

REPORT ON BOILERS.

No. 16833

13 MAR 1930

Received at London Office

15 DEC 1929

Date of writing Report *26. 2. 1930* When handed in at Local Office *11. 3. 1930* Port of *Grimby*
 No. in Survey held at *Lincoln* Date, First Survey *25. 9. 29* Last Survey *26. 12. 1929*
 of opening. Book.
 on the *MV "MOORDRECHT"* (Number of Visits *12*) Gross *7495* Tons Net *4598*
 Built at *Rotterdam* By whom built *Rotterdamsche Droogdok Maatschappij* Yard No. *503* When built *1926*
 Engines made at *Glasgow* By whom made *Harland & Wolff* Engine No. *6264* When made *1920*
 Boilers made at *Lincoln* By whom made *Babcock & Wilcox, Ltd.* Boiler No. *69/192* When made *1930*
 Nominal Horse Power *652* Owners *Stoomv. Mij. "De Maas"* Port belonging to *Rotterdam*

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel *Parkgate 1st Lb. Ld. Appleby Iron Works.* (Letter for Record)
 Total Heating Surface of Boilers *1366 sq. ft.* Is forced draught fitted ☒ Coal or Oil fired *oil*
 No. and Description of Boilers *One Spence, Maccourt, Kirk Patent back Heat* Working Pressure *10 Kilo/4 cm.*
 Tested by hydraulic pressure to *263 lb. H₂O* Date of test *7/2/30* No. of Certificate *285* Can each boiler be worked separately ☒
 Area of Firegrate in each Boiler *none* No. and Description of safety valves to each boiler *One, double, spring loaded*
 Area of each set of valves per boiler *per Rule 13. 7. 19. 24* Pressure to which they are adjusted *adjusted* 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 ☒ Is oil fuel carried in the double bottom under boilers
 Smallest distance between shell of boiler and tank top plating ☒ Is the bottom of the boiler insulated
 Largest internal dia. of boilers *6'-6"* Length *10'-6"* Shell plates: Material *S. K. steel* Tensile strength *28/32 Tons*
 Thickness *19/32"* Are the shell plates welded or flanged *no* Description of riveting: circ. seams *end S. K. Lap*
 long. seams *D. R. B. straps* Diameter of rivet holes in *circ. seams 1 7/32 2 1/32* Pitch of rivets *3", 2.18", 2.19"*
 Percentage of strength of circ. end seams *plate 52.8 rivets 52.75* Percentage of strength of circ. intermediate seam *plate 66.8 rivets 68.0*
 Percentage of strength of longitudinal joint *plate 76 rivets 81 combined* Working pressure of shell by Rules *169 lb.*
 Thickness of butt straps *outer 19/32 inner 19/32* No. and Description of Furnaces in each Boiler *none*
 Material ☒ Tensile strength ☒ Smallest outside diameter ☒
 Length of plain part *top bottom* Thickness of plates *coron bottom* Description of longitudinal joint ☒
 Dimensions of stiffening rings on furnace or c.c. bottom ☒ Working pressure of furnace by Rules ☒
 End plates in steam space: Material *S. K. steel* Tensile strength *26/30 T.* Thickness *7/8"* Pitch of stays *14" x 9"*
 How are stays secured *double nut & washers* Working pressure by Rules *221 lb. sq. in.*
 Tube plates: Material *front S. K. steel back - - -* Tensile strength *26/30 Tons.* Thickness *1 1/8" x 7/8" 7/8"*
 Mean pitch of stay tubes in nests *10"* Pitch across wide water spaces *16" 13"* Working pressure *front 277 lb. sq. in. back 277 lb. sq. in.*
 Girders to combustion chamber tops: Material ☒ Tensile strength ☒ Depth and thickness of girder
 at centre ☒ Length as per Rule ☒ Distance apart ☒ No. and pitch of stays
 in each ☒ Working pressure by Rules ☒ Combustion chamber plates: Material
 Tensile strength ☒ Thickness: Sides ☒ Back ☒ Top ☒ Bottom ☒
 Pitch of stays to ditto: Sides ☒ Back ☒ Top ☒ Are stays fitted with nuts or riveted over
 Working pressure by Rules ☒ Front plate at bottom: Material ☒ Tensile strength ☒
 Thickness ☒ Lower back plate: Material ☒ Tensile strength ☒ Thickness ☒
 Pitch of stays at wide water space ☒ Are stays fitted with nuts or riveted over ☒
 Working Pressure ☒ Main stays: Material ☒ Tensile strength ☒
 Diameter *At body of stay, Over threads* No. of threads per inch ☒ Area supported by each stay ☒
 Working pressure by Rules ☒ Screw stays: Material ☒ Tensile strength ☒
 Diameter *At turned off part, Over threads* No. of threads per inch ☒ Area supported by each stay ☒

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W347-0134

Working pressure by Rules ✓ Are the stays drilled at the outer ends ✓ Margin stays: Diameter { At turned off part, or Over threads ✓

No. of threads per inch - Area supported by each stay ✓ Working pressure by Rules -

Tubes: Material *h.f.* ✓ External diameter { Plain $1\frac{1}{2}$ " ✓ Stay $1\frac{3}{4}$ " & $1\frac{5}{8}$ " Thickness { $\frac{1}{4}$ " & $\frac{3}{16}$ " No. of threads per inch 9 ✓

Pitch of tubes $2\frac{1}{2}$ " ✓ Working pressure by Rules 277 *lb.* ✓ Manhole compensation: Size of opening

dome shell plate $16" \times 12"$ Section of compensating ring *none* No. of rivets and diameter of rivet holes *none*

Outer row rivet pitch at ends ✓ Depth of flange if manhole flanged $3\frac{1}{2}"$ from *up of* ✓ Steam Dome: Material *h.f. steel*

Tensile strength $26/30$ *Tan* Thickness of shell $\frac{3}{8}"$ ✓ Description of longitudinal joint *S.R. 2 B. joint* ✓

Diameter of rivet holes $\frac{11}{16}"$ ✓ Pitch of rivets 2" Percentage of strength of joint { Plate 65.6 Rivets 75.8

Internal diameter 2'-0" ✓ Working pressure by Rules 258 *lb.* ✓ Thickness of crown $\frac{1}{2}"$ No. and diameter

stays *none* Inner radius of crown 2'-0" ✓ Working pressure by Rules 179 *lb.* ✓

How connected to shell *riveted* ✓ Size of doubling plate under dome $2'-11\frac{3}{8}" \times \frac{7}{8}"$ Diameter of rivet holes and

of rivets in outer row in dome connection to shell $1" \times 3.64$

Type of Superheater 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

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

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*

Request form attached to Gen. Rpt. No. 16834

The foregoing is a correct description, *Yes*

BABCOCK & WILCOX LTD. (Lincoln Branch) Manufacture

Dates of Survey { During progress of work in shops - - 1929 Sep 25 Oct 19 Dec 18 23 1930 Are the approved plans of boiler and superheater forwarded herewith *Yes* (If not state date of approval.)

while building { During erection on board vessel - - - Jan 2 9 15 31 Feb 7 26

Total No. of visits 12

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) *This boiler has been built under special survey and in accordance with the Rules and approved plans as per Secy's letters of the 20/9/29 & 3/10/29. The materials and workmanship are good.*

Survey Fee £ 9 : 0 : 0 } When applied for, 24.2.1930 *as per*

Travelling Expenses (if any) £ 1 : 18 : 6 } When received, 14.3.1930 *as per*

W. G. H. Kinley
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **FRI, 19 DEC 1930**

Assigned *See Rot. J.E. 19937*