

## REPORT ON BOILERS.

No. 50789.

Received at London Office

AUG -5 1940

Date of writing Report

10

When handed in at Local Office

2 AUG 1940

Port of

HULL

No. in Survey held at  
Reg. Book.

Hull.

Date, First Survey

5. 1. 40

Last Survey

16. 7. 19 40

(Number of Visits 35.)

Gross 452

Tons Net 144

on H.M.S. **FANDANGO**

Built at

Selby.

By whom built

Cochrane &amp; Sons Ltd

Yard No. 1214 When built 1940.7.

Engines made at

Hull.

By whom made

Amos &amp; Smith Ltd

Engine No. 674 When made do.

Boilers made at

do

By whom made

do

Boiler No. do When made do.

Nominal Horse Power

156

Owners

The Admiralty

Port belonging to

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

Manufacturers of Steel

Colvilles, Ltd., Appleby-Frodingham Steel Co., Ltd.,

(Letter for Record

S

Total Heating Surface of Boilers

2650  $\text{ft}^2$ 

Is forced draught fitted

Yes

Coal or Oil fired

Coal

No. and Description of Boilers

One - S.B.

Working Pressure 200 lbs./sq"

Tested by hydraulic pressure to

350 lbs./sq"

Date of test

7.6.40

No. of Certificate

4029

Can each boiler be worked separately

Yes

Area of Firegrate in each Boiler

63  $\text{ft}^2$ 

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"

as fitted 16.6 sq"

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

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 29/32 tons/sq"

Thickness

15/16"

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"

Pitch of rivets

4"

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%

Thickness of butt straps

outer 1 1/8"

No. and Description of Furnaces in each Boiler

3 - Cf. Deighton section

Material

Steel

Tensile strength 26/30 tons/sq"

Smallest outside diameter

3' - 6 7/16"

Length of plain part

top 19 3/32"

Thickness of plates

crown 19 3/32"

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 tons/sq"

Thickness

1 1/32"

Pitch of stays 21" x 20" max

How are stays secured

None inside and out

Tube plates: Material

front Steel

back Steel

Tensile strength 26/30 tons/sq"

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"

Depth and thickness of girder

at centre 8 1/4" x 17 3/8"

Length as per Rule

2' - 7 15/32"

Distance apart

10 3/4"

No. and pitch of stays

in each 2 - 9 7/8"

Combustion chamber plates: Material

Steel

Tensile strength

26/30 tons/sq"

Thickness: Sides

25/32"

Back

3/4"

Top

25/32"

Bottom

25/32"

Pitch of stays to ditto: Sides

10 3/4" x 9 3/8"

Back

9 1/4" x 9 7/8"

Top

10 3/4" x 9 7/8"

Are stays fitted with nuts or riveted over

None

Front plate at bottom: Material

Steel

Tensile strength

26/30 tons/sq"

Thickness

7/8"

Lower back plate: Material

Steel

Tensile strength

26/30 tons/sq"

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

None

Main stays: Material

Steel

Tensile strength

28/32 tons/sq"

Diameter

At body of stay, or Over threads

3 1/8"

No. of threads per inch

6

Screw stays: Material

Steel

Tensile strength

26/30 tons/sq"

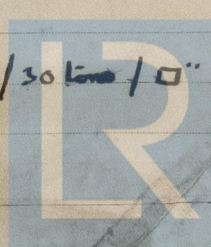
Diameter

At turned off part, or Over threads

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, 2" 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 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 \_\_\_\_\_ 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 \_\_\_\_\_ Internal diameter and thickness of tubes \_\_\_\_\_

Number of elements \_\_\_\_\_ Material of tubes \_\_\_\_\_ 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.P. Cawley Manufacturer. 17.10.39.

Dates of Survey { During progress of work in shops - - 1940 Jan. 5. 7. 25. 26. 31. Feb. 7. 9. 19. 26. Mar. 1. 4. 7. 23. 29. Apr. 9. 11. 25. Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) 17.10.39.

while building { During erection on board vessel - - - May. 2. 9. 10. 23. 25. 30. 31. June. 4. 7. 28. July. 2. 3. 5. 6. 8. 9. 11. 16. Total No. of visits 35.

Is this Boiler a duplicate of a previous case Yes If so, state Vessel's name and Report No. H.M.S. "BIRCH" Rpt 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 Plans & the Rules.

The workmanship & materials are good & when subjected to a 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

Lightfoot & Co.  
Engineer Surveyor to Lloyd's Register of Shipping.

TUE, 13 AUG 1940

Committee's Minute

Assigned

See H.M.S. 50789