

## REPORT ON BOILERS.

No. 83200

Received at London Office 1 SEP 1928

Date of writing Report 1928 When handed in at Local Office 4 8 1928 Port of Newcastle-on-Tyne

No. in Survey held at Wallsend-on-Tyne Date, First Survey 12 Sept/27 Last Survey 2 Aug 1928

Reg. Book. on the New Steel S.S. "Caspia" (Number of Visits 1) Gross 6018 Tons Net 3720

Master Built at Walker By whom built J. W. G. Armstrong & Co Yard No. 1036 When built 1928

Engines made at Wallsend By whom made Wallsend Shipways & E. Coy Ltd Engine No. 845 When made 1928

Donkey Boilers made at Wallsend By whom made Wallsend Shipways & E. Coy Ltd Boiler No. 352B When made 1928

Nominal Horse Power Owners Port belonging to

MULTITUBULAR BOILERS ~~MAIN, AUXILIARY OR~~ DONKEY.

Manufacturers of Steel Steel Company of Scotland (Letter for Record S.)

Total Heating Surface of Boilers 1212 sq ft Is forced draught fitted ho Coal or Oil fired coals oil

No. and Description of Boilers One single ended Working Pressure 120 lbs

Tested by hydraulic pressure to 230 lbs Date of test 6-2-28 No. of Certificate 257 Can each boiler be worked separately yes

Area of Firegrate in each Boiler 40 sq ft No. and Description of safety valves to each boiler Two spring loaded, high lift

Area of each set of valves per boiler (per Rule 13.4) Pressure to which they are adjusted 125 lbs Are they fitted with easing gear yes

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

Smallest distance between boiler uptakes and bunkers 3'-0" Is oil fuel carried in the double bottom under boilers ho

Smallest distance between shell of boiler and tank top plating on tween deck Is the bottom of the boiler insulated ho

Largest internal dia. of boilers 11'-10 9/16" Length 10'-4 1/2" Shell plates: Material Steel Tensile strength 28 to 32 tons

Thickness 3/32" Are the shell plates welded or flanged ho Description of riveting: circ. seams (end inter.) 3/4" 4 1/8"

long. seams D.R.D.B.S. Diameter of rivet holes in (circ. seams) 29/32 (long. seams) 29/32 Pitch of rivets 3/4" 4 1/8"

Percentage of strength of circ. end seams (plate rivets) 43.6 Percentage of strength of circ. intermediate seam (plate rivets) 81.4

Percentage of strength of longitudinal joint (plate rivets) 85.0 Working pressure of shell by Rules 122 lbs

Thickness of butt straps (outer) 23/32 (inner) 3/32 No. and Description of Furnaces in each Boiler Three corrugated (Brighton)

Material Steel Tensile strength 26 to 30 tons Smallest outside diameter 32 3/4"

Length of plain part (top) Thickness of plates (crown) 13/32 (bottom) 3/32 Description of longitudinal joint weld.

Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules 145 lbs

End plates in steam space: Material Steel Tensile strength 26 to 30 tons Thickness 1/8" Pitch of stays 14 x 16 1/2"

How are stays secured Double nuts Working pressure by Rules 125 lbs

Tube plates: Material (front back) Steel Tensile strength 26 to 30 tons Thickness 13/16" 1 1/16"

Mean pitch of stay tubes in nests 10 3/32" Pitch across wide water spaces 14" Working pressure (front back) 122 lbs 128 lbs

Girders to combustion chamber tops: Material Steel Tensile strength 28 to 32 tons Depth and thickness of girder 6 1/8" x 1 1/2"

at centre Length as per Rule 2'-4 1/4" Distance apart 9" No. and pitch of stays 2 @ 8 3/4"

Tensile strength 26 to 30 tons Thickness: Sides 9/16" Back 9/16" Top 9/16" Bottom 9/16"

Pitch of stays to ditto: Sides 10" x 8 3/4" Back 9 3/8" x 9 3/8" Top 9" x 8 3/4" Are stays fitted with nuts or riveted over nuts

Working pressure by Rules 123 lbs Front plate at bottom: Material Steel Tensile strength 26 to 30 tons

