

REPORT ON BOILERS.

No. 18553

1 JUN 1944

Received at London Office

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Date of writing Report 24/5/1944 When handed in at Local Office 24/5/1944 Port of WEST HARTLEPOOL

No. in Survey held at WEST HARTLEPOOL

Date, First Survey 23rd March, 1944 Last Survey 29th May, 1944

Reg. Book. on the H.M. TRAWLER "HERMETRAY" J2692 (Number of Visits 9) Gross 458-6 Tons Net 143-9

Master Built at SELBY By whom built COCHRANE & SONS LTD Yard No. 1284 When built 1944

Engines made at HULL By whom made MESSRS C.D. HOLMESTED Engine No. 740 When made 1944

Boilers made at WEST HARTLEPOOL By whom made CENTRAL MARINE ENGINE WORKS Boiler No. R365 When made 1944

Nominal Horse Power 156 Owners THE ADMIRALTY Port belonging to

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Messrs Bolinder & Co. Glasgow. (Letter for Record S. ✓)

Total Heating Surface of Boilers 2650 sq ft Is forced draught fitted Yes Coal or Oil fired Coal ✓

No. and Description of Boilers One single ended multitubular Working Pressure 200 lbs ✓

Tested by hydraulic pressure to 350 lbs Date of test 25-5-44 No. of Certificate H.027 Can each boiler be worked separately -

Area of Firegrate in each Boiler 63.36 sq ft No. and Description of safety valves to each boiler Two Cockburn High Lift

Area of each set of valves per boiler { per Rule 7-7 sq. in. Pressure to which they are adjusted 200 lbs Are they fitted with easing gear YES. as fitted 9-8 sq. in. }

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 3/8" Length 11'-6" Shell plates: Material Steel Tensile strength 29-33 tons ✓

Thickness 1 5/16" Are the shell plates welded or flanged No Description of riveting: circ. seams { end D.R. LAP. inter. - }

long. seams TR Double butt strap Diameter of rivet holes in { circ. seams 1 3/8" Pitch of rivets { 4" inter. 9 1/2" long. seams 1 3/8" }

Percentage of strength of circ. end seams { plate 65.6 rivets 44.9 Percentage of strength of circ. intermediate seam { plate 85.52 rivets 88.54 }

Percentage of strength of longitudinal joint { plate 85.52 rivets 88.54 combined 88.77 Working pressure of shell by Rules

Thickness of butt straps { outer 1 1/8" inner 1 1/8" No. and Description of Furnaces in each Boiler 3 Corrugated Deighton Section. ✓

Material Steel Tensile strength 26-30 tons Smallest outside diameter 3'-6 3/16" ✓

Length of plain part { top - bottom - Thickness of plates { crown 1 9/32" bottom 1 1/2" Description of longitudinal joint Welded. }

Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules

End plates in steam space: Material Steel Tensile strength 26-30 tons Thickness 1 1/32" Pitch of stays 21 x 20 ✓

How are stays secured Double nuts Working pressure by Rules

Tube plates: Material { front Steel Tensile strength 26-30 tons Thickness 7/8" back Steel Tensile strength 26-30 tons Thickness 2 5/32" ✓

Mean pitch of stay tubes in nests 11 5/8" x 7 3/4" Pitch across wide water spaces 13 5/8" Working pressure { front back }

Girders to combustion chamber tops: Material Steel Tensile strength 28-32 tons Depth and thickness of girder

at centre 8 1/4 x 1 1/8 2-15/16 plates Length as per Rule 2'-6 29/32" Distance apart 10 3/4" No. and pitch of stays

in each 2 @ 9 1/2" Working pressure by Rules Combustion chamber plates: Material Steel ✓

Tensile strength 26-30 tons Thickness: Sides 2 5/32" Back 3/4" Top 2 5/32" Bottom 2 5/32" ✓

Pitch of stays to ditto: Sides 10 3/4 x 9 3/8" Back 9 3/8 x 9 1/2" Top 10 3/4 x 9 1/2" Are stays fitted with nuts or riveted over Nuts ✓

Working pressure by Rules Front plate at bottom: Material Steel Tensile strength 26-30 tons

Thickness 7/8" Lower back plate: Material Steel Tensile strength 26-30 tons Thickness 7/8" ✓

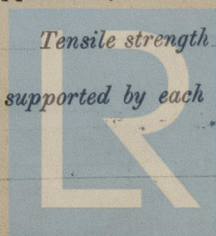
Pitch of stays at wide water space 14 1/2 x 9 3/8" Are stays fitted with nuts or riveted over Nuts ✓

Working Pressure Main stays: Material Steel Tensile strength 28-32 tons

Diameter { At body of stay, or Over threads 3 3/4" No. of threads per inch 6 Area supported by each stay ✓

Working pressure by Rules Screw stays: Material Steel Tensile strength 26-30 tons ✓

Diameter { At turned off part, or Over threads 1 7/8" No. of threads per inch 9 Area supported by each stay ✓



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Working pressure by Rules Are the stays drilled at the outer ends ☒ No Margin stays: Diameter { At turned off part, or Over threads 2" }
No. of threads per inch 9 Area supported by each stay Working pressure by Rules
Tubes: Material HRWS External diameter { Plain 2 3/4" Stay 2 3/4" } Thickness { 8WG 3/8" 5/16" } No. of threads per inch 9
Pitch of tubes 3 7/8" x 3 7/8" Working pressure by Rules Manhole compensation: Size of opening in shell plate 20 x 16" Section of compensating ring 2-11 1/2" x 2-7 1/2" x 1 5/8" No. of rivets and diameter of rivet holes 32 @ 1 5/32"
Outer row rivet pitch at ends 10 1/8" Depth of flange if manhole flanged 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 Working pressure by Rules Thickness of crown No. and diameter of stays Inner radius of crown Working pressure by Rules
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 Working pressure as per Rules
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 THE CENTRAL MARINE ENGINE WORKS

(S. G. & Co. Ltd.) Manufacturer.

Dates of Survey { During progress of work in shops - - - 20.12.44 4.1.45 1.15.19.20 } Are the approved plans of boiler and superheater for use with 25-5-H3.
while building { During erection on board vessel - - - } (If not state date of approval.)
Total No. of visits 9

Is this Boiler a duplicate of a previous case Yes. If so, state Vessel's name and Report No. H.M.T. HERMETRAY at Hull, Kamins mtr steam, safety valves adjusted as overleaf, accumulation test held, tried under working conditions and found satisfactory in every respect on completion of all trials. W.S. Shields.

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) This boiler has been constructed under special survey and in accordance with the approved plans for a working pressure of 200 lbs per square inch.

The materials and workmanship have been found good. Upon completion the boiler was tested in the presence of the undersigned by a hydraulic pressure of 350 lbs per square inch, showed no signs of weakness and was found tight and sound in every respect at that pressure. This boiler is being despatched to Hull for fitting on board.

Abon boiler fitted on board H.M.T. HERMETRAY at Hull, Kamins mtr steam, safety valves adjusted as overleaf, accumulation test held, tried under working conditions and found satisfactory in every respect on completion of all trials. W.S. Shields.

Survey Fee ... £ 17 : 14 : 0 When applied for, 30/5/1944
Travelling Expenses (if any) £ : : When received, 19

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

Committee's Minute

Assigned ...
on 1st Sept