

REPORT ON BOILERS.

No. 97977.

10 DEC 1930

Received at London Office

LIVERPOOL

Date of writing Report

19

When handed in at Local Office

-8 DEC. 1930

Port of

No. in
Reg. Book.

Survey held at

Birkenhead

Date, First Survey

Oct 16th

Last Survey

Decr 1st 1930

24153 on the

S. S. Shellie - New boilers -

(Number of Visits 12)

Tons

Gross 339

Net 180

Master

Built at

Dublin

By whom built

Dunlin Drydock Co

Yard No.

When built 1905

Engines made at

Glasgow

By whom made

Ross & Duncan

Engine No.

When made 05

Boilers made at

Birkenhead

By whom made

Messrs. Cammell Laird & Co Ltd

Boiler No.

When made 1930

Nominal Horse Power

Owners

W.R. Davies S.S. Co

Port belonging to

Helfwood

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

David Colville & Sons Ltd & Edgely & Dudley Rm

Letter for Record

S

Total Heating Surface of Boilers

1474 sq ft

Is forced draught fitted

No

Coal or Oil fired

Coal

No. and Description of Boilers

One Cylindrical multitubular

Working Pressure

125 lb/sq in

Tested by hydraulic pressure to

237 1/2 lb/sq in

Date of test

8.11.30

No. of Certificate

2375

Can each boiler be worked separately

Yes

Area of Firegrate in each Boiler

40 sq ft

No. and Description of safety valves to each boiler

Two spring loaded

Area of each set of valves per boiler

per Rule 6.6 sq ft

as fitted

7.95 sq ft

Pressure to which they are adjusted

130 lb/sq in

Are they fitted with easing gear

Yes

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

Yes

Smallest distance between boilers or uptakes and bunkers or woodwork

No change

Is oil fuel carried in the double bottom under boilers

No

Smallest distance between shell of boiler and tank top plating

No change

Is the bottom of the boiler insulated

No

Largest internal dia. of boilers

12.9"

Length

10.0"

Shell plates: Material

Steel

Tensile strength

28-32 tons/sq in

Thickness

25/32"

Are the shell plates welded or flanged

No

Description of riveting: circ. seams

end

DR lap

long. seam

Jute R. double butts

Diameter of rivet holes in

circ. seams

15/16"

long. seams

15/16"

Pitch of rivets

2.745"

6.3"

Percentage of strength of circ. end seams

plate 66

rivets 53

Percentage of strength of circ. intermediate seam

plate

rivets

Percentage of strength of longitudinal joint

plate 85.1

rivets 107

combined 91.7

Working pressure of shell by Rules

130 lb/sq in

Thickness of butt straps

outer 5/8"

inner 3/4"

No. and Description of Furnaces in each Boiler

2 plain

Material

Steel

Tensile strength

26-30 tons/sq in

Smallest outside diameter

3.10 1/4"

Length of plain part

top 72 1/2"

bottom 72 1/2"

Thickness of plates

crown 2 1/32"

bottom 2 1/32"

Description of longitudinal joint

weld

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

none

Working pressure of furnace by Rules

130 lb/sq in

End plates in steam space: Material

Steel

Tensile strength

26-30 tons/sq in

Thickness

1 1/16"

Pitch of stays

22x17 3/4"

How are stays secured

Double nuts & small washers

Working pressure by Rules

130 lb/sq in

Tube plates: Material

front Steel

back Steel

Tensile strength

26-30 tons/sq in

Thickness

7/8"

13/16"

Mean pitch of stay tubes in nests

13 7/16"

Pitch across wide water spaces

14 1/4"

Working pressure

front 135 lb/sq in

back 134 lb/sq in

Girders to combustion chamber tops: Material

Steel

Tensile strength

28-32 tons/sq in

Depth and thickness of girder

at centre

6 1/4 x 8 3/4"

Length as per Rule

29 1/4"

Distance apart

8 1/2"

No. and pitch of stays

in each

209"

Working pressure by Rules

130 lb/sq in

Combustion chamber plates: Material

Steel

Tensile strength

26-30 tons/sq in

Thickness: Sides

9/16"

Back

9/16"

Top

9/16"

Bottom

7/8"

Pitch of stays to ditto: Sides

9 x 8 3/4"

Back

9 x 8 3/4"

Top

9 x 8 1/2"

Are stays fitted with nuts or riveted over

nutted

Working pressure by Rules

137 1/4 lb/sq in

Front plate at bottom: Material

Steel

Tensile strength

26-30 tons/sq in

Thickness

7/8"

Lower back plate: Material

Steel

Tensile strength

26-30 tons/sq in

Thickness

3/4"

Pitch of stays at wide water space

14 1/4 x 9 3/4"

Are stays fitted with nuts or riveted over

nutted

Working Pressure

152 lb/sq in

Main stays: Material

Steel

Tensile strength

28-32 tons/sq in

Diameter

At body of stay

2 5/8"

No. of threads per inch

6

Area supported by each stay

390 sq in

Working pressure by Rules

130 lb/sq in

Screw stays: Material

Steel

Tensile strength

26-30 tons/sq in

Diameter

At turned off part

1 3/8"

No. of threads per inch

9

Area supported by each stay

790 sq in

W282-0011

Working pressure by Rules 130 lbs Are the stays drilled at the outer ends No Margin stays: Diameter 1 7/8"
No. of threads per inch 9 Area supported by each stay 113 sq" Working pressure by Rules 134 lbs
Tubes: Material Iron External diameter 3 1/4" Thickness 1/16" No. of threads per inch 9
Pitch of tubes 4 1/2" x 4 3/8" Working pressure by Rules 198 lbs Manhole compensation: Size of opening in
shell plate 21 1/4" x 17 1/4" Section of compensating ring 7 7/8" x 7 7/8" thick No. of rivets and diameter of rivet holes 52 @ 1 5/16"
Outer row rivet pitch at ends 6.3" Depth of flange if manhole flanged 3 1/4" Steam Dome: Material none
Tensile strength ✓ Thickness of shell ✓ Description of longitudinal joint ✓
Diameter of rivet holes ✓ Pitch of rivets ✓ Percentage of strength of joint ✓
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 ✓
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 22 inclusive for boilers been complied with Yes

The foregoing is a correct description,
GAMMELL LAIRD AND COMPANY LIMITED Manufacturer.

Dates of Survey During progress of work in shops - - -
while building During erection on board vessel - - -
Oct 16, 22, 24, 29, 30, 31.
Nov 3, 6, 7, 9, 25, Dec 1.

Are the approved plans of boiler and superheater forwarded SECRETARY
(If not state date of approval.)
Total No. of visits 12

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 survey and is in accordance with the Rules and the approved plan. It has been satisfactorily fitted on board and examined under steam and is eligible in my opinion for record of T.N.B. 12.30 in Register book

Survey Fee £ 9. 16. 0 When applied for, 9 DEC. 1930
Travelling Expenses (if any) £ When received, 31. 12. 1930

W. J. Milton

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute LIVERPOOL - 9 DEC. 1930

Assigned T.N.B. 12.30



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