

REPORT ON BOILERS.

No. 18443

Received at London Office

8 NOV 1943
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Date of writing Report 28/7/1943 When handed in at Local Office 28/7/1943 Port of WEST HARTLEPOOL.

No. in Survey held at Hull Date, First Survey 12th March, 1943 Last Survey 19th July 1943

on the HMT "MINALTO" J2713 (Number of Visits 12) Tons {Gross 452 Net 144

Built at Beverly Hull By whom built Cook Winton & Gemmell Yard No. 717 When built 1943

Engines made at HULL By whom made C.D. HOLMES & CO. LTD Engine No. 1657 When made

Boilers made at WEST HARTLEPOOL By whom made CENTRAL MARINE ENGINE WORKS Boiler No. R363 When made

Nominal Horse Power 156 Owners Admiralty Port belonging to

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Messrs Colville's & 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 19.7.43 No. of Certificate H.005. Can each boiler be worked separately YES

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

Area of each set of valves per boiler {per Rule 15.4 sq ft as fitted 16.6 sq ft 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 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 29.33 tons

Thickness 1 5/16" Are the shell plates welded or flanged No Description of riveting: circ. seams {end D.R. LAP. inter. 4" Pitch of rivets 9 1/2"

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

Percentage of strength of circ. end seams {plate 65.6 rivets 44.9 Percentage of strength of circ. intermediate seam {plate - rivets -

Percentage of strength of longitudinal joint {plate 85.52 rivets 88.54 combined 88.77

Thickness of butt straps {outer 1" inner 1 1/8" No. and Description of Furnaces in each Boiler 3 corrugated diagonal section

Material Steel Tensile strength 26-30 tons Smallest outside diameter 3'-6 7/16"

Length of plain part {top - bottom - Thickness of plates {crown 19 1/32" bottom 19 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 Thickness 1 1/32" Pitch of stays 21" x 20"

How are stays secured Double nuts

Tube plates: Material {front Steel back Steel Tensile strength {26-30 tons Thickness 7/16" 26-30 tons

Mean pitch of stay tubes in nests 11 5/8" x 7 3/4" Pitch across wide water spaces 13 5/8"

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

at centre 8 1/4" x 1 7/8" 2-1 1/2" 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" Combustion chamber plates: Material Steel

Tensile strength 26-30 tons Thickness: Sides 25/32" Back 3/4" Top 25/32" Bottom 25/32"

Pitch of stays to ditto: Sides 10 3/4" x 9 7/8" Back 9 7/8" x 9 1/2" Top 10 3/4" x 9 1/2" Are stays fitted with nuts or riveted over Nuts

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"

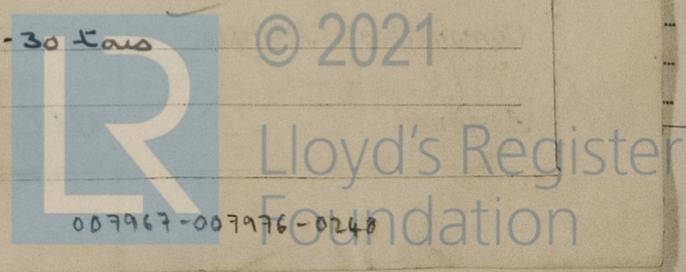
Pitch of stays at wide water space 14 1/2" x 9 7/8" Are stays fitted with nuts or riveted over Nuts

Main stays: Material Steel Tensile strength 28-32 tons

Diameter {At body of stay, or Over threads 3 7/8" No. of threads per inch 6

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



Are the stays drilled at the outer ends no

No. of threads per inch 9

Margin stays: Diameter { At turned off part, or Over threads } 2"

Tubes: Material HRWS External diameter { Plain 2 3/4" Stay 2 3/4" } Thickness { 8WG } No. of threads per inch 9

Pitch of tubes 3 7/8" x 3 7/8"

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 5/16" 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 Wae

Tensile strength _____ Thickness of shell _____ Description of longitudinal joint _____

Diameter of rivet holes 5 1/2" 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 _____

Area of each safety valve _____ Is a safety valve fitted to every part of the superheater which can be shut off from the boiler _____

Pressure to which the safety valves are adjusted _____ Are the safety valves fitted with easing gear _____

tubes _____ forgings and castings _____ and after assembly in place _____ Hydraulic test pressure: _____

valves fitted to free the superheater from water where necessary _____ Are drain cocks or _____

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 (L. Gray & Co. Ltd.) Manufacturer.

Dates of Survey { During progress of work in shops - - } 1943 March 12 - June 7 - 11 - 21 - 22 - July 7 - 12 - 15 - 16 - 15 - 19 Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) 25-5-43

while building { During erection on board vessel - - - } _____

Total No. of visits 12

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

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 plan 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 has been despatched to Hull for fitting on board.

Above boiler installed on board HMT MINALTO at Hull, tried under working conditions, safety valves adjusted, accumulation test held & found satisfactory after all trials W.S. Shields

Survey Fee £ 17:14:01 When applied for, 28/7/1943

Travelling Expenses (if any) £ See Moby Rpt. When received, 19

Arthur W. Oxford
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUES. 16 NOV 1943

Assigned see minute on Hmt P.E. Rpt.