Thickness 13/16" Lower back plate: Material Steel Tensile strength 26 to 30 tons Thickness 1/16"

Pitch of stays at wide water space 13 3/4" Are stays fitted with nuts or riveted over nuts

Working Pressure 134 lbs Main stays: Material Steel Tensile strength 28 to 32 tons

Diameter (At body of stay, or over threads) 2 1/4" No. of threads per inch 6 Area supported by each stay 980.5 sq in

Working pressure by Rules 123 lbs Screw stays: Material Steel Tensile strength 26 to 30 tons

Diameter (At turned off part, or over threads) 1 1/2" No. of threads per inch 9 Area supported by each stay 84.89 sq in

Working pressure by Rules *143 lbs* Are the stays drilled at the outer ends *no* Margin stays: 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 *108.36"* Working pressure by Rules *140 lbs*

Tubes: Material *lin* External diameter { Plain *3 1/4"* Thickness *5/16 + 1/8"* No. of threads per inch *9*

Pitch of tubes *4 3/8" x 4 3/8"* Working pressure by Rules *plain 230, stay 169 lbs* Manhole compensation: Size of opening *4 1/2" @ 2 3/8"*

shell plate *19 x 15"* Section of compensating ring *4 5/8" x 2 3/8"* No. of rivets and diameter of rivet holes *44 @ 2 3/8"*

Outer row rivet pitch at ends *4 1/8"* Depth of flange if manhole flanged *2 3/8"* Steam Dome: Material *none.*

Tensile strength *1001* Thickness of shell *1/2"* Description of longitudinal joint *butt*

Diameter of rivet holes *3/8"* Pitch of rivets *2 3/8"* Percentage of strength of joint { Plate *100* Rivets *100*

Internal diameter *14 1/2"* Working pressure by Rules *140 lbs* Thickness of crown *1/2"* No. and diameter of stays *16* Working pressure by Rules *140 lbs*

How connected to shell *direct* Size of doubling plate under dome *1/2" x 14 1/2"* Diameter of rivet holes and pitch of rivets in outer row in dome connection to shell *4 1/8" @ 2 3/8"*

Type of Superheater *none.* Manufacturers of { Tubes *Walsby* Steel castings *Walsby*

Number of elements *1* Material of tubes *lin* Internal diameter and thickness of tubes *3 1/4" x 1/8"*

Material of headers *lin* Tensile strength *1001* Thickness *1/2"* Can the superheater be shut off and the boiler be worked separately *yes*

Area of each safety valve *1 1/2"* Are the safety valves fitted with easing gear *yes* Working pressure as per Rules *140 lbs* Pressure to which the safety valves are adjusted *140 lbs* Hydraulic test pressure *210 lbs*

tubes *lin* castings *lin* and after assembly in place *yes* Are drain cocks or valves fitted to free the superheater from water where necessary *yes*

Have all the requirements of Sections 14 to 23 inclusive for boilers been complied with *yes.*

FOR THE WALLSEND SLIPWAY & ENGINEERING CO. LIMITED  
The foregoing is a correct description,  
*W. Wallsend* Manufacture.

Dates of Survey { During progress of work in shops - *11/11/28* Please see Machinery Report. Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) *yes*

while building { During erection on board vessel - *11/11/28* Total No. of visits *1*

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)  
*This Boiler has been built under Special Survey, Materials & workmanship good. Hydraulic test satisfactory. It is securely fixed in place. Was examined under steam & safety valves adjusted.*

*11/11/28* *11/11/28* *11/11/28* *11/11/28* *11/11/28* *11/11/28* *11/11/28* *11/11/28* *11/11/28* *11/11/28*

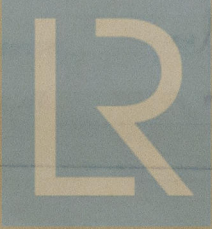
Survey Fee *£ 192* When applied for, *192*

Travelling Expenses (if any) *£ 192* When received, *192*

*William P. Butler.*  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute *FRI. 7 SEP 1928*

Assigned *See P.E. rpt. attached*

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