pressure

front 240 lbs.

back 229 lbs.

Girders to combustion chamber tops: Material

Steel

Tensile strength

28/32 tons/sq in

Depth and thickness of girder

31.9"

At centre

9'8" x 2 1/6"

Length as per Rule

2'-7 9/32"

Distance apart

11 3/4"

No. and pitch of stays

In each

3 7 1/2"

Working pressure by Rules

224 lbs.

Combustion chamber plates: Material

Steel

Tensile strength

26/30 tons/sq in

Thickness: Sides

25/32"

Back

25/32"

Top

25/32"

Bottom

25/32"

Pitch of stays to ditto: Sides

10" x 9 9/8"

Back

9 1/4" x 9 9/8"

Top

7 1/2" x 11 1/4"

Are stays fitted with nuts or riveted over

nuts fitted

Working pressure by Rules

222 lbs.

Front plate at bottom: Material

Steel

Tensile strength

26/30 tons/sq in

Thickness

1 1/6"

Lower back plate: Material

Steel

Tensile strength

26/30 tons/sq in

Thickness

1 1/6"

Pitch of stays at wide water space

14 1/2" x 9 9/8"

Are stays fitted with nuts or riveted over

nuts fitted

Working Pressure

235 lbs.

Main stays: Material

Steel

Tensile strength

28/32 tons/sq in

Diameter

At body of stay, 2 3/8"

Over threads, 2 3/4"

No. of threads per inch

6

Area supported by each stay

44.55" x 15"

Working pressure by Rules

220 lbs.

Screw stays: Material

Steel

Tensile strength

26/30 tons/sq in

Diameter

At turned off part, 1 7/8"

Over threads, 1 7/8"

No. of threads per inch

9

Area supported by each stay

9 1/8" x 9 5/8"

Lloyds Register Foundation

W142-0124

Working pressure by Rules 223 lb Are the stays drilled at the outer ends no Margin stays: Diameter 2" At turned off part, or Over threads 2"
 No. of threads per inch 9 Area supported by each stay 9 5/8" x 1 1/2" Working pressure by Rules 223 lb
 Tubes: Material steel External diameter 3 3/4" Thickness 3/8", 5/16" x 1/4" No. of threads per inch 9
 Pitch of tubes 4 1/2" x 4 1/2" Working pressure by Rules 223 lb Manhole compensation: Size of opening 9
 shell plate — Section of compensating ring — No. of rivets and diameter of rivet holes —
 Outer row rivet pitch at ends — Depth of flange if manhole flanged 3 9/16" 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 —
 Internal diameter — Working pressure by Rules — Thickness of crown — Rivets —
 stays — Inner radius of crown — Working pressure by Rules — No. and diameter —
 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 —
 Number of elements — Material of tubes — Steel castings —
 Material of headers — Tensile strength — Thickness — Internal diameter and thickness of tubes —
 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 fitted —
 to free the superheater from water where necessary —

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

The foregoing is a correct description,
 FOR THE NORTH EASTERN MARINE ENGINEERING CO. (1933) LTD.
a. g. Bury Manufacturer

Dates of Survey while building — During progress of work in shops — Please see Mech Rpt — Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) —
 Total No. of visits —

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

This boiler has been constructed under Special Survey in accordance with the approved plans, Secretary's letters and the requirements of the Rules. Workmanship and materials are good. No recommendation please see Rpt. 4.

Survey Fee — When applied for, 102
 Travelling Expenses (if any) — When received, 102

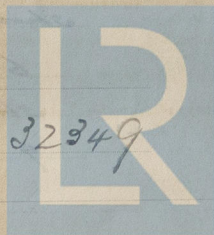
L. R. Home

Committee's Minute

FRI. 22 APR 1938

Assigned

See Mtd. J.E. 32349



© 2021
 Lloyd's Register
 Foundation