

REPORT ON BOILERS.

Sld. No. 29707

M. No. 13223.

1 MAR 1928

Received at London Office

Date of writing Report 29. 2. 1928 When handed in at Local Office 29. 2. 1928 Port of MIDDLESBROUGH.

No. in
Reg. Book.

Survey held at STOCKTON.

Date, First Survey 12-10-27.

Last Survey

21st April 1928
29. 2. 1928.

on the donkey boiler for S.S. "LLANDILO" (Hiley No. N° 5709).

(Number of Visits 14)

Gross 4966
Net 2985

Master

Built at Sunderland.

By whom built Barham & Sons.

Yard No. 262.

When built 1928.

Engines made at

STOCKTON

By whom made

Blair & Co.

Engine No. 1969

When made 1928

Boilers made at

do.

By whom made

do.

Boiler No. 1969

When made 1928.

Nominal Horse Power

Owners Geo Thomas Radcliffe & Co. Port belonging to

London

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

Manufacturers of Steel

David Colville & Sons Ltd.

(Letter for Record

S)

Total Heating Surface of Boilers

1520 sq. ft.

Is forced draught fitted

no

Coal or Oil fired

Coal, x 12.

No. and Description of Boilers

One S.E. Marine

Working Pressure

120 lbs.

Tested by hydraulic pressure to

230 lbs.

Date of test

29. 2. 28

No. of Certificate

6620.

Can each boiler be worked separately

Area of Firegrate in each Boiler

50 sq. ft.

No. and Description of safety valves to each boiler

Two. Direct Spring loaded.

Area of each set of valves per boiler

per Rule

14.340

as fitted

14.140

Pressure to which they are adjusted

125 lbs.

Are they fitted with easing gear

Yes

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler

No. Non-return Valve fitted.

Smallest distance between boilers or uptakes and bunkers or woodwork

1' 9"

Is oil fuel carried in the double bottom under boilers

Smallest distance between shell of boiler and tank top plating

2' 0"

Is the bottom of the boiler insulated

Largest internal dia. of boilers

12' 6"

Length

11' 0"

Shell plates: Material

Steel

Tensile strength

28/32.

Thickness

23/32

Are the shell plates welded or flanged

no

Description of riveting: circ. seams

end D.R.

long. seams

T.R.D.B.S.

Diameter of rivet holes in

circ. seams

15/16

Pitch of rivets

2 3/4 x 5 1/2

Percentage of strength of circ. end seams

plate 68.7

rivets 42.4

Percentage of strength of circ. intermediate seam

plate

rivets

Percentage of strength of longitudinal joint

plate 86.3

rivets 93.6

combined 87.3

Working pressure of shell by Rules

123 lbs

Thickness of butt straps

outer 9/16

inner 11/16

No. and Description of Furnaces in each Boiler

3. Corrugated

Material

Steel

Tensile strength

26/30.

Smallest outside diameter

2' 11 3/4"

Length of plain part

top

bottom

Thickness of plates

crown 3/8

bottom 3/8

Description of longitudinal joint

weld.

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

Working pressure of furnace by Rules

144 lbs.

150 lbs.

End plates in steam space: Material

Steel

Tensile strength

26/30

Thickness

3/4"

Pitch of stays

16 1/4 x 15"

How are stays secured

D.N & W.

Working pressure by Rules

121 lbs.

Tube plates: Material

front Steel

back Steel

Tensile strength

26/30.

Thickness

1/8"

Mean pitch of stay tubes in nests

10"

Pitch across wide water spaces

13 7/8"

Working pressure

front 123 lbs.

back 137 lbs.

Girders to combustion chamber tops: Material

Steel

Tensile strength

25/32

Depth and thickness of girder

at centre

8 x 7/8 (double)

Length as per Rule

2'-8"

Distance apart

10"

No. and pitch of stays

in each

2. 10 1/2 x 10"

Working pressure by Rules

146 lbs.

Combustion chamber plates: Material

Steel

Tensile strength

26/30.

Thickness: Sides

7/8"

Back

7/32"

Top

7/8"

Bottom

7/8"

Pitch of stays to ditto: Sides

10 x 10 1/2"

Back

8 1/2 x 9 1/4"

Top

10 x 10 1/2"

Are stays fitted with nuts or riveted over

nuts

Working pressure by Rules

121 lbs.

Front plate at bottom: Material

Steel

Tensile strength

26/30

Thickness

11/16"

Lower back plate: Material

Steel

Tensile strength

26/30

Thickness

2 1/2"

Pitch of stays at wide water space

13 7/8"

Are stays fitted with nuts or riveted over

nuts

Working Pressure

120 lbs.

Main stays: Material

Steel

Tensile strength

28/32

Diameter

At body of stay,

2 1/8"

No. of threads per inch

6.

Area supported by each stay

251

Working pressure by Rules

120 lbs.

Screw stays: Material

Steel

Tensile strength

26/30

Diameter

At turned off part,

1 1/2"

No. of threads per inch

9

Area supported by each stay

105

Working pressure by Rules 120 lbs. Are the stays drilled at the outer ends no. Margin stays: Diameter { At turned off part. 1 1/2"
or
Over threads 1 1/2"
No. of threads per inch 9. Area supported by each stay 104 sq Working pressure by Rules 120 lbs.
Tubes: Material iron External diameter { Plain 3 1/4 5 3/4 1 1/2 Thickness { 10 w.g. No. of threads per inch 9.
Stay 3 1/2 3 1/4 Working pressure by Rules p = 130 s = 257 lbs. Manhole compensation: Size of opening in
Pitch of tubes 4 3/8 x 4 1/4 Section of compensating ring 7 x 1 1/2 No. of rivets and diameter of rivet holes 44 - 7/16
shell plate 16 x 20 Outer row rivet pitch at ends 6 Depth of flange if manhole flanged 3" 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 Manufacturers of { Tubes
Steel castings
Number of elements Material of tubes 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 23 inclusive for boilers been complied with

Yes OR

RILEY BROS. (BOILERMAKERS) LIMITED.

The foregoing is a correct description,

J. H. Shields

SECRETARY Manufacturer.

Dates of Survey { During progress of work in shops - - } 1921 Oct. 12-18 Nov. 2-5-16-18-24-30 Dec. 15- Are the approved plans of boiler and superheater forwarded herewith Yes.
(If not state date of approval.)
while building { During erection on board vessel - - } 23- 1922 Jan. 4-1 Feb. 11-29 Total No. of visits 14.

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

The materials and workmanship are good. This boiler has been built under special survey in accordance with the Rules and approved plan.

Donkey Boiler satisfactorily fitted in the vessel, and the Safety Valves adjusted under steam.

Survey Fee £ 10-6-0 When applied for, MONTHLY 1/6.
Travelling Expenses (if any) £ : : When received, 192

P. J. Mac... & A. L. Griffiths.
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUES. 8 MAY 1928

Assigned

See Std Bk up No 29707



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Foundation