

REPORT ON BOILERS.

No. 52146.

Date of writing Report 9-8-43. 19

When handed in at Local Office

13 SEP 1943

Received at London Office

4 OCT 1943

Port of HULL

No. in Survey held at HULL

Date, First Survey 24. 3. 43 Last Survey 16. 9. 19 43

on the H.M. TRAWLER

FARNE.

J2705

(Number of Visits 44.)

Gross 452
Net 144

Built at BEVERLEY

By whom built Colt. Weltra & Gemmell Ltd

Yard No. 713. When built 1943

Engines made at HULL

By whom made Chas. D. Holmes Ltd

Engine No. 1653. When made

Boilers made at HULL

By whom made Chas. D. Holmes Ltd

Boiler No. 1653. When made

Nominal Horse Power 156

Owners Admiralty

Port belonging to

MULTITUBULAR BOILERS - MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Appleby Frodingham Steel Co Ltd and Cluiles Ltd

(Letter for Record 5)

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 12-5-43. No. of Certificate 4191. Can each boiler be worked separately

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 $\frac{\text{per Rule}}{\text{as fitted}}$ 15.4 sq. in. 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

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 $\frac{3}{8}$ "

Length 11'-6"

Shell plates: Material Steel Tensile strength 29-33 tons/sq. in.

Thickness 1 $\frac{5}{16}$ "

Are the shell plates welded or flanged No

Description of riveting: circ. seams end D.R. Cap. inner. None

long. seams T.R., D.B.S.

Diameter of rivet holes in circ. seams 1 $\frac{3}{8}$ "long. seams 1 $\frac{3}{8}$ "Pitch of rivets 4" 9 $\frac{1}{2}$ "

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 % combined 88.8 %

Percentage of strength of longitudinal joint plate 85.5 % rivets 88.5 % combined 88.8 %

Thickness of butt straps outer 1 $\frac{1}{8}$ " inner 1 $\frac{1}{8}$ "

No. and Description of Furnaces in each Boiler 3. c.f. Deighta Section

Material Steel

Tensile strength 26-30 tons/sq. in.

Smallest outside diameter 3'-6 $\frac{1}{16}$ "

Length of plain part top bottom

Thickness of plates crown 1 $\frac{9}{32}$ " bottom 1 $\frac{9}{32}$ "

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. in.

Thickness 1 $\frac{1}{32}$ "

Pitch of stays 21" x 20"

How are stays secured Nuts inside and out.

Tube plates: Material front Steel back Steel

Tensile strength 26-30 tons/sq. in.

Thickness 7 $\frac{1}{8}$ " 25 $\frac{1}{32}$ "Mean pitch of stay tubes in nests 9 $\frac{1}{16}$ "Pitch across wide water spaces 13 $\frac{5}{8}$ "

Girders to combustion chamber tops: Material Steel

Tensile strength 28-32 tons/sq. in.

Depth and thickness of girder

at centre 8 $\frac{1}{4}$ " x 1 $\frac{7}{8}$ "Length as per Rule 2'-7 $\frac{15}{32}$ "Distance apart 10 $\frac{3}{4}$ "

No. and pitch of stays

in each 2 @ 9 $\frac{7}{8}$ "

Combustion chamber plates: Material Steel

Tensile strength 26-30 tons/sq. in.

Thickness: Sides 25 $\frac{1}{32}$ "Back 3 $\frac{1}{4}$ "Top 25 $\frac{1}{32}$ "Bottom 25 $\frac{1}{32}$ "Pitch of stays to ditto: Sides 10 $\frac{3}{4}$ " x 9 $\frac{7}{8}$ " Back 9 $\frac{1}{4}$ " x 9 $\frac{7}{8}$ " Top 10 $\frac{3}{4}$ " x 9 $\frac{7}{8}$ " Are stays fitted with nuts or riveted over Nuts.

Front plate at bottom: Material Steel

Tensile strength 26-30 tons/sq. in.

Thickness 7 $\frac{1}{8}$ "

Lower back plate: Material Steel

Tensile strength 26-30 tons/sq. in.

Thickness 7 $\frac{1}{8}$ "Pitch of stays at wide water space 14 $\frac{1}{2}$ " x 9 $\frac{7}{8}$ "

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, or Over threads 3 $\frac{1}{8}$ "

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 $\frac{7}{8}$ "

No. of threads per inch 9

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"FARNE."

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" 3/16" 3/8" 1/2" No. of threads per inch 9

Pitch of tubes 3 7/8" x 3 7/8" Manhole compensation: Size of opening in shell plate 12" x 16" 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 .517 Pitch of rivets Percentage of strength of joint { Plate Rivets

Internal diameter .5201 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 221

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.
W.R. Evans. Manufacturer.

1943. Mar. 24. Apr. 8. 13. 15. 20. 21. 23. 29. May 3.
Dates of Survey { During progress of work in shops - - 4. 5. 6. 10. 11. 12. 17. July 28. Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) ✓
while building { During erection on board vessel - - - As on machinery report. Total No. of visits 44.

Is this Boiler a duplicate of a previous case YES. If so, state Vessel's name and Report No. 'BRYHER'

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

Above Boiler installed in H.M.T. 'FARNE' at Hull, tried under working conditions, safety valves adjusted as overleaf, accumulation test held and found satisfactory in every respect all on trials. J.S. Shields

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

Committee's Minute

Assigned

see minute on
J.E. Rpt.

FRI. 8 OCT 1943

Engineer Surveyor to Lloyd's Register of Shipping.



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