

Rpt. 5a.

REPORT ON BOILERS.

No. 52580.

Received at London Office 28 SEP 1944

Date of writing Report 4-9-1944

When handed in at Local Office 25 SEP 1944

Port of HULL.

No. in Reg. Book. Survey held at HULL

Date, First Survey 15.2.44

Last Survey 22.9.1944

on the H.M. TRAWLER

"HOME GUARD." J2745

(Number of Visits 29.)

Gross 581.39

Tons Net 180.44

Built at BEVERLEY

By whom built C. H. Weller & Co. Ltd

Yard No. 733. When built 1944

Engines made at HULL

By whom made Chas. D. Holmes & Co. Ltd

Engine No. 1682. When made

Boilers made at HULL

By whom made Chas. D. Holmes & Co. Ltd

Boiler No. 1682. When made

Nominal Horse Power 165.

Owners THE ADMIRALTY.

Port belonging to

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Appleby, Frodingham Steel Co. Ltd and Colville & Co. Ltd Letter for Record 5.

Total Heating Surface of Boilers 2551 sq. ft.

Is forced draught fitted Yes.

Coal or Oil fired Coal.

No. and Description of Boilers One Single Ended

Working Pressure 225 lb./sq. in.

Tested by hydraulic pressure to 388 lb./sq. in. Date of test 8.5.44. No. of Certificate 4226. Can each boiler be worked separately

Area of Firegrate in each Boiler 64 sq. ft. No. and Description of safety valves to each boiler Two Spring loaded

Area of each set of valves per boiler {per Rule 17.5. 13.28 sq. ft. as fitted 19.24. Pressure to which they are adjusted 225 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 12".

Is oil fuel carried in the double bottom under boilers No.

Smallest distance between shell of boiler and tank top plating

Is the bottom of the boiler insulated No.

Largest internal dia. of boilers 15' 9 1/16". Length 11' 0".

Shell plates: Material Steel Tensile strength 31-35 tons/in.

Thickness 1 15/32". Are the shell plates welded or flanged No.

Description of riveting: circ. seams {end Double

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

Diameter of rivet holes in {circ. seams 1 15/32" long. seams 1 1/2".

Pitch of rivets 9 9/16".

Percentage of strength of circ. end seams {plate 62-1% rivets 44.0%.

Percentage of strength of circ. intermediate seam {plate rivets

Percentage of strength of longitudinal joint {plate 84.3% rivets 86.9%.

Thickness of butt straps {outer 1 5/32" inner 1 9/32".

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

Material Steel

Tensile strength 26-30 tons/in.

Smallest outside diameter 3'-10".

Length of plain part {top bottom

Thickness of plates {crown 2 3/32" bottom 2 3/32".

Description of longitudinal joint Welded

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

End plates in steam space: Material Steel

Tensile strength 26-30 tons/in.

Thickness 1 1/4".

Pitch of stays 19 1/4" x 19 1/8".

How are stays secured Nuts & washers inside & Nuts & large washers outside.

Tube plates: Material {front Steel back Steel

Tensile strength {26-30 tons/in. 26-30 tons/in.

Thickness {3 1/32" 2 9/32".

Mean pitch of stay tubes in nests 10-675.

Pitch across wide water spaces 14 1/4" x 9 1/2".

Girders to combustion chamber tops: Material Steel

Tensile strength 29-33 tons/in.

Depth and thickness of girder

at centre 9" x 7 1/8" Double Length as per Rule 32 1/4".

Distance apart 9 1/4".

No. and pitch of stays

in each 3 @ 7 1/2".

Combustion chamber plates: Material Steel

Tensile strength 26-30 tons/in. Thickness: Sides 2 3/32".

Back 2 3/32".

Top 1 1/6".

Bottom 1 5/16".

Pitch of stays to ditto: Sides 9 7/8" x 8". Back 9 1/2" x 8 1/4". Top 9 1/4" x 7 1/2". Are stays fitted with nuts or riveted over Nuts.

Front plate at bottom: Material Steel

Tensile strength

Thickness 3 1/32".

Lower back plate: Material Steel

Tensile strength 26-30 tons/in.

Thickness 2 9/32".

Pitch of stays at wide water space 14 1/2" x 9 1/2".

Are stays fitted with nuts or riveted over Nuts.

Main stays: Material Steel

Tensile strength 28-32 tons/in.

Diameter {At body of stay, 3 3/8" or Over threads

No. of threads per inch 8.

Screw stays: Material Steel

Tensile strength 26-30 tons/in.

Diameter {At turned off part, 1 3/4" or Over threads

No. of threads per inch 10.

HOME GUARD.

Are the stays drilled at the outer ends No.Margin stays: Diameter { At turned off part, $1\frac{7}{8}$ " $2\frac{1}{8}$ "
or
Over threadsNo. of threads per inch 10.Tubes: Material L.W. Iron. External diameter { Plain $3\frac{1}{2}$ "
Stay $3\frac{1}{2}$ " Thickness { 7 W.G.
 $\frac{5}{16}$ " $\frac{3}{8}$ " $\frac{7}{16}$ " No. of threads per inch 9.Pitch of tubes $4\frac{3}{4}$ " x $4\frac{3}{4}$ "

Manhole compensation: Size of opening in

shell plate 12 " (x 16 ") Section of compensating ring $3'-8\frac{1}{4}$ " x $1\frac{5}{32}$ " No. of rivets and diameter of rivet holes $62 @ 1\frac{1}{2}$ " DiaOuter row rivet pitch at ends 10.74 . Depth of flange if manhole flanged $3\frac{1}{2}$ "Steam Dome: Material Dome Not fittedTensile strength Thickness of shell Description of longitudinal joint But compensation plate fitted for future alteration.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 $4'-11\frac{1}{4}$ " Dia x $1\frac{5}{32}$ " Diameter of rivet holes and pitch

of rivets in outer row in dome connection to shell

Type of Superheater None. (Safety Valves fitted to allow of change over to Superheater.) 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

The foregoing is a correct description,
FOR CHARLES D. HOLMES & CO., LTDW.R. Evans

Manufacturer.

1944 Feb. 15. Mar. 2. 3. 10. 27. 29. 30. Apr. 21. 25.
 Dates of Survey { During progress of work in shops - - } SEE RPT 4 May 8. 13 June 15.
 while building { During erection on board vessel - - - }
 Are the approved plans of boiler and superheater forwarded herewith 29. 5. 42.
 (If not state date of approval.)
 Total No. of visits 29.

Is this Boiler a duplicate of a previous case Yes. If so, state Vessel's name and Report No. H.M.T. GRENADIER.

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 an hydraulic test of 388 lb / sq. in. it was found satisfactory in every respect.

Boiler examined under steam, safety valves adjusted as overleaf, accumulation test held, boiler tried under working conditions and found satisfactory on completion of all tests.

W.S. Shields.

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

J. P. ...
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

TUES. 3 OCT 1944

Assigned

see minute
 on J.S. Rpt.



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