

## REPORT ON BOILERS.

No. 51638.

Received at London Office 17 JUN 1942

of writing Report

When handed in at Local Office

10

Port of HULL.

in Survey held at HULL.

Date, First Survey 22. 9. 41.

Last Survey 13. 5. 42.

(Number of Visits 41.)

Gross 38 T.

Tons

Net 127.

on the H.M.T. WHITING.

By whom built

Cochrane &amp; Sons Ltd

By whom made

Chas D. Holmes Ltd

By whom made

Chas D. Holmes Ltd

Horse Power

125.

Owners

THE ADMIRALTY.

Port belonging to

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Appledon Frodingham Steel Co. Ltd &amp; Colville Ltd

(Letter for Record

Total Heating Surface of Boilers

1873 sq. ft.

Is forced draught fitted

Yes.

Coal or Oil fired

Coal

No. and Description of Boilers

One S.B.

Working Pressure

210 lb/sq. in.

Tested by hydraulic pressure to

365 lb/sq. in.

Date of test

26/3/42. No. of Certificate 4138.

Can each boiler be worked separately

Area of Firegrate in each Boiler

50 sq. ft.

No. and Description of safety valves to each boiler

2. Spring loaded

Area of each set of valves per boiler

per boiler 12.57 sq. in.

Pressure to which they are adjusted

210 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

None

Smallest distance between boilers or uptakes and bunkers or woodwork

9".

Is oil fuel carried in the double bottom under boilers

None

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'-3 1/2"

Length

10'-6"

Shell plates: Material

Steel

Tensile strength

31/35 ton/sq. in.

Thickness

1 1/4".

Are the shell plates welded or flanged

No.

Description of riveting: circ. seams

and

D.R. Lap.

Long. seams

T.R., D.B.S.

Diameter of rivet holes in

circ. seams

15/16"

long. seams

1 1/32"

Pitch of rivets

3 3/4"

9"

Percentage of strength of circ. end seams

plate 64.9%.

rivets 42.8%.

Percentage of strength of circ. intermediate seam

Percentage of strength of longitudinal joint

plate 85.1%.

rivets 85.8%.

combined 87.6%.

Thickness of butt straps

outer 3/32"

inner 1 3/32"

No. and Description of Furnaces in each Boiler

3 cf. Deighan Patent.

Material

Steel.

Tensile strength

26-30 ton/sq. in.

Smallest outside diameter

2'-6 3/4"

Length of plain part

top

bottom

Thickness of plates

crown

5/8"

Description of longitudinal joint

Weld.

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

None.

End plates in steam space: Material

Steel

Tensile strength

26-30 ton/sq. in.

Thickness

1 3/32"

Pitch of stays

17" x 17 1/2".

How are stays secured

Nuts and washers inside end.

Tube plates: Material

front Steel

back Steel.

Tensile strength

26-30 ton/sq. in.

Thickness

1 5/16"

7/8".

Mean pitch of stay tubes in nests

9 1/2" x 9".

Pitch across wide water spaces

14" x 9". 9 1/2" with 3/4" double.

Girders to combustion chamber tops: Material

Steel

Tensile strength

29-33 ton/sq. in.

Depth and thickness of girder

at centre

9" x 7/8". Double

Length as per Rule

2'-10 23/32".

Distance apart

8".

No. and pitch of stays

in each

3 @ 8 1/2".

Combustion chamber plates: Material

Steel

Tensile strength

26-30 ton/sq. in.

Thickness: Sides

2 3/32"

Back

2 3/32"

Top

2 1/32"

Bottom

2 3/32"

Pitch of stays to ditto: Sides

9 3/4" x 8 1/2"

Back

9 1/4" x 9"

Top

8 1/2" x 8"

Are stays fitted with nuts or riveted over

Nuts.

Front plate at bottom: Material

Steel

Tensile strength

26-30 ton/sq. in.

Thickness

1 5/16".

Lower back plate: Material

Steel

Tensile strength

26-30 ton/sq. in.

Thickness

7/8".

Pitch of stays at wide water space

14" x 9".

Are stays fitted with nuts or riveted over

Nuts.

Main stays: Material

Steel

Tensile strength

28-32 ton/sq. in.

Diameter

At body of stay, or over threads

3"

No. of threads per inch

8.

Screw stays: Material

Steel

Tensile strength

26-30 ton/sq. in.

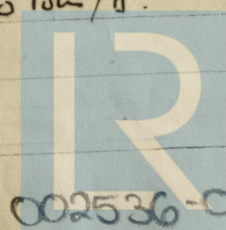
Diameter

At turned off part, or over threads

1 3/4".

No. of threads per inch

10



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002536-002542-0122

Foundation



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Are the stays drilled at the outer ends No. Margin stays: Diameter { At turned off part, 1 3/4", 1 7/8", 2"  
or Over threads  
No. of threads per inch 10  
Tubes: Material L.W. Iron. External diameter { Plain 3 1/2"  
Stay 3 1/4" Thickness { 8.W.G. No. of threads per inch 9  
Pitch of tubes 4 1/2" x 4 5/8" Manhole compensation: Size of opening in  
shell plate 12" (x16") Section of compensating ring 33 7/16" x 1 1/4" No. of rivets and diameter of rivet holes 122 @ 1 1/32"  
Outer row rivet pitch at ends 10-45" Depth of flange if manhole flanged 3 3/8" Steam Dome: Material Steel  
Tensile strength 26-30 tons/ft. Thickness of shell 3/4" Description of longitudinal joint S.R. Lap.  
Diameter of rivet holes 1 1/32" Pitch of rivets 2 1/4" Percentage of strength of joint { Plate 54%  
Rivets 43-8%  
Internal diameter 2'-9" Thickness of crown 7/8" No. and diameter of  
stays 2 @ 2 1/4" Inner radius of crown Flat.  
How connected to shell Triple Riveted. Size of doubling plate under dome 4'-9 1/2" Dia. x 1 1/4" T. Diameter of rivet holes and pitch  
of rivets in outer row in dome connection to shell 1 1/32" Dia x 10" P.

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,  
FOR CHARLES D. HOLMES & CO., LTD. Manufacturer.  
W.H. Evans

Dates of Survey { During progress of work in shops - - } See machinery report.  
while building { During erection on board vessel - - }

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

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

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

The Boiler of this Vessel has been constructed in accordance with the approved plans, the Rule, Specification & Admiralty requirements.  
The Workmanship and Material are good and when subjected to a hydraulic test of 265 lbs./sq. in was found satisfactory in every respect.

Survey Fee ... £

Travelling Expenses (if any) £

When applied for,

19

When received,

19

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned

See Incl. J.C. 57658

FRI. 19 JUN 1912



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