

REPORT ON BOILERS.

No. 16423

Received at London Office 28 JUL 1926

Date of writing Report 1926 When handed in at Local Office 27.7.26 Port of WEST HARTLEPOOL

No. in Survey held at West Hartlepool Date, First Survey 31st December Last Survey 22nd July 1926

3351 on the S.S. "OTTERPOOL" (Number of Visits) (Gross 4867 Tons Net 2999)

Master Built at West Hartlepool By whom built Wm Gray & Co. Ltd. Yard No. 980 When built 1926

Engines made at West Hartlepool By whom made Central Marine Engine Engine No. 980 When made 1926

Boilers made at ditto By whom made Works Boiler No. 980 When made 1926

Nominal Horse Power Owners The Pool Shipping Co. Port belonging to West Hartlepool

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel D Cobille & Sons Ltd (Letter for Record S ✓)

Total Heating Surface of Boilers 927 sq. ft. Is forced draught fitted no Coal or Oil fired coal ✓

No. and Description of Boilers One single ended. Working Pressure 150 lbs ✓

Tested by hydraulic pressure to 275 Date of test 4-6-26 No. of Certificate 3685 Can each boiler be worked separately yes ✓

Area of Firegrate in each Boiler 34.2 No. and Description of safety valves to each boiler 2 direct spring ✓

Area of each set of valves per boiler { per Rule 7.02 ✓ as fitted 7.96 ✓ Pressure to which they are adjusted 150 lbs Are they fitted with easing gear yes ✓

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler no ✓

Smallest distance between boilers or uptakes and bunkers or woodwork 18" ✓ 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 ✓

Largest internal dia. of boilers 10'-6" Length 10'-0" Shell plates: Material Steel Tensile strength 28/32 ✓

Thickness 3/4" Are the shell plates welded or flanged no Description of riveting: circ. seams { end D.R. Lap inter. 3 1/2" ✓

long. seams J.R. D.B.S. ✓ Diameter of rivet holes in { circ. seams 15" ✓ 16 1/3" ✓ long. seams 16" ✓ Pitch of rivets { 6 1/8" ✓

Percentage of strength of circ. end seams { plate 75.9 rivets 32.55 Percentage of strength of circ. intermediate seam { plate rivets ✓

Percentage of strength of longitudinal joint { plate 86.75 rivets 87.1 combined 89 Working pressure of shell by Rules 154 lbs ✓

Thickness of butt straps { outer 9/16" ✓ inner 11/16" ✓ No. and Description of Furnaces in each Boiler 2 plain ✓

Material Steel Tensile strength 26/30 ✓ Smallest outside diameter 38 5/8" ✓

Length of plain part { top 5'-11 3/8" ✓ bottom 5'-5 3/8" ✓ Thickness of plates { crown 21" ✓ bottom 32" ✓ Description of longitudinal joint welded ✓

Dimensions of stiffening rings on furnace or c.c. bottom ✓ Working pressure of furnace by Rules 157 ✓

End plates in steam space: Material Steel Tensile strength 26/30 ✓ Thickness 27/32 ✓ Pitch of stays 16 1/2" x 17 1/2" ✓

How are stays secured D Nuts & washers ✓ Working pressure by Rules 150 ✓

Tube plates: Material { front Steel Tensile strength { 26/30 ✓ back steel Thickness { 27/32 ✓ 3/4" ✓

Mean pitch of stay tubes in nests 13 1/2" x 9" Pitch across wide water spaces 14 1/4" ✓ Working pressure { front 171 back 158 ✓

Girders to combustion chamber tops: Material Steel Tensile strength 28/32 ✓ Depth and thickness of girder at centre 7 3/8" x 1 1/4" ✓ Length as per Rule 27 1/2" ✓ Distance apart 10 1/2" ✓ No. and pitch of stays in each 2 9 1/4" ✓ Working pressure by Rules 153 ✓

Tensile strength 26/30 Thickness: Sides 21/32 ✓ Back 23/32 ✓ Top 21/32 ✓ Bottom 1" ✓

Pitch of stays to ditto: Sides 9 1/4" x 10 1/2" Back 10 1/2" x 11 1/4" Top 9 1/4" x 10 1/2" Are stays fitted with nuts or riveted over nuts ✓

Working pressure by Rules 153 Front plate at bottom: Material Steel Tensile strength 26/30 ✓ Thickness 27/32 ✓ Lower back plate: Material Steel Tensile strength 26/30 ✓ Thickness 27/32 ✓

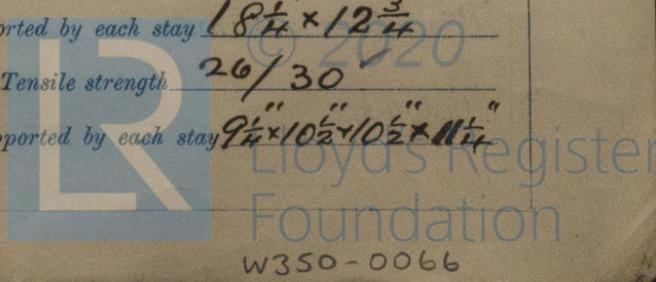
Pitch of stays at wide water space 14 1/4" x 11 1/4" Are stays fitted with nuts or riveted over nuts ✓

Working Pressure 176 Main stays: Material Steel Tensile strength 28/32 ✓

Diameter { At body of stay 2 3/8" ✓ No. of threads per inch 6 ✓ Area supported by each stay 18 1/4" x 12 3/4" ✓

Working pressure by Rules 168 Screw stays: Material Steel Tensile strength 26/30 ✓

Diameter { At turned off part 1 5/8" x 1 3/4" ✓ No. of threads per inch 9 ✓ Area supported by each stay 9 1/4" x 10 1/2" x 10 1/2" x 11 1/4" ✓



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Working pressure by Rules 153 Are the stays drilled at the outer ends no Margin stays: Diameter { At turned off part, 1 7/8" or Over threads 1 7/8" }
 No. of threads per inch 9 Area supported by each stay 11 1/4" x 12 5/8" Working pressure by Rules 150
 Tubes: Material Iron External diameter { Plain 3 1/4" Stay 3 1/4" } Thickness { 8 W G } No. of threads per inch 9
 Pitch of tubes 4 1/2" x 4 1/2" Working pressure by Rules 187 Manhole compensation: Size of opening in shell plate 16" x 20" Section of compensating ring 19 1/2" x 15" No. of rivets and diameter of rivet holes 32 1 1/2"
 Outer row rivet pitch at ends 6 5/8" 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 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 _____ 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 23 inclusive for boilers been complied with yes **THE CENTRAL MARINE ENGINE WORKS, (W. Gray & Co. Ltd.)**
 The foregoing is a correct description, in full
MANAGING DIRECTOR, C.M.E.W.

Dates of Survey { During progress of work in shops - - } _____ Are the approved plans of boiler and superheater forwarded herewith (if not state date of approval) _____
 while building { During erection on board vessel - - - } See report on Machinery Total No. of visits _____

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)

See accompanying machinery report

Survey Fee £ See Machinery Rpt. When applied for, 192
 Travelling Expenses (if any) £ _____ When received, 192

R.D. Shilston
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 30 JUL 1926
 Assigned See Rpt attached

