

REPORT ON BOILERS.

No. 118227

Received at London Office 20 AUG 1942

Date of writing Report

19

When handed in at Local Office

3 AUG 1942

Port of

LIVE

No. in Survey held at

LYTHAM

Date First Survey

3/5/41

Last Survey

27/7/42

1942

Book.

on the

STEEL SCREW "FRESHENER"

(Number of Visits

59

Gross

278

Net

98.69

uilt at

LYTHAM

By whom built

The Lytham S.B. & C. Co. Ltd.

Yard No.

869

When built

1942

Engines made at

Lytham

By whom made

- do -

Engine No.

548

When made

1942

Boilers made at

Lytham

By whom made

- do -

Boiler No.

547

When made

1942

Nominal Horse Power

90

Owners

The Admiralty

Port belonging to

London

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

SHELL: STEEL COMPANY OF SCOTLAND, ENDS: COLVILLES LTD, INTERNALS: CONSETT

IRON CO.

(Letter for Record

SB

S

Total Heating Surface of Boilers

1600 SQ. FT.

Is forced draught fitted

YES

Coal or Oil fired

COAL

No. and Description of Boilers

ONE SINGLE ENDED MULTITUBULAR CYLINDRICAL (SCOTCH) TYPE

Working Pressure

180 LBS/SQ. IN.

Tested by hydraulic pressure to

320 LBS/SQ. IN.

Date of test

10-4-42

No. of Certificate

2556

Can each boiler be worked separately

✓

Area of Firegrate in each Boiler

46.5 SQ. FT.

No. and Description of safety valves to each boiler

TWO 2 1/4" DIA. SPRING LOADED

Area of each set of valves per boiler

per Rule 10.25 sq. in.

Pressure to which they are adjusted

180 LBS/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

✓

Smallest distance between boiler

on uptake and bunkers

on woodwork

8 1/4"

Is oil fuel carried in the double bottom under boilers

NO

Smallest distance between shell of boiler and tank top plating

✓

Is the bottom of the boiler insulated

NO

Largest internal dia. of boilers

12-9 1/16"

Length

10-6"

Shell plates: Material

STEEL

Tensile strength

29-35 TONS/SQ. IN.

Thickness

1/32

Are the shell plates welded or flanged

NO

Description of riveting: circ. seams

end

DR

long. seams

TR. DBS.

Diameter of rivet holes in

circ. seams 1 1/32

long. seams 1 1/32

Pitch of rivets

5 1/8"

7 3/4"

Percentage of strength of circ. end seams

plate 67%

rivets 42.8%

Percentage of strength of circ. intermediate seam

plate

✓

Percentage of strength of longitudinal joint

plate 85.8%

rivets 87.5%

combined 89.4%

Thickness of butt straps

outer 25/32

inner 20/32

No. and Description of Furnaces in each Boiler

3 DEWINTON TYPE WITH STEPHEN-GOURLY BACK ENDS

Material

STEEL

Tensile strength

26-30 TONS/SQ. IN.

Smallest outside diameter

33 7/8"

Length of plain part

top

✓

Thickness of plates

crown 7/16

bottom 7/16

Description of longitudinal joint

WELDED

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

✓

End plates in steam space: Material

STEEL

Tensile strength

26-30 TONS/SQ. IN.

Thickness

1/32

Pitch of stays

14 1/4" x 17 3/4"

How are stays secured

DOUBLE NUTS

Tube plates: Material

front

STEEL

back

STEEL

Tensile strength

26-30 TONS/SQ. IN.

Thickness

7/8"

25/32"

Mean pitch of stay tubes in nests

9 x 11 3/32"

Pitch across wide water spaces

14 1/2"

Girders to combustion chamber tops: Material

STEEL

Tensile strength

28-32 TONS/SQ. IN.

Depth and thickness of girder

at centre

8 1/2" x 1 1/2" DOUBLE PLATES

Length as per Rule

31 1/2"

Distance apart

11"

No. and pitch of stays

in each

TWO AT 9 7/8"

Combustion chamber plates: Material

STEEL

Tensile strength

26-30 TONS/SQ. IN.

Thickness: Sides

3/4"

Back

3/4"

Top

3/4"

Bottom

3/4"

Pitch of stays to ditto: Sides

10 3/4" x 9 7/8"

Back

10 x 9 7/8"

Top

11 x 9 7/8"

Are stays fitted with nuts or riveted over

NUTS

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

7/8"

Pitch of stays at wide water space

14 3/4" x 10"

Are stays fitted with nuts or riveted over

NUTS

Main stays: Material

STEEL

Tensile strength

28-32 TONS/SQ. IN.

Diameter

At body of stay, 2 5/8"

or

3"

No. of threads per inch

SIX

Screw stays: Material

STEEL

Tensile strength

26-30 TONS/SQ. IN.

Diameter

At turned off part, 1 7/8"

or

1 7/8"

No. of threads per inch

NINE

008812 - 008822 - 0107

Lloyd's Register Foundation

Are the stays drilled at the outer ends No. Margin stays: Diameter { At turned off part, 1.86" or Over threads 2"

No. of threads per inch 9"

Tubes: Material SEAMLESS STEEL External diameter { Plain 3 1/4" Stay 3 1/4" Thickness { 8 WG. 1/4" 5/16" 3/16" No. of threads per inch 9"

Pitch of tubes 4 1/2" x 4 9/16" Manhole compensation: Size of opening shell plate 20" x 16" Section of compensating ring 2-11 1/2" x 2-7 1/2" x 1 1/16" No. of rivets and diameter of rivet holes 32 @ 1 3/16"

Outer row rivet pitch at ends 9" Depth of flange if manhole flanged 3 1/2" 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 ✓ Thickness of crown ✓ No. and diameter stays ✓ Inner radius of crown ✓

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 forgings ✓ 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 ✓

Pressure to which the safety valves are adjusted ✓ Hydraulic test pressure tubes ✓ forgings and castings ✓ and after assembly in place ✓ Are drain cocks on 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,
THE LYTHAM SHIPBUILDING and ENGINEERING COMPANY, LIMITED Manufacturer
A. Friedman

Dates of Survey { During progress of work in shops - - See Mch report. Are the approved plans of boiler and superheater forwarded herewith Nº 18-4-41 (If not state date of approval.) while building { During erection on board vessel - - - ✓ Total No. of visits ✓

Is this Boiler a duplicate of a previous case yes If so, state Vessel's name and Report No. FRESHBROOK (LIV RPT No-11746)

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

This boiler has been constructed under special survey in accordance with the approved plan & the Society's Rules. The material & workmanship are sound & good. The boiler has been satisfactorily fitted on board, examined under steam and the safety valves adjusted under steam to the approved working pressure. It is eligible in my opinion to be classed in the Register Book with notation 1 SB. F.D. - 3 C.F. - 180 lbs./sq. in.

Survey Fee Included on the Machinery Report When applied for, 19
 Travelling Expenses (if any) ✓ When received, 19

H. A. Lindsay
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute ✓ 18 AUG 1942
 Assigned Lausmit to London. See Liv. 38
118227