

REPORT ON BOILERS.

8 DEC 1927 Bel. 9872
No. 12959

Received at London Office 23 JUN 1927

Date of writing Report 22.6.24 When handed in at Local Office 22.6.24 Port of Middlesbrough
No. in Survey held at Stockton Date, First Survey 17.2.24 Last Survey 22.6.1924
Reg. Book 16553 on the Two "Meredith" boilers for Messrs Workman Clark & Co. No. 490. (Number of Visits 18) Gross Tons Net
Built at Belfast By whom built Workman Clark & Co. Ltd. Yard No. 490 When built 1927
Engines made at Sunderland By whom made Wm. Duguid & Sons Engine No. 163 When made 1927
Boilers made at Bermuda & West Indies S.S. Co. Ltd. By whom made Boiler No. When made
Owners Port belonging to Bermuda

VERTICAL DONKEY BOILER.

Made at Stockton By whom made Riley Bros. Boilers No. 5406-4 When made 1924 Where fixed in of Ann. E. R.
Manufacturers of Steel Steel Co. of Scotland
Total Heating Surface of Boiler 1000 sq. ft. Is forced draught fitted No. Coal or Oil fired Oil
No. and Description of Boilers 2. Vertical "Meredith" Working pressure 120 lbs.
Tested by hydraulic pressure to 230 lbs. Date of test 20.6.24 No. of Certificate 6548.
Area of Firegrate in each Boiler No. and Description of safety valves to each boiler Two spring loaded - high lift
Area of each set of valves per boiler { per rule 7.40" as fitted 7.950" Pressure to which they are adjusted 120 lbs. Are they fitted with easing gear Yes
State whether steam from main boilers can enter the donkey boiler Yes Smallest distance between boiler or uptake and bunkers
Is oil fuel carried in the double bottom under boiler Yes Smallest distance between base of boiler and tank top plating
21" Is the base of the boiler insulated Yes Largest internal dia. of boiler 8'-6" Height 14'-0"
Shell plates: Material Steel Tensile strength 28/32 Thickness TOP STRAKE 9/8 CENTRE 3/4 BOTTOM 3/4
Are the shell plates welded or flanged No. Description of riveting: circ. seams end S.R. lap inter. D.R. lap long. seams T.T.C. = T.R. lap B. = D.R. D.B.S.
Dia. of rivet holes in { circ. seams 15/16" Pitch of rivets Top 2 3/8 B.C. 3 T. 3 3/8 C 4 1/8 B 5 1/8 Percentage of strength of circ. seams { plate C 68.7 rivets T.B. 42.6 of Longitudinal joint { plate 74.3 C 76 B 81.5 rivets T.B. 42.6 combined.
Working pressure of shell by rules 129. Thickness of butt straps { outer 9/8 (bottom strake) inner 3/4
Shell Crown: Whether complete hemisphere, dished partial spherical, or flat Dished Material Steel
Tensile strength 26/30 Thickness 1 1/16" Radius 4'-4 5/16" Working pressure by rules 139 lbs.
Description of Furnace: Plain, spherical, or dished crown Spherical Material Steel Tensile strength 26/30
Thickness 3/4" External diameter { top Length as per rule Working pressure by rules
Pitch of support stays circumferentially and vertically Are stays fitted with nuts or riveted over
Diameter of stays over thread Radius of spherical or dished furnace crown 3'-11" Working pressure by rule 134 lbs.
Thickness of Ogee Ring 3/4" Diameter as per rule { D 8'-4 1/2" Working pressure by rule 80 lbs. (NEGLECTING HANGING STAYS) a 7'-4 1/2"
Combustion Chamber: Material Steel Tensile strength 26/30 Thickness of top plate 23/32
Radius if dished Working pressure by rule 125 lbs. Thickness of back plate 21/32 Diameter if circular
Length as per rule Pitch of stays 11" x 8" Are stays fitted with nuts or riveted over
Diameter of stays over thread 1 1/2" Working pressure of back plate by rules 162 lbs.
Tube Plates: Material { front Steel Tensile strength { 28/32 Thickness { 13/16 Mean pitch of stay tubes in nests 11 1/4" back 26/30 21/32
Comprising shell, Dia. as per rule { front Pitch in outer vertical rows { Dia. of tube holes FRONT { stay 2 3/4 plain 2 9/16 BACK { stay 2 1/2 plain 2 1/2
Each alternate tube in outer vertical rows a stay tube Working pressure by rules { front 138 back 120
Orders to combustion chamber tops: Material S. Tensile strength 28/32
Depth and thickness of girder at centre 10" x 5/8" (double) Length as per rule 2'-11 1/4"
Distance apart 13" No. and pitch of stays in each 2 - 11 x 13 Working pressure by rule 13/ lbs.

Crown stays: Material ☒ Tensile strength ☒ Diameter { at body of stay, ☒ or over threads ☒

No. of threads per inch ☒ Area supported by each stay ☒ Working pressure by rules ☒

Screw stays: Material steel Tensile strength 26/30 Diameter { at turned off part, ☒ or over threads 1 1/2" No. of threads per inch 9

Area supported by each stay 100 sq Working pressure by rules 125 Are the stays drilled at the outer ends no

Tubes: Material iron External diameter { plain 2 1/2" stay 2 1/2" Thickness { 11 w.g. 5/16"

No. of threads per inch 9 Pitch of tubes 3 1/2 x 3 1/2 and 5 x 3 1/2 Working pressure by rules P = 125 S = 146

Manhole Compensation: Size of opening in shell plate 16 x 12 Section of compensating ring ☒ No. of rivets and diameter of rivet holes ☒ Outer row rivet pitch at ends ☒ Depth of flange if manhole flanged 3"

Uptake: External diameter ☒ Thickness of uptake plate ☒

Cross Tubes: No. ☒ External diameters { ☒ Thickness of plates ☒

Have all the requirements of Sections 14 to 23 inclusive for boilers been complied with Yes

The foregoing is a correct description,

J. H. Shields SECRETARY, Manufacturer.

1921
Dates of Survey { During progress of work in shops - Feb 17 - Mar 22-29 - Apr 4 - 12 - 22-26-29 - May } Is the approved plan of boiler forwarded herewith Yes
(If not state date of approval.)
while building { During erection on board vessel - 4 - 10 - 13 - 20 - 26 - Jun 2 - 14 - 20 - 22 } Total No. of visits 18

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)

The materials and workmanship are good. These boilers have been built under special survey in accordance with the Rules and approved plan. They are being sent to Belfast for fitting aboard.

These boilers have been efficiently installed on suitable seats in a compartment at the forward end of the auxiliary engine room. They have been fitted to burn oil fuel. The safety valves have been adjusted under steam. The adjusting washers are Port Bore P 7 3/4 S 3 1/2 Starboard Bore P 8 S 3 1/2, a satisfactory accumulation test was made. The safety valves are 2 1/4" dia = 3.9 sq in area. They are fitted with easing gear. The oil fuel suction & pressure lines have been tested in accordance with the rules. In my opinion this vessel is now eligible for the Class contemplated and to have the notation of boiler pressure 120 lbs.

R. Lee Ames
Belfast.

Survey Fee ... £ 13-8-0 MONTHLY A/c.
When applied for, 19
Travelling Expenses (if any) £ : : When received, 19

Committee's Minute
Assigned

See Rel No 1st No 9872 attached

FRI 22 JAN 1921
Engineer Surveyor to Lloyd's Register of Shipping.



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Foundation