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## REPORT ON BOILERS.

No. 51173.

Received at London Office APR 24 1941

Writing Report

19

When handed in at Local Office

19

Port of

HULL

Survey held at

Hull

Date, First Survey

5. 6. 40.

Last Survey

2. 4. 1941.

(Number of Visits

54.)

Gross

452

Tons

Net

142.

on the H.M.S.

JULIET

Beverly

By whom built

Messrs. Book, Walton &amp; Gemmell, Ltd.

Yard No. 669

When built 1941-3.

es made at

Hull

By whom made

Messrs. C. D. Holmes, Ltd.

Engine No. 1569

When made 1941-3.

es made at

Hull

By whom made

Messrs. C. D. Holmes, Ltd.

Boiler No. 1569

When made 1941-3.

Horse Power

156

Owners

The Admiralty

Port belonging to

## TUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Appley Frodingham Steel Co. Ltd.

(Letter for Record

S

Heating Surface of Boilers

2650

Is forced draught fitted

Yes

Coal or Oil fired

Coal

and Description of Boilers

One — S.B.

Working Pressure 200 lbs/sq. in.

ed by hydraulic pressure to

350 lbs/sq. in.

Date of test 18.12.40.

No. of Certificate 4083.

Can each boiler be worked separately

Yes

a of Firegrate in each Boiler

63

No. and Description of safety valves to each boiler

2 — spring loaded.

a of each set of valves per boiler

per Rule

15.4

as fitted

16.6

Pressure to which they are adjusted 200 lbs/sq. in.

Are they fitted with easing gear

Yes

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

Yes

allest distance between boilers or uptakes and bunkers or woodwork

2' — 0"

Is oil fuel carried in the double bottom under boilers

No

allest distance between shell of boiler and tank top plating

None

Is the bottom of the boiler insulated

No

ggest internal dia. of boilers

14' — 9 3/8"

Length

11' — 6"

Shell plates: Material

Steel

Tensile strength 29/32 tons/sq. in.

ckness

1 5/16"

Are the shell plates welded or flanged

No

Description of riveting: circ. seams

D.R. Lap

s. 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"

centage 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"

inner

1 1/8"

No. and Description of Furnaces in each Boiler

3 — cf. Deighton section

Material

Steel

Tensile strength

26/30 tons/sq. in.

Smallest outside diameter

3' — 6 7/16"

Length of plain part

top

bottom

Thickness of plates

crown

1 9/32"

bottom

1 3/32"

Description of longitudinal joint

Weld.

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

Yes

nd plates in steam space: Material

Steel

Tensile strength 26/30 tons/sq. in.

Thickness

1 1/32"

Pitch of stays 21" x 20 max

How are stays secured

Nuts inside — out.

Side 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 1/16"

Pitch across wide water spaces

13 5/8"

Girders to combustion chamber tops: Material

Steel

Tensile strength 28/32 tons/sq. in.

Depth and thickness of girder

centre

8 1/4" x 1 7/8"

Length as per Rule

2' — 7 5/32"

Distance apart

10 3/4"

No. and pitch of stays

each

2 — 9 7/8"

Combustion chamber plates: Material

Steel.

Tensile strength

26/30 tons/sq. in.

Thickness: Sides

25/32"

Back

3/4"

Top

25/32"

Bottom

25/32"

Pitch of stays to ditto:

Sides 10 3/4" x 9 7/8"

Back 9 1/4" x 9 7/8"

Top 10 3/4" 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 1/2" x 9 7/8"

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,

3 1/8"

Over threads

No. of threads per inch

6

Screw stays: Material

Steel

Tensile strength

26/30 tons/sq. in.

Diameter

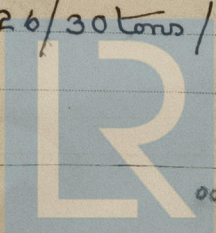
At turned off part,

1 7/8"

Over threads

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

shell plate 16" (x 20")

Section of compensating ring 1 5/16" x 20"

No. of rivets and diameter of rivet holes 15 - 1 5/8"

Outer row rivet pitch at ends

10 1/8"

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

Plate

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

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

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 CHARLES D. JONES & CO., LTD.

Manufacturer

Dates of Survey { During progress of   
 work in shops - -   
 while { During erection on   
 building { board vessel - - -

See Machinery report

Are the approved plans of boiler and superheater forwarded herewith   
 (If not state date of approval.)

Total No. of visits

Is this Boiler a duplicate of a previous case

Yes

If so, state Vessel's name and Report No.

H.M.T. BIRCH

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 plans & the Rules. The workmanship & materials are good & when subjected to an hydraulic test of 350 lbs/sq" it was found satisfactory in every respect.

Survey Fee ... .. £

When applied for, 19

Travelling Expenses (if any) £

When received, 19

Signature of Engineer Surveyor

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

TUE. 29 APR 1941

Assigned

See Hnl J.C. 51172



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