

# REPORT ON BOILERS.

Glasgow No. 67058

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Date of writing Report 4-3-43 When handed in at Local Office 25-3-43 Port of Garrow.

No. in Reg. Book. Barrow. Date, First Survey 3-2-42 Last Survey 3-3-1943

on the S/S "EMPIRE MIRANDA" (Number of Visits, 27) Tons { Gross Net

Master     Built at St. Glasgow By whom built Lithgrouse & Co. Yard No. 983 When built 1943

Engines made at Glasgow By whom made D. Brown & Co. Ltd. Engine No. 1123 When made 1943

Boilers made at Barrow. By whom made Vickers-Armstrongs Ltd. Boiler No. 848 When made 1943

Nominal Horse Power 509 Owners Ministry of War Transport Port belonging to GREENOCK

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

Manufacturers of Steel Colville's & Steel Co of Scotland. (Letter for Record S)

Total Heating Surface of Boilers 7248 sq. ft. Is forced draught fitted Yes. Coal or Oil fired Coal

No. and Description of Boilers 3. S.B. Working Pressure 220 lbs/sq. in.

Tested by hydraulic pressure to 380 lbs/sq. in. Date of test 11.1.43 No. of Certificate 489 Can each boiler be worked separately Yes

Area of Firegrate in each Boiler 54.8 sq. ft. No. and Description of safety valves to each boiler 2 - Improved high lift. Spring loaded.

Area of each set of valves per boiler { per Rule 6.42 sq. ft. as fitted 9.82 sq. ft. Pressure to which they are adjusted 220 lbs. 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 hull clear Is oil fuel carried in the double bottom under boilers No

Smallest distance between shell of boiler and tank top plating 26" Is the bottom of the boiler insulated Yes

Largest internal dia. of boilers 15' - 0 1/16" Length 11' - 6" Shell plates: Material Steel Tensile strength 29/33 tons/sq. in.

Thickness 1 15/32" Are the shell plates welded or flanged No Description of riveting: circ. seams { end D.R. Lap. inter.    

long. seams T.R. - D.B.S. Diameter of rivet holes in { circ. seams 1 31/64" long. seams do. Pitch of rivets { 4.07" 10 7/32"

Percentage of strength of circ. end seams { plate 63.5% rivets 45.8% Percentage of strength of circ. intermediate seam { plate 85.4% rivets 88.4%

Percentage of strength of longitudinal joint { plate 85.4% rivets 88.4% combined 88.5% Working pressure of shell by Rules    

Thickness of butt straps { outer 1 1/8" inner 1 1/4" No. and Description of Furnaces in each Boiler 3 - cf. Dugton section.

Material Steel Tensile strength 26/30 tons/sq. in. Smallest outside diameter 45 1/4"

Length of plain part { top     bottom     Thickness of plates { crown 1 1/16" bottom     Description of longitudinal joint Welded.

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

End plates in steam space: Material Steel Tensile strength 26/30 tons/sq. in. Thickness 1 13/32" Pitch of stays 20" x 21"

How are stays secured Nuts inside & out. Working pressure by Rules    

Tube plates: Material { front Steel back Steel Tensile strength { 26/30 tons/sq. in. do. Thickness { 15/16" 25/32"

Mean pitch of stay tubes in nests 9 7/16" Pitch across wide water spaces 14" x 8 1/4" Working pressure { front     back    

Girders to combustion chamber tops: Material Steel Tensile strength 28/32 tons/sq. in. Depth and thickness of girder    

at centre 10 1/2" x 1 3/8" (2 x 1/16") Length as per Rule 2' - 9 7/16" Distance apart 9 1/4" No. and pitch of stays    

in each 3 @ 8" pitch Working pressure by Rules     Combustion chamber plates: Material Steel

Tensile strength 26/30 tons/sq. in. Thickness: Sides 1 1/16" Back 25/32" Top 1 1/16" Bottom 1 3/16"

Pitch of stays to ditto: Sides 8" x 9 1/4" Back 8" x 9 1/4" Top 8" x 9 1/4" Are stays fitted with nuts or riveted over Nuts

Working pressure by Rules     Front plate at bottom: Material Steel Tensile strength 26/30 tons/sq. in.

Thickness 15/16" Lower back plate: Material Steel Tensile strength 26/30 tons/sq. in. Thickness 27/32"

Pitch of stays at wide water space 14" x 8" Are stays fitted with nuts or riveted over Nuts

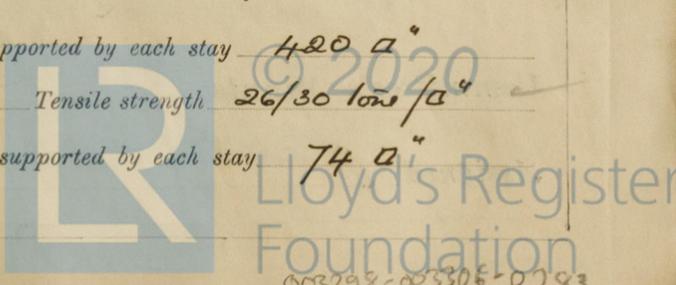
Working Pressure     Main stays: Material Steel Tensile strength 28/32 tons/sq. in.

Diameter { At body of stay, 3 1/4" No. of threads per inch 6 Area supported by each stay 420 sq. in.

Working pressure by Rules     Screw stays: Material Steel Tensile strength 26/30 tons/sq. in.

Diameter { At turned off part, 1 3/4" No. of threads per inch 9 Area supported by each stay 74 sq. in.

Is a Report also sent on the Hull of the Ship?



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