

## REPORT ON BOILERS.

Std. No. 33135

Hull No. 14008

Received at London Office

7 JUL 1941

Date of writing Report 19/3/41 When handed in at Local Office 20/3/41 Port of MIDDLESBROUGH

No. in Reg. Book. Survey held at Stockton-on-Tees Date, First Survey Last Survey 17/3/41  
on the "DALTON HALL" (Number of Visits) Gross 7253 Tons Net 5022Master Built at Sunderland By whom built W. Delford & Sons Ltd Yard No. 672 When built 1941  
Engines made at Sunderland By whom made Wm. Bayfield & Sons Ld Engine No. 642 When made 1941  
Boilers made at Stockton By whom made Stockton C. Engers & Riley Boilers No. 6465 When made 1941  
Nominal Horse Power 516 Owners Messrs. Hantlepad Stevedoring Co. Ltd Port belonging to W. Hantlepad.

## MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Steel Company of Scotland Ltd. (Letter for Record S ✓)  
 Total Heating Surface of Boilers 1660 sq ft Is forced draught fitted No. Coal or Oil fired oil  
 No. and Description of Boilers 1 - S. Ended Working Pressure 120 lbs  
 Tested by hydraulic pressure to 230 lbs Date of test 17/3/41 No. of Certificate 7015 Can each boiler be worked separately ✓  
 Area of Firegrate in each Boiler No. and Description of safety valves to each boiler Two direct Spring.  
 Area of each set of valves per boiler { per Rule 15.4 sq ft as fitted 19.2 sq ft Pressure to which they are adjusted 120 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 2' 9" Is oil fuel carried in the double bottom under boiler No  
 Smallest distance between shell of boiler and tank top plating 2' 9" Is the bottom of the boiler insulated Yes.  
 Largest internal dia. of boilers 11'-10 5/8" Length 11'-6" Shell plates: Material Steel Tensile strength 29-33 Tons  
 Thickness 1 1/8" Are the shell plates welded or flanged No. Description of riveting: circ. seams { end 33/8" inter. 53/8" ✓  
 long. seams T.R.D.B.S. Diameter of rivet holes in { circ. seams 1 1/8" long. seams 1 1/16" Pitch of rivets { plate 68.51 rivets 45.45 ✓  
 Percentage of strength of circ. end seams { plate 84.90 rivets 83.40 ✓  
 Percentage of strength of longitudinal joint { plate 89.90 rivets 89.90 ✓  
 Working pressure of shell by Rules 123 lbs  
 Thickness of butt straps { outer 9/16" inner 1/16" No. and Description of Furnaces in each Boiler 2 corrugated (Deighton)  
 Material Steel Tensile strength 26-30 Tons Smallest outside diameter 3'-8 1/16"  
 Length of plain part { top 13 1/2" bottom 13 1/2" Thickness of plates { crown 13 1/2" bottom 13 1/2" Description of longitudinal joint welded  
 Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules 131 lbs  
 End plates in steam space: Material Steel Tensile strength 26-30 Tons Thickness 27/32" Pitch of stays 17" x 16"  
 How are stays secured S. Nuts & Washers Working pressure by Rules 142 lbs  
 Tube plates: Material { front Steel Tensile strength 26-30 Tons Thickness { 13 1/16" front 139 lbs back 245 lbs  
 Mean pitch of stay tubes in nests 9 13/16" Pitch across wide water spaces 14" Working pressure { front 139 lbs back 245 lbs  
 Girders to combustion chamber tops: Material Steel Tensile strength 28-32 Tons Depth and thickness of girder at centre 7'-20 5/8" Length as per Rule 29 7/16" Distance apart 9" No. and pitch of stays in each 209" Working pressure by Rules 134 lbs Combustion chamber plates: Material Steel  
 Tensile strength 26-30 tons Thickness: Sides 19/32" Back 9/16" Top 19/32" Bottom 7/8" ✓  
 Pitch of stays to ditto: Sides 9" x 10" Back 8 3/4" x 9 1/2" Top 9" x 9" Are stays fitted with nuts or riveted over Nuts.  
 Working pressure by Rules 121 lbs Front plate at bottom: Material Steel Tensile strength 26-30 tons  
 Thickness 27/32" Lower back plate: Material Steel Tensile strength 26-30 tons Thickness 27/32"  
 Pitch of stays at wide water space 13 1/2" x 9 1/2" Are stays fitted with nuts or riveted over Nuts.  
 Working Pressure 210 lbs Main stays: Material Steel Tensile strength 28-32 tons  
 Diameter { body of stay 2 1/4" No. of threads per inch 6 Area supported by each stay 246.5 sq in  
 Working pressure by Rules 145 lbs Screw stays: Material Steel Tensile strength 26-30 tons  
 Diameter { turned off part 1 3/8" No. of threads per inch 9 Area supported by each stay 79.5 sq in



Working pressure by Rules 126 lbs Are the stays drilled at the outer ends No Margin stays: Diameter 1 5/8"  
No. of threads per inch 9 Area supported by each stay 102 sq" Working pressure by Rules 149 lbs  
Tubes: Material L W Iron External diameter 2 3/4" Thickness 5/16" No. of threads per inch 9  
Pitch of tubes 3 3/4" x 3 3/4" Working pressure by Rules P. 275 lbs S. 265 lbs Manhole compensation: Size of opening in  
shell plate 16" x 20" Section of compensating ring 7" x 1" No. of rivets and diameter of rivet holes 44 - 15/16"  
Outer row rivet pitch at ends 6" Depth of flange if manhole flanged ✓ Steam Dome: Material None  
Tensile strength \_\_\_\_\_ Thickness of shell \_\_\_\_\_ Description of longitudinal joint \_\_\_\_\_  
Diameter of rivet holes \_\_\_\_\_ Pitch of rivets \_\_\_\_\_ Percentage of strength of joint Plate  
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  
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

For and on behalf of

STOCKTON CHEMICAL ENGINEERS & RILEY BOILERS LTD.

The foregoing is a correct description,

R. H. Riley Manufacture  
DIRECTOR

Dates of Survey During progress of work in shops - - Aug. 28. Sept. 9. Dec. 30. Feb. 13. 25. Are the approved plans of boiler and superheater forwarded herewith Yes  
while building During erection on board vessel - - - Mar. 10. 14. (If not state date of approval.)  
Total No. of visits Seven

Is this Boiler a duplicate of a previous case - If so, state Vessel's name and Report No. -

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) This boiler has been constructed under Special Survey in accordance with the Rule Requirements, & approved plan. The materials workmanship are good, & on completion the boiler was tested by hydraulic pressure to 230 lbs/sq. ft. & satisfactory.  
This boiler is being forwarded to Sunderland, for installation in Messrs Wm. Dargfords & Sons, Contract No. 672

This boiler has been securely fixed on board the vessel.  
Safety valves adjusted to working pressure.

(For recommendation please see Encly Rpt)

Survey Fee ... £ 11 : 2 : - When applied for, 28/3/1941  
Travelling Expenses (if any) £ : : When received, 19

R. H. Easthope  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

RI. 11 JUL 1941

Assigned

See Sld. J.E. 33135



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