

REPORT ON BOILERS.

No. 51444.

Received at London Office

3 DEC 1941

Date of writing Report

19

When required at Local Office

Port of HULL.

No. in Survey held at

HULL.

Reg. Book

Date First Survey

10.2.41

Last Survey

26.11.41

19

41

(Number of Visits)

42

Gross

452

Tons

Net

142.

Built at Goole

By whom built

H.M.T. SHIANT. Goole Shipbuilding & Repairing Co. Ward No. 363. When built

Engines made at HULL

By whom made

H.M.T. SHIANT. When made

Engine No. 694

When made

Boilers made at

By whom made

H.M.T. SHIANT. When made

Boiler No. 694

When made

Nominal Horse Power 156.

Owners

The ADMIRALTY.

Port belonging to

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

H.M.T. SHIANT. Appleby, Frodingham Steel Co. & Co. Ld.

(Letter for Record)

S.

Total Heating Surface of Boilers

2650 sq. ft.

Is forced draught fitted

Yes.

Coal or Oil fired

Coal

No. and Description of Boilers

One - S.B.

Working Pressure

200 lb./sq. in.

Tested by hydraulic pressure to

350 lb./sq. in.

Date of test

29-8-41

No. of Certificate

4113.

Can each boiler be worked separately

Yes

Area of Firegrate in each Boiler

63 sq. ft.

No. and Description of safety valves to each boiler

2 Spring loaded

Area of each set of valves per boiler

per Rule

15.4 sq. in.

as fitted

16.6 sq. in.

Pressure to which they are adjusted

200 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

2'-0"

Is oil fuel carried in the double bottom under boilers

No

Smallest distance between shell of boiler and tank top plating

None

Is the bottom of the boiler insulated

No.

Largest internal dia. of boilers

14'-9 3/8"

Length

11'-6"

Shell plates: Material

Steel

Tensile strength

29/33 lb./sq. in.

Thickness

1 5/16"

Are the shell plates welded or flanged

No.

Description of riveting: circ. seams

end

D.R. lap.

inter.

None

long. seams

T.R. - D.B.S.

Diameter of rivet holes in

circ. seams

1 3/8"

long. seams

1 3/8"

Pitch of rivets

4"

9 1/2"

Percentage of strength of circ. end seams

plate

65.6%

rivets

44.7%

Percentage of strength of circ. intermediate seam

plate

85.5%

rivets

88.5%

Percentage of strength of longitudinal joint

plate

85.5%

rivets

88.5%

combined

88.8%

Thickness of butt straps

outer

1 1/8"

No. and Description of Furnaces in each Boiler

3 - Cf. Deighva section.

Material

Steel

Tensile strength

26/30 lb./sq. in.

Smallest outside diameter

3'-6 7/16"

Length of plain part

top

bottom

Thickness of plates

crown

19/32"

Description of longitudinal joint

Weld

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

End plates in steam space: Material

Steel

Tensile strength

26/30 lb./sq. in.

Thickness

1 1/32"

Pitch of stays

21" x 20" man

How are stays secured

Nuts inside and.

Tube plates: Material

front

Steel

Tensile strength

26/30 lb./sq. in.

Thickness

7/8"

2 1/2"

Mean pitch of stay tubes in nests

9 1/16"

Pitch across wide water spaces

13 7/8"

Girders to combustion chamber tops: Material

Steel

Tensile strength

28/32 lb./sq. in.

Depth and thickness of girder

at centre

8 1/4" x 1 7/8"

Length as per Rule

2'-7 1/2"

Distance apart

10 3/4"

No. and pitch of stays

in each

2 @ 9 3/8"

Combustion chamber plates: Material

Steel

Tensile strength

26/30 lb./sq. in.

Thickness: Sides

2 7/32"

Back

3/4"

Top

2 5/32"

Bottom

2 5/32"

Pitch of stays to ditto: Sides

10 3/8" x 9 3/8"

Back

9 1/2" x 9 3/8"

Top

10 3/8" x 9 3/8"

Are stays fitted with nuts or riveted over

Nuts.

Front plate at bottom: Material

Steel

Tensile strength

26/30 lb./sq. in.

Thickness

7/8"

Lower back plate: Material

Steel

Tensile strength

26/30 lb./sq. in.

Thickness

7/8"

Pitch of stays at wide water space

14 1/2" x 9 3/8"

Are stays fitted with nuts or riveted over

Nuts

Main stays: Material

Steel

Tensile strength

28/32 lb./sq. in.

Diameter

At body of stay,

3 1/8"

No. of threads per inch

6

Screw stays: Material

Steel

Tensile strength

26-20.

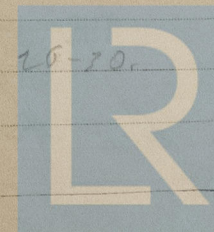
Diameter

At turned off part,

1 7/8"

No. of threads per inch

9



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

No. of threads per inch 9.

Tubes: Material Steel External diameter { Plain 2 3/4" Stay 2 3/4" Thickness { 8 W.G. 1/4", 5/16", 3/8", 7/16" No. of threads per inch 9.

Pitch of tubes 3 7/8" x 3 7/8" Manhole compensation: Size of opening in shell plate 16" (x 20"). Section of compensating ring 1 5/16" x 20" No. of rivets and diameter of rivet holes 15 @ 1 5/32"

Outer row rivet pitch at ends 10 1/8" Depth of flange if ^{Bottom} manhole flanged 3 1/4" Steam Dome: Material NONE

Tensile strength _____ Thickness of shell _____ Description of longitudinal joint _____

Diameter of rivet holes 5/16" Pitch of rivets _____ Percentage of strength of joint { Plate 200% Rivets _____

Internal diameter _____ Thickness of crown _____ No. and diameter of 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 2 1/2"

Type of Superheater NONE 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 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, A. E. Kewley Manufacturer.

Dates of Survey { During progress of work in shops - - 1941 Feb 10, May 6, June 11, 12, 23, 24, 25, 30, 31 Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) Aug 2, 6, 8, 12, 15, 16, 19, 20, 22, 24, 29, Sep 10, 15, 17, 18, 22 Oct 1, 2, 8, 15, 16, 20, 27

while building { During erection on board vessel - - 28 Nov 5, 11, 13, 19, 20, 21, 28, Dec Total No. of visits 42

Is this Boiler a duplicate of a previous case Yes. If so, state Vessel's name and Report No. H.M.T. BIRCH. H.L.P.M. No 50672.

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

This Boiler has been constructed under Special Survey in accordance with the approved Admiralty plan and the Rules.

The Workmanship & Materials are good and, when subjected to a hydraulic test of 350 lb / sq in it was found satisfactory in every respect.

Survey Fee ... £ : : When applied for, 19

Travelling Expenses (if any) £ : : When received, 19

Committee's Minute

Assigned

TUE 9 DEC 1941

See H.L.P.M. No 51414

Engineer Surveyor to Lloyd's Register of Shipping.



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