

# REPORT ON BOILERS.

No. 16505

Received at London Office

29 JUN 1927

14.19. Date of writing Report 25.6.1927. Port of WEST HARTLEPOOL

No. in Surrey held at West Hartlepool Date, First Survey 26<sup>th</sup> January Last Survey 21<sup>st</sup> June 1927

on the S.S. "ROMANBY" (Number of Visits ) Gross 4887 Tons Net 2997

27. Master Built at West Hartlepool By whom built Wm Gray & Co. Ld. Yard No. 987 When built 1927

Engines made at West Hartlepool By whom made Central Marine Engine Works Engine No. 987 When made 1927

27. Boilers made at ditto By whom made ditto Boiler No. 987 When made 1927

nominal Horse Power Owners Port belonging to

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

1. S. Manufacturers of Steel D. Colville & Sons Ld. (Letter for Record S)

13/6. Total Heating Surface of Boilers 7614 sq. ft. Is forced draught fitted yes Coal or Oil fired Coal

2. No. and Description of Boilers Three single ended. Working Pressure 180 lbs

3. Tested by hydraulic pressure to 320 lb Date of test 20.5.27 No. of Certificate 3698 Can each boiler be worked separately yes

4. Area of Firegrate in each Boiler 63 3/4 sq. ft. No. and Description of safety valves to each boiler 2 Cockburns high lift

5. Area of each set of valves per boiler (per Rule 10.85 as fitted 11.88) Pressure to which they are adjusted 185 lb Are they fitted with easing gear yes

6. In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler

7. Smallest distance between boilers or uptakes and bunkers or woodwork no side bunkers Is oil fuel carried in the double bottom under boilers no

8. Smallest distance between shell of boiler and tank top plating Is the bottom of the boiler insulated

9. Largest internal dia. of boilers 15'-9 7/16" Length 11'-0" Shell plates: Material Steel Tensile strength 28/32

10. Thickness 1 9/32" Are the shell plates welded or flanged no Description of riveting: circ. seams (end D.R. J.R. J.S.) inter. 4 3/8" Pitch of rivets 9 1/4"

11. Circ. seams J.R. D.B.S. Diameter of rivet holes in (circ. seams 1 3/8" long. seams 1 5/16" Percentage of strength of circ. end seams (plate 68.5 rivets 61.7 Percentage of strength of circ. intermediate seam (plate 85.8 rivets 87.8 combined 89.1 Working pressure of shell by Rules 180 lbs

12. Percentage of strength of longitudinal joint (plate 85.8 rivets 87.8 combined 89.1 Working pressure of shell by Rules 180 lbs

13. Thickness of butt straps (outer 1" inner 1 1/8" No. and Description of Furnaces in each Boiler 3 Deightons Smallest outside diameter 46 1/16"

14. Material Steel Tensile strength 26/30 Thickness of plates (crown 19" bottom 32" Description of longitudinal joint Welded

15. Length of plain part (top bottom) Working pressure of furnace by Rules 188 lbs

16. Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules 188 lbs

17. Stays in steam space: Material Steel Tensile strength 26/30 Thickness 1 5/16" Pitch of stays 21" x 21 1/2"

18. How are stays secured Double nuts & washers Working pressure by Rules 181 lbs

19. Stays plates: Material (front steel back steel) Tensile strength 26/30 Thickness (8" 13" 7/16" Working pressure (front 185 lbs back 187 lbs

20. Pitch of stay tubes in nests 13 1/2" x 9" Pitch across wide water spaces 14 1/4" x 9" Working pressure (front 185 lbs back 187 lbs

21. Stays to combustion chamber tops: Material Steel Tensile strength 28/32 Depth and thickness of girder (entre 9 1/4" x 1 1/2" Length as per Rule 35 1/2" Distance apart 9" No. and pitch of stays (each Three 9" Working pressure by Rules 180 lbs

22. Tensile strength 26/30 Thickness: Sides 2 1/32" Back 2 1/32" Top 2 1/32" Bottom 3/4" Combustion chamber plates: Material Steel

23. Pitch of stays to ditto: Sides 9 1/4" x 9" Back 9 1/4" x 9" Top 9" x 9" Are stays fitted with nuts or riveted over nuts Working pressure by Rules 183 lbs

24. Thickness 7/8" Front plate at bottom: Material Steel Tensile strength 26/30 Lower back plate: Material Steel Tensile strength 26/30 Thickness 7/8"

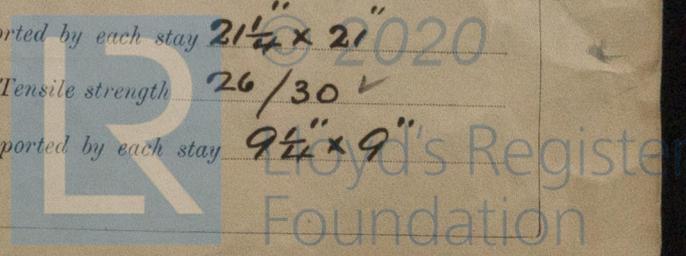
25. Pitch of stays at wide water space 16" x 9 1/4" Are stays fitted with nuts or riveted over nuts Working Pressure 183 lbs

26. Main stays: Material Steel Tensile strength 28/32

27. Diameter (At body of stay, or Over threads) 3 3/8" No. of threads per inch 6 Area supported by each stay 21 1/4" x 21"

28. Working pressure by Rules 194 lbs Screw stays: Material Steel Tensile strength 26/30

29. Diameter (At turned off part, or Over threads) 1 5/8" No. of threads per inch 9 Area supported by each stay 9 1/4" x 9"



Working pressure by Rules 183lb Are the stays drilled at the outer ends no Margin stays: Diameter <sup>At turned off part.</sup> 1 7/8" or <sup>Over threads</sup> 1 7/8" ✓  
 No. of threads per inch 9 ✓ Area supported by each stay 11 1/2" x 9 1/4" Working pressure by Rules 200lb  
 Tubes: Material Iron ✓ External diameter <sup>Plain</sup> 3 1/4" ✓ <sup>Stay</sup> 3 1/4" ✓ Thickness <sup>9 W.G.</sup> 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 180lb Manhole compensation: Size of opening in shell plate 16" x 20" ✓ Section of compensating ring 21" x 1 9/32" ✓ No. of rivets and diameter of rivet holes 28 1 1/2" ✓  
 Outer row rivet pitch at ends 10" ✓ 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 <sup>Plate</sup> \_\_\_\_\_ <sup>Rivets</sup> \_\_\_\_\_  
 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 <sup>Tubes</sup> \_\_\_\_\_ <sup>Steel castings</sup> \_\_\_\_\_  
 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.

yes. FOR THE CENTRAL MARINE ENGINE WORKS,  
 The foregoing ~~is~~ ~~correct~~ description,  
John H. Seaman Manufacturer.  
 DIRECTOR J.S.

Dates of Survey <sup>During progress of work in shops - - -</sup> \_\_\_\_\_  
<sup>while building</sup> <sup>During erection on board vessel - - -</sup> See machinery report

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

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

See accompanying machinery report.

Survey Fee ... .. £ : : 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 FM 1 JUL 1927  
 Assigned See S.P. attached