

Rpt. 5a.

REPORT ON BOILERS.

No. 16556

Received at London Office

Date of writing Report 4th Oct 1927 When handed in at Local Office 11.10.1927 Port of West Hartlepool
 No. in Reg. Book 43152 on the S. S. "UMBERLEIGH" Date, First Survey 25th May Last Survey 8th Oct 1927
 (Number of Visits ") Gross 4930 Tons Net 2965
 Master West Hartlepool Built at West Hartlepool By whom built Wm Gray & Co. Ltd. Yard No. 992 When built 1927
 Engines made at West Hartlepool By whom made Central Marine Engine Engine No. 992 When made 1927
 Boilers made at ditto By whom made Works Boiler No. 992 When made 1927
 Nominal Horse Power 1000 Owners Taken Steam Navigation Co Ltd Port belonging to London

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Steel Company of Scotland (Letter for Record S)
 Total Heating Surface of Boilers 7359 ft² Is forced draught fitted yes Coal or Oil fired coal
 No. and Description of Boilers 3 single ended Working Pressure 200 lb
 Tested by hydraulic pressure to 350 Date of test 15.7.27 No. of Certificate 3707 Can each boiler be worked separately yes
 Area of Firegrate in each Boiler 57 ft² No. and Description of safety valves to each boiler Cockburns improved High lift
 Area of each set of valves per boiler per Rule 7.14 as fitted 9.82 Pressure to which they are adjusted 205 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 10" 2 1/2" lagging + cladding Is oil fuel carried in the double bottom under boilers no
 Smallest distance between shell of boiler and tank top plating yes Is the bottom of the boiler insulated yes
 Largest internal dia. of boilers 14'-3 1/2" Length 12'-0" Shell plates: Material Steel Tensile strength 29/33
 Thickness 1 1/4" Are the shell plates welded or flanged no Description of riveting: circ. seams end 2 R Lap inter. yes
 long. seams Treb R. Butt St. Diameter of rivet holes in circ. seams 1 5/16" Pitch of rivets 4" 9 1/8"
 Percentage of strength of circ. end seams plate 67.2 rivets 66.2 of f. end. Percentage of strength of circ. intermediate seam plate 85.7 rivets 88.4 combined 88.8
 Percentage of strength of longitudinal joint plate 85.7 rivets 88.4 combined 88.8 Working pressure of shell by Rules 205 lbs
 Thickness of butt straps outer 1" inner 1 1/8" No. and Description of Furnaces in each Boiler 3 Deightons
 Material Steel Tensile strength 26/30 Smallest outside diameter 41 7/16"
 Length of plain part top 19" bottom 32" Thickness of plates crown 19" bottom 32" Description of longitudinal joint welded
 Dimensions of stiffening rings on furnace or c.c. bottom yes Working pressure of furnace by Rules 207 lbs
 End plates in steam space: Material Steel Tensile strength 26/30 Thickness 1 3/16" Pitch of stays 18"x20"
 How are stays secured Double nuts & washers. Working pressure by Rules 206 lb
 Tube plates: Material front Steel. back Steel. Tensile strength 26/30 Thickness front 3/32" back 1/16"
 Mean pitch of stay tubes in nests 11 1/4"x7 1/2" Pitch across wide water spaces 13 1/2" Working pressure front 236 lbs back 271 lbs
 Girders to combustion chamber tops: Material Steel Tensile strength 28/32 Depth and thickness of girder 9 1/2"x1 3/4"
 at centre 9 1/8"x1 3/4" Length as per Rule 34 1/2" Distance apart 9 1/2" No. and pitch of stays 3. 8 1/2"
 Working pressure by Rules 203. Combustion chamber plates: Material Steel
 Tensile strength 26/30 Thickness: Sides 1/16" Back 1/16" Top 1/16" Bottom 3/4"
 Pitch of stays to ditto: Sides 8 3/4"x9 1/4" Back 9"x9" Top 8 1/2"x9 1/2" Are stays fitted with nuts or riveted over nuts
 Working pressure by Rules 203 lbs Front plate at bottom: Material Steel Tensile strength 26/30
 Thickness 29/32" Lower back plate: Material Steel Tensile strength 26/30 Thickness 15/16"
 Pitch of stays at wide water space 13 1/2"x9" Are stays fitted with nuts or riveted over nuts
 Working Pressure 274 lbs Main stays: Material Steel Tensile strength 28/32
 Diameter At body of stay, 3 1/4" No. of threads per inch 6 Area supported by each stay 20"x18"
 Working pressure by Rules 204 lbs Screw stays: Material Steel Tensile strength 26/30
 Diameter At turned off part, 1 3/4" No. of threads per inch 9 Area supported by each stay 9 1/2"x8 1/2"

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Working pressure by Rules 224 lbs Are the stays drilled at the outer ends no Margin stays: Diameter { At turned off part, 1 1/8" or Over threads 1 1/8" Working pressure by Rules 211 lbs
No. of threads per inch 9 Area supported by each stay 11 1/4" x 9" Thickness { 9 W G No. of threads per inch 9
Tubes: Material Iron External diameter { Plain 2 1/2" Stay 2 1/2" Manhole compensation: Size of opening in
Pitch of tubes 3 3/4" x 3 3/4" Working pressure by Rules 230 + 267 No. of rivets and diameter of rivet holes 2
end shell plate 12" x 16" Section of compensating ring flanged Depth of flange if manhole flanged 4" Steam Dome: Material none
Outer row rivet pitch at ends ✓ 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 ✓ Diameter of rivet holes and pitch
How connected to shell ✓ Size of doubling plate under dome ✓ 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.

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

Dates { During progress of work in shops - - }
of Survey { During erection on board vessel - - }

See machinery report.

Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) Yes.
Total No. of visits 1

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

See accompanying machinery report

Survey Fee ... £
Travelling Expenses (if any) £

When applied for, 192
When received, 192

R.D. Shilston.

Engineer Surveyor to Lloyd's Register of Shipping.

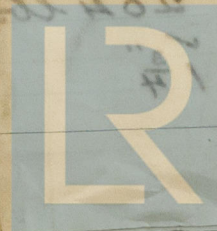
Committee's Minute

FM. 21 OCT 1927

Assigned

see minute

on Hpl Rpt 1655B attached



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