

REPORT ON BOILERS.

No. 30449

Received at London Office

30 AUG 1930

29 AUG. 1930

Date of writing Report

192

When handed in at Local Office

192

Port of *Londonderry*

No. in Survey held at

*Londonderry*Date, First Survey *15 May*Last Survey *27 Aug 1930*

Reg. Book

(Number of Visits *12*)Gross *9463*

on the

*M. V. LONGWOOD*Tons Net *5559*

Master

Built at *Londonderry*By whom built *John J. Jacobs & Co. Ltd.*Yard No. *712*When built *1920*Engines made at *Londonderry*By whom made *John J. Jacobs & Co. Ltd.*Engine No. *451*When made *1920*Boilers made at *Londonderry*By whom made *George Black Ltd.*Boiler No. *11942*When made *1930*Nominal Horse Power *709*Owners *John J. Jacobs & Co. Ltd.*Port belonging to *Londonderry*

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel *Thyssen Works Mulheim*(Letter for Record *S*)Total Heating Surface of Boilers *3390 sq ft (2 boilers)*Is forced draught fitted *yes*Coal or Oil fired *oil*No. and Description of Boilers *2 High Pressure (S.E.)*Working Pressure *150 lbs/sq in*Tested by hydraulic pressure to *275 lbs/sq in*Date of test *26/5/30*No. of Certificate *4101*Can each boiler be worked separately *yes*Area of Firegrate in each Boiler *✓*No. and Description of safety valves to each boiler *Two spring loaded*Area of each set of valves per boiler *per Rule 7.70"*as fitted *9.816"*Pressure to which they are adjusted *155 lbs/sq in*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 *8'-0"*Is oil fuel carried in the double bottom under boilers *No. FITTED TWEEN DECK*Smallest distance between shell of boiler and tank top plating *✓*Is the bottom of the boiler insulated *YES*Largest internal dia. of boilers *12'-11 1/8"*Length *11'-6"*Shell plates: Material *Steel*Tensile strength *28 to 32 tons*Thickness *7/8"*Are the shell plates welded or flanged *No*Description of riveting: circ. seams *end*inter. *DR*long. seams *TRDAS*Diameter of rivet holes in *circ. seams 15/16"*long. seams *15/16"*Pitch of rivets *2 1/8"*Percentage of strength of circ. end seams *plate 67.2%*rivets *43.5%*Percentage of strength of circ. intermediate seam *plate 85.29%*rivets *92%*Percentage of strength of longitudinal joint *combined 91%*Working pressure of shell by Rules *150 lbs/sq in*Thickness of butt straps *outer 1 1/8"*inner *1 1/8"*No. and Description of Furnaces in each Boiler *Three Jefferies*Material *Steel*Tensile strength *26 to 30 tons*Smallest outside diameter *2'-11 1/8"*Length of plain part *top 1'*bottom *1'*Thickness of plates *crown 1 1/8"*bottom *1 1/8"*Description of longitudinal joint *Welded*Dimensions of stiffening rings on furnace or c.c. bottom *✓*Working pressure of furnace by Rules *164 lbs/sq in*End plates in steam space: Material *Steel*Tensile strength *26 to 30 tons*Thickness *1 1/8"*Pitch of stays *19 x 1 1/2"*How are stays secured *DN & W*Working pressure by Rules *161 lbs/sq in*Tube plates: Material *Steel*Tensile strength *26 to 30 tons*Thickness *7/8"*front *3/4"*back *250"*Mean pitch of stay tubes in nests *10 x 8"*Pitch across wide water spaces *13 1/4 x 8"*Working pressure *front 345 lbs/sq in*back *250"*Girders to combustion chamber tops: Material *Steel*Tensile strength *29 to 33 tons*

Depth and thickness of girder

at centre *8 3/8 x 1 3/4"*Length as per Rule *37 1/8"*Distance apart *9"*

No. and pitch of stays

in each *329"*Working pressure by Rules *154 lbs/sq in*Combustion chamber plates: Material *Steel*Tensile strength *26 to 30 tons*Thickness: Sides *1/8"*Back *5/8"*Top *1/8"*Bottom *1/8"*Pitch of stays to ditto: Sides *9 x 9 3/8"*Back *9 x 9 3/4"*Top *9 x 9 7/8"*Are stays fitted with nuts or riveted over *Nuts*Working pressure by Rules *151 lbs/sq in*Front plate at bottom: Material *Steel*Tensile strength *26 to 30 tons*Thickness *7/8"*Lower back plate: Material *Steel*Tensile strength *26 to 30 tons*Thickness *1 1/8"*Pitch of stays at wide water space *15 1/2 x 9"*Are stays fitted with nuts or riveted over *Nuts*Working Pressure *167 lbs/sq in*Main stays: Material *Steel*Tensile strength *28 to 32 tons*Diameter *At body of stay, 2 1/2"*or *Over threads, 2 7/8"*No. of threads per inch *6*Area supported by each stay *19 x 1 1/2"*Working pressure by Rules *165 lbs/sq in*Screw stays: Material *Steel*Tensile strength *26 to 30 tons*Diameter *At turned off part, 1 5/8"*or *Over threads, 1 5/8"*No. of threads per inch *9*Area supported by each stay *9 x 9 1/8"*

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Working pressure by Rules *169 lbs* Are the stays drilled at the outer ends *No* Margin stays: Diameter *1 3/4"* (At turned off part, or Over threads)
No. of threads per inch *9* Area supported by each stay *12 1/2" x 9"* Working pressure by Rules *159 lbs*
Tubes: Material *Steel* External diameter *2 3/4"* (Plain Stay) Thickness *8 W.G.* *5/16"* No. of threads per inch *9*
Pitch of tubes *4"* Working pressure by Rules *215 lbs* Manhole compensation: Size of opening in shell plate *16" x 20"* Section of compensating ring *10 1/2" x 7/8"* No. of rivets and diameter of rivet holes *40 @ 1 1/8"*
Outer row rivet pitch at ends *7 1/4"* Depth of flange if manhole flanged *3 1/2"* 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 *-* 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 *-* 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 22 inclusive for boilers been complied with *Yes.*

The foregoing is a correct description,

W. B. Munn

Manufacturer.

Dates of Survey *During progress of work in shops - - May 15, 17, 20, 22, 23, 26, 30.* Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.)
while building - - During erection on board vessel - - June 2, 5, 11, 16, Aug. 27
Total No. of visits *12*

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

These boilers have been built under Special License & the materials & workmanship are good. On completion they were satisfactorily fitted in the vessel & the safety valves adjusted under steam. For notation see machinery report.

Survey Fee *£ 28-5-0* When applied for, *8 Aug 1930.*
Travelling Expenses (if any) *£ :* When received, *13 Aug 1930 H.W.*

Harbottle.
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute *FRI. 5 SEP 1930*

Assigned

See F.E. Rpt.



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