Rpt. 5a.

REPORT ON BOILERS.

No. 18413

Received at London Office 18 MAY 1943 — 9 AUG 1943

Date of writing Report 17/5/ 1943 When handed in at Local Office 17/5/ 1943 Port of WEST HARTLEPOOL

No. in Reg. Book. Survey held at WEST HARTLEPOOL Date, First Survey 3rd November, 1942 Last Survey 5th May 1943

(Number of Visits 10) on the Steel Single Screw Rescue Tug "ANTIC" Tons { Gross 597 / Net /

Built at Selby By whom built Cochrane & Sons. Ltd. Yard No. 1264 When built 1943

Engines made at HULL. By whom made Messrs C.D. HOLMES & Co. Engine No. When made -

Boilers made at WEST HARTLEPOOL By whom made CENTRAL MARINE ENGINE WORKS. Boiler No. R360 When made 1943.

Nominal Horse Power Owners Port belonging to

MULTITUBULAR BOILERS—MAIN. ~~AUXILIARY. OR DONKEY.~~

Manufacturers of Steel Messrs Colvilles Ltd. Glasgow. (Letter for Record S.

Total Heating Surface of Boilers 3550 ☐ft Is forced draught fitted YES Coal or Oil fired OIL.

No. and Description of Boilers 1 Single ended multitubular Working Pressure 210 lbs ☐in.

Tested by hydraulic pressure to 365 lbs ☐in. Date of test 12-5-43 No. of Certificate 24,000 Can each boiler be worked separately –

Area of Firegrate in each Boiler OIL FIRED. No. and Description of safety valves to each boiler Two spring loaded

Area of each set of valves per boiler { per Rule (16.14) sqin 19.7 / as fitted 16.59 " } Pressure to which they are adjusted 213 lbs 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 PART

Largest internal dia. of boilers 17'-0" Length 11'-6" **Shell plates:** Material Steel Tensile strength 31-35 tons

Thickness 1 15/32" Are the shell plates welded or flanged CNo. Description of riveting: circ. seams { end D.R. LAP / inter. – }

long. seams T.R. Double butt straps. Diameter of rivet holes in { circ. seams 1 7/16" / long. seams 1 17/32" } Pitch of rivets { 3 13/16" / 10 1/16" }

Percentage of strength of circ. end seams { plate 62-2 / rivets 43. } Percentage of strength of circ. intermediate seam { plate – / rivets – }

Percentage of strength of longitudinal joint { plate 84.8. / rivets 86.7. / combined 86.9. } –

Thickness of butt straps { outer 1 1/8" / inner 1 1/4" } **No. and Description of Furnaces in each Boiler** 3 Corrugated. Deighton section

Material Steel Tensile strength 26-30 tons Smallest outside diameter 4'-3 1/2"

Length of plain part { top – / bottom – } Thickness of plates { crown / bottom } 3/4" 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 Thickness 1 3/16" Pitch of stays 20 3/4" x 16"

How are stays secured Double nuts and washers.

Tube plates: Material { front Steel / back Steel. } Tensile strength { 26-30 tons / 26-30 tons } Thickness { 15/16" / 29/32" }

Mean pitch of stay tubes in nests 10 5/8" x 8 1/2" Pitch across wide water spaces 13 1/2"

Girders to combustion chamber tops: Material Steel Tensile strength 29-33 tons Depth and thickness of girder

Centre 9" x 1 3/4", 2-2 1/8" plates Length as per Rule 2'-8 31/32" Distance apart 9 3/4" No. and pitch of stays

each 3 @ 7 3/4" **Combustion chamber plates:** Material Steel

Tensile strength 26-30 tons Thickness: Sides 23/32" Back 23/32" Top 11/16" Bottom 7/8"

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

Front plate at bottom: Material Steel Tensile strength 26-30 tons

Thickness 15/16" **Lower back plate:** Material Steel Tensile strength 26-30 tons Thickness 27/32"

Pitch of stays at wide water space 13 3/4" x 8 7/8" Are stays fitted with nuts or riveted over CNuts

Shipping stays: Material Steel Tensile strength 28-32 tons

Diameter { At body of stay, or Over threads 3 1/16" } No. of threads per inch 6

Screw stays: Material Steel Tensile strength 26-30 tons

Diameter { At turned off part, or Over threads 1 3/4" } No. of threads per inch 9.

29/5/43.

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.

Tubes: *Material* L.W. IRON. *External diameter* { *Plain* 3" / *Stay* 3" } *Thickness* { 8 WG 5/16" 3/8" 7/16" } *No. of threads per inch* 9.

Pitch of tubes 4 1/4" x 4 1/4" **Manhole compensation:** *Size of opening in shell plate* 16" x 12" *Section of compensating ring* 3·0" x 2·4 1/2" x 1 15/32" *No. of rivets and diameter of rivet holes* 32 @ 1 17/32"

Outer row rivet pitch at ends 10 1/16" *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 ____ *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* ____ *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 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
(W. Gray & Co. Ltd.)
GENERAL MANAGER *Manufacturer.*

Dates of Survey while building { *During progress of work in shops* - - 1942 - Nov 3 - 1943 - Mar. 16 - 18 - 24 - Apr 12 - 20 - 27 - May 3 - 4 - 5 / *During erection on board vessel* - - - } *Are the approved plans of boiler and superheater forwarded herewith* (If not state date of approval.) 4-5-43

Total No. of visits 10

Is this Boiler a duplicate of a previous case Yes. *If so, state Vessel's name and Report No.* R359. RATN. 1839H.

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 210 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 365 lbs per square inch showed no signs of weakness and was found tight and sound in every respect at that pressure.

It has now been despatched to Hull for fitting on board.

The above boiler installed onboard "ANTIC" at Hull, safety valves adjusted as above, accumulation test held and afterwards examined on completion of all tests. W.S. Shields.

Survey Fee ... ... £ 23 : 14 : 0 | When applied for, 17/5/1943

Travelling Expenses (if any) £ : : | When received, 19

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

Committee's Minute TUES. 17 AUG 1943

Assigned Ile minute on Hull F.S. Rpt.