

REPORT ON BOILERS.

Std. No. 33135
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 Survey Reg. Book at Stockton-on-Tees Date, First Survey _____ Last Survey 17/3/41
 on the "DALTON HALL" (Number of Visits _____) Tons {Gross 7253 Net 5022
 Master _____ Built at Sunderland By whom built W. Dufford & Sons Ltd Yard No. 672 When built 1941
 Engines made at Sunderland By whom made Wm. Bayfield & Co Ld Engine No. 672 When made 1941
 Boilers made at Stockton By whom made Stockton C. Eng. & Riley & Co Boiler No. 6465 When made 1941
 Nominal Horse Power 516 Owners Wm. Hattlepool Ste. Nav. Co. Ld Port belonging to W. Hattlepool.

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" as fitted 19.2 sq" 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 ✓ 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 1/16" Are the shell plates welded or flanged no. Description of riveting: circ. seams {end DR inter. _____
 long. seams T.R.D.B.S. Diameter of rivet holes in {circ. seams 1 1/16" long. seams 1 3/16" Pitch of rivets {circ. seams 3 3/8" long. seams 5 3/8"
 Percentage of strength of circ. end seams {plate 68.51 rivets 45.45 Percentage of strength of circ. intermediate seam {plate _____ rivets _____
 Percentage of strength of longitudinal joint {plate 84.90 rivets 83.40 combined 89.90 Working pressure of shell by Rules 123 lbs
 Thickness of butt straps {outer 9/16" inner 11/16" 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 _____ bottom _____ Thickness of plates {crown 13/32" bottom 13/32" Description of longitudinal joint Weld
 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 back Steel Tensile strength {front 26-30 Tons back 26-30 Tons Thickness {front 27/32" back 13/16"
 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"
 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"

Working pressure by Rules 126 lb 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 lb
 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. 245 lb S. 265 lb 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
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 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 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 (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 lb/sq. ft. & found tight & satisfactory. This boiler is being forwarded to Sunderland, for installation in Messrs Wm Dogfords & Sons, Contract No 672

This boiler has been securely fixed on board the vessel. Safety valves adjusted to working pressure. (For recommendation please see inclos Rpt) R. H. Riley

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 Old. J.E. 33135



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