

REPORT ON BOILERS.

No. 53635.

Date of writing Report

19

When handed in at Local Office

14 AUG 1946

Received at London Office

17 AUG 1946

Port of

HULL.

No. in
Reg. Book.

Surrey held at

HULL.

Date, First Survey

20. 3. 45.

Last Survey

15. 7. 1946

on the

Steam Tug "SIMONIA".

A/MS 1195.

(Number of Visits

41.)

Tons

Gross 275

Net -

Built at

Selby

By whom built

Cochrane & Sons Ltd.

Yard No. 1308.

When built 1946.

Engines made at

Hull

By whom made

Amos & Smith Ltd.

Engine No. 772

When made -do-

Boilers made at

Hull

By whom made

Amos & Smith Ltd.

Boiler No. 772

When made -do-

Nominal Horse Power

132

Owners

Ministry of War Transport

Port belonging to

London

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Appleby Frodingham Steel Co. Ltd.

(Letter for Record

S

Total Heating Surface of Boilers

2390 sq.ft.

Is forced draught fitted

No

Coal or Oil fired

Oil

No. and Description of Boilers

One S.B.

Working Pressure

200 lbs/sq.in.

Tested by hydraulic pressure to

350 lbs/sq.in.

Date of test

13.12.45

No. of Certificate

4257

Can each boiler be worked separately

-

Area of Firegrate in each Boiler - (O.F.)

-

No. and Description of safety valves to each boiler

2 spring loaded.

Area of each set of valves per boiler

(per Rule

13.9 sq.in.

as fitted

14.137 "

Pressure to which they are adjusted

200 lbs

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

1'6"

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

Yes

Largest internal dia. of boilers

15'6 1/2"

Length

11'6"

Shell plates: Material

Steel

Tensile strength

29-33 tons/in²

Thickness

1.3/8"

Are the shell plates welded or flanged

No

Description of riveting: circ. seams

D.R. Lap

long. seams

T.R.

D.B.S.

Diameter of rivet holes in

circ. seams

1.13/32"

long. seams

1.13/32"

Pitch of rivets

4.3/16"

9.7/8"

Percentage of strength of circ. end seams

plate

66.4%

rivets

42.7%

Percentage of strength of circ. intermediate seam

plate

-

rivets

-

Percentage of strength of longitudinal joint

plate

85.7%

rivets

85.0%

combined

90.15%

Thickness of butt straps

outer

1.1/16"

inner

1.3/16"

No. and Description of Furnaces in each Boiler

3 C.F. Deighton Section.

Material

Steel

Tensile strength

26-30 tons/sq.in.

Smallest outside diameter

3' 11.3/8"

Length of plain part

top

-

bottom

-

Thickness of plates

crown

11/16"

bottom

-

Description of longitudinal joint

Weld

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

End plates in steam space: Material

Steel

Tensile strength

26-30 tons/in²

Thickness

1.3/16"

Pitch of stays

18 1/2" x 18 1/2"

How are stays secured

Nuts inside & out.

Tube plates: Material

front

steel

back

steel

Tensile strength

26-30 tons/sq.in.

Thickness

15/16"

-do-

7/8"

Mean pitch of stay tubes in nests

9 1/2" x 9 1/2"

Pitch across wide water spaces

14 1/2" x 9 1/2"

Girders to combustion chamber tops: Material

Steel

Tensile strength

29-33 tons/in²

Depth and thickness of girder

at centre

9 1/2" x 7/8" double

Length as per Rule

2'11"

Distance apart

9"

No. and pitch of stays

in each

3 @ 8 1/2"

Combustion chamber plates: Material

Steel

Tensile strength

26-30 tons/sq.in.

Thickness: Sides

3/4"

Back

23/32"

Top

23/32"

Bottom

3/4"

Pitch of stays to ditto: Sides

9 1/2" x 8 1/2"

Back

9 1/2" x 8 1/2"

Top

9" x 8 1/2"

Are stays fitted with nuts or riveted over

Nuts

Front plate at bottom: Material

Steel

Tensile strength

26-30 tons/sq.in.

Thickness

15/16"

Lower back plate: Material

Steel

Tensile strength

26-30 tons/in²

Thickness

7/8"

Pitch of stays at wide water space

14 1/2" x 8 1/2"

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,

or

over threads

3 1/2"

No. of threads per inch

6

Screw stays: Material

Steel

Tensile strength

26-30 tons/sq.in.

Diameter

At turned off part,

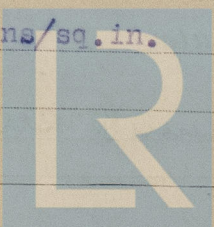
or

over threads

1 1/2"

No. of threads per inch

9



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Steam Tug "SIMONIA".

Are the stays drilled at the outer ends No Margin stays: Diameter { At turned off part, - or Over threads 1 7/8" & 2"

No. of threads per inch 9

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

Pitch of tubes 4 1/2" Manhole compensation: Size of opening in shell plate 16" x 12" Section of compensating ring 1.3/8" x 15" No. of rivets and diameter of rivet holes 28 @ 1.13/32"

Outer row rivet pitch at ends 9 7/8" Depth of flange if ^{bottom}manhole flanged 3.3/8" 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 _____ 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 _____

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

For AMOS & SMITH LTD.
The foregoing is a correct description,
A. E. Kendry Manufacturer.

Dates of Survey { During progress of work in shops - - see Machinery Report. Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) -
while building { During erection on board vessel - - - Dec. 7. 10. 18. 1946 Jan 3. 9. Total No. of visits 41.

Is this Boiler a duplicate of a previous case Yes If so, state Vessel's name and Report No. "EMPIRE BARBARA" Hul Rpt. No. 52761.

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

The boiler has been constructed under Special Survey in accordance with the Rules & the approved plans.

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

The above boiler fitted on board under Special Survey, examined under steam & safety valves adjusted as overleaf, accumulation test held, trials carried out and boiler found satisfactory on completion.

Survey Fee see Mch. Rpt. £ : : When applied for, 19
Travelling Expenses (if any) £ : : When received, 19

W. S. Shields
Engineer Surveyor to Lloyd's Register of Shipping.

FRI. 6 SEP 1946

Committee's Minute.

Assigned For memo to see J.E. Mch. Rpt.



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