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# REPORT ON BOILERS.

No. 68149

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Date of writing Report 16 2 - 1944 When handed in at Local Office 28. 2. 1944 Port of GLASGOW.

No. in Survey held at CLYDEBANK. Date, First Survey 21. 8. 1942 Last Survey 12. 1. 1944

on the S.S. "EMPIRE KUMASI" (Number of Visits 81) Tons {Gross 7301 Net 4935}

Master Built at Port Glasgow By whom built Wm Hamilton & Co Ltd Yard No. 465 When built 1944

Engines made at Glasgow By whom made Fairfield S.B. & E. Co. Ltd Engine No. 699 When made 1943

Boilers made at CLYDEBANK. By whom made JOHN BROWN & CO. LTD. Boiler No. A.64 When made 1944

Nominal Horse Power 558 Owners Ministry of War Transport Port belonging to Greenock

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

Manufacturers of Steel COLVILLES Ltd. (Letter for Record S. ✓)

Total Heating Surface of Boilers 5920 square feet Is forced draught fitted Yes. ✓ Coal or Oil fired Coal. ✓

No. and Description of Boilers 2 - Multitubular Working Pressure 220 ✓

Tested by hydraulic pressure to 380 Date of test 20. 9. 43. No. of Certificate 21506 Can each boiler be worked separately Yes ✓

Area of Firegrate in each Boiler 66.6 sq. ft. No. and Description of safety valves to each boiler 2 - 3 1/2" S.L. ✓

Area of each set of valves per boiler {per Rule 15.74 sq. in. Pressure to which they are adjusted 220 lb. Are they fitted with easing gear Yes. ✓  
{as fitted 16.58 sq. in.}

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 1'-9" Is oil fuel carried in the double bottom under boilers No. ✓

Smallest distance between shell of boiler and tank top plating 3'-3" Is the bottom of the boiler insulated Yes. ✓

Largest internal dia. of boilers 16'-1 29/64" Length 12'-0 15/16" Shell plates: Material S Tensile strength 29-33 ✓

Thickness 1 35/64" Are the shell plates welded or flanged No. Description of riveting: circ. seams {end D.R. Nil. ✓  
{inter. Nil. ✓

Long. seams T.R.D.B.S. Diameter of rivet holes in {circ. seams B. 1 9/16", F. 1 1/8" Pitch of rivets {B. 4.196", F. 3.4" ✓  
{long. seams 1 9/16"}

Percentage of strength of circ. end seams {plate F. 60 B. 62.7 ✓  
{rivets F. 44.7 B. 47 ✓ Percentage of strength of circ. intermediate seam {plate - - ✓  
{rivets - - ✓

Percentage of strength of longitudinal joint {plate 85.5 ✓  
{rivets 85.26 ✓ Working pressure of shell by Rules - - ✓  
{combined 88.13 ✓

Thickness of butt straps {outer 1 11/64" ✓  
{inner 1 19/64" ✓ No. and Description of Furnaces in each Boiler 4 - Deighton ✓

Material S. Tensile strength 26.30 Smallest outside diameter 3' 5 1/4" ✓

Length of plain part {top - Thickness of plates {crown 5/8" ✓  
{bottom - Description of longitudinal joint Weld ✓

Dimensions of stiffening rings on furnace or c.c. bottom None Working pressure of furnace by Rules - -

End plates in steam space: Material S Tensile strength 26.30 Thickness 1 13/32" Pitch of stays 20.0" x 21 1/2" ✓

How are stays secured D.N. Working pressure by Rules - -

Tube plates: Material {front S. Tensile strength {26-30 ✓  
{back S. Thickness {15/16" ✓  
{25/32" ✓

Mean pitch of stay tubes in nests 10" Pitch across wide water spaces 14" Working pressure {front - - ✓  
{back - - ✓

Girders to combustion chamber tops: Material S. Tensile strength 28-32 Depth and thickness of girder

at centre 10" x 1 3/4" Length as per Rule 36.6" Distance apart 9 3/8" No. and pitch of stays

in each 3 - 8 1/2" Working pressure by Rules - - Combustion chamber plates: Material S. ✓

Tensile strength 26.30 Thickness: Sides 25/32" Back 21/32" Top 25/32" Bottom 25/32" ✓

Pitch of stays to ditto: Sides 8 3/4" x 9 5/8" Back 8 1/2" x 8" Top 9 5/8" x 8 1/2" Are stays fitted with nuts or riveted over Nuts ✓

Working pressure by Rules - - Front plate at bottom: Material S Tensile strength 26-30

Thickness 15/16" Lower back plate: Material S Tensile strength 26-30 Thickness 53/64" ✓

Pitch of stays at wide water space 13 1/2" Are stays fitted with nuts or riveted over Nuts

Working Pressure - - Main stays: Material S Tensile strength 28-32 ✓

Diameter {At body of stay, 3 1/2" x 3 1/4" ✓  
{Over threads - - No. of threads per inch 6 ✓ Area supported by each stay - -

Working pressure by Rules - - Screw stays: Material S. Tensile strength 26-30 ✓

Diameter {At turned off part, - -  
{Over threads 1 5/8", 1 3/4", 1 7/8", 2 1/4" ✓ No. of threads per inch 9 ✓ Area supported by each stay - -



