

REPORT ON BOILERS.

Received at London Office

MAY 9 1939

Date of writing Report 3/5/1939 When handed in at Local Office 5/5/1939 Port of WEST HARTLEPOOL.

No. in Survey held at WEST HARTLEPOOL. Reg. Book.

Date, First Survey 15/10/27 Last Survey 2/5/1939

(Number of Visits 66) Tons { Gross 2470.77 Net 1482.49

on the S.S. TINTERN ABBEY

Master Built at West Hartlepool By whom built W. Gray & Co. Ltd Yard No. 1090 When built 1939.

Engines made at West Hartlepool By whom made Central Coal Eng. Works Engine No. 1090 When made 1939.

Boilers made at West Hartlepool By whom made Central Coal Eng. Works Boiler No. 1090 When made 1939.

Nominal Horse Power 234 Owners Abbey Line Ltd Port belonging to Bardiff.

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

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

Total Heating Surface of Boilers 3826 sq ft Is forced draught fitted No Coal or Oil fired Coal.

No. and Description of Boilers Two, single ended. Working Pressure 200 lbs sq in.

Tested by hydraulic pressure to 350 lbs Date of test 30.5.38 No. of Certificate 3890 Can each boiler be worked separately Yes.

Area of Firegrate in each Boiler 44 sq ft No. and Description of safety valves to each boiler 2, Buchan's Improved High Lift.

Area of each set of valves per boiler (per Rule 5.64 sq in. as fitted 6.28 sq in.) Pressure to which they are adjusted 210 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 30" Is oil fuel carried in the double bottom under boilers No.

Smallest distance between shell of boiler and tank top plating 24" Is the bottom of the boiler insulated Yes.

Largest internal dia. of boilers 14'-3 1/2" Length 10'-6" Shell plates: Material Steel Tensile strength 29-33 tons

Thickness 1 1/4" Are the shell plates welded or flanged No Description of riveting: circ. seams end DR Lat. inter. single stroke.

long. seams 3 R D B S. Diameter of rivet holes in (circ. seams 1 5/16" long. seams 1 1/16" Pitch of rivets 4" 9/8"

Percentage of strength of circ. end seams (plate 67.2 rivets 42.9) Percentage of strength of circ. intermediate seam (plate - rivets -)

Percentage of strength of longitudinal joint (plate 85.61 rivets 88 combined 88.82) Working pressure of shell by Rules 200.1 lbs sq in.

Thickness of butt straps (outer 3 1/32" inner 1 3/32") No. and Description of Furnaces in each Boiler Three, Deighton Type.

Material Steel Tensile strength 26-30 tons Smallest outside diameter 3'-5 9/16"

Length of plain part (top bottom) Thickness of plates (crown 19/32" bottom 3/32") Description of longitudinal joint Welded.

Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules 207.8 lbs.

End plates in steam space: Material Steel Tensile strength 26-30 tons Thickness 1 1/4" Pitch of stays 21" x 18 3/4"

How are stays secured Double nuts and washers Working pressure by Rules 205.5 lbs

Tube plates: Material (front back) Steel Tensile strength 26-30 tons Thickness (front 27/32" back 27/32")

Mean pitch of stay tubes in nests 11 1/4" Pitch across wide water spaces 14 1/4" x 9" Working pressure (front 213.5 lbs back 203 lbs)

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

at centre 7 3/4" x 1 3/4" Length as per Rule 30 7/16" Distance apart 9 1/2" No. and pitch of stays

in each 2 @ 9 1/2" Working pressure by Rules 206.2 lbs Combustion chamber plates: Material Steel

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

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

Working pressure by Rules 200.5 lbs Front plate at bottom: Material Steel Tensile strength 26-30 tons

Thickness 1 5/16" Lower back plate: Material Steel Tensile strength 26-30 tons Thickness 29/32"

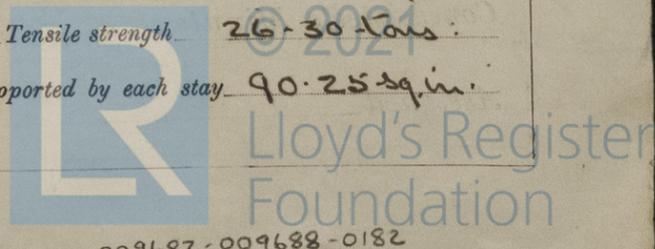
Pitch of stays at wide water space 14 1/4" x 10" Are stays fitted with nuts or riveted over Nuts.

Working Pressure 222.2 lbs Main stays: Material Steel Tensile strength 28-32 tons

Diameter (At body of stay, or Over threads) 3 1/4" No. of threads per inch 6 Area supported by each stay 393.75 sq in.

Working pressure by Rules 204.2 lbs 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 Area supported by each stay 90.25 sq in.



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Working pressure by Rules 201-100 Are the stays drilled at the outer ends Yes Margin stays: Diameter { At turned off part, or Over threads } 2"

No. of threads per inch 9 Area supported by each stay 116.25 sq in Working pressure by Rules 212.9 lbs.

Tubes: Material Steel External diameter { Plain 3 1/4" Stay 3 1/4" } Thickness { 3/16" 1/4" 5/16" } No. of threads per inch 9

Pitch of tubes 4 1/2" x 4 1/2" Working pressure by Rules 232 lbs. Manhole compensation: Size of opening in shell plate 20 x 16 Section of compensating ring 37" x 33" x 1 1/4" No. of rivets and diameter of rivet holes 32 @ 1 1/8 Dia.

Outer row rivet pitch at ends 10" Depth of flange if manhole flanged 3 3/8" Bot. 3 5/8" Steam Dome: Material _____

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 _____

How connected to shell _____ Inner radius of crown _____ Working pressure by Rules _____

of rivets in outer row in dome connection to shell _____ Size of doubling plate under dome _____ Diameter of rivet holes and pitch _____

Type of 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 _____

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 _____

The foregoing is a correct description, FOR THE CENTRAL MARINE ENGINE WORKS, (W. Gray & Co., Ltd.) Manufacturer.

Dates of Survey { During progress of work in shops - - } Are the approved plans of boiler and superheater _____ with (If not state date of approval.)

{ During erection on board vessel - - - } Total No. of visits _____

Is this Boiler a duplicate of a previous case Yes If so, state Vessel's name and Report No. S.S. MARGAM ABBEY "RPT. 1794"

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

The workmanship and materials have been found good.

Upon completion the Boilers were tested in the presence of the undersigned with hydraulic pressure to 350 lbs per square inch, showed no signs of weakness and were found tight and sound in every respect at that pressure.

Survey Fee £ : : } When applied for, 10

Travelling Expenses (if any) £ : : } When received, 10

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

FRI 19 MAY 1939

Committee's Minute _____

Assigned See Vpl. No. 17940

