

REPORT ON BOILERS.

No. 18443.

25 FEB 1948

Received at London Office

Date of writing Report 11th Feb. 1948. When handed in at Local Office 12th Feb. 1948. Port of MIDDLEBROUGH.

No. in Reg. Book. 16. Surrey held at STOCKTON-on-TEES. Date, First Survey 12th Nov. 1947. Last Survey 9th Feb. 1948.

on the M.T. "Pericles". (Number of Visits 4.) Tons Gross Net.

Built at By whom built Yard No. When built

Engines made at By whom made Engine No. When made

Boilers made at Stockton-on-Tees. By whom made Stockton C.E. & Riley Boilers Ltd. Boiler No. 6992. When made 1947

Nominal Horse Power Owners Port belonging to

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Appleby-Frodingham Steel Co. Ltd. (Letter for Record S)

Total Heating Surface of Boilers 1850 Is forced draught fitted Yes Coal or Oil fired Yes

No. and Description of Boilers 1 S.E. Multitubular Marine Working Pressure 150 lbs per sq. in.

Tested by hydraulic pressure to 275 Date of test 9.2.48. No. of Certificate 7231 Can each boiler be worked separately

Area of Firegrate in each Boiler No. and Description of safety valves to each boiler

Area of each set of valves per boiler {per Rule as fitted Pressure to which they are adjusted Are they fitted with easing gear

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 boilers

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

Least internal dia. of boilers 12'4" Length 11'4" Shell plates: Material Steel Tensile strength 29/33

Thickness 27/32" Are the shell plates welded or flanged No Description of riveting: circ. seams {end DR.L inter. 7

long. seams TR-GBS Diameter of rivet holes in {circ. seams 1.1/16" long. seams 15/16" Pitch of rivets {3.233 6.11/16"

Percentage of strength of circ. end seams {plate 67.1% rivets 50.9 Percentage of strength of circ. intermediate seam {plate 86.0 rivets 90.9

Percentage of strength of longitudinal joint {plate 86.0 rivets 90.9 combined

Thickness of butt straps {outer 21/32" inner 25/32" No. and Description of Furnaces in each Boiler 2 Morrison Corrugated

Material Steel Tensile strength 26 - 30 Smallest outside diameter 3' - 8 1/2"

Length of plain part {top - bottom - Thickness of plates {crown 15/32" bottom - Description of longitudinal joint Welded.

Dimensions of stiffening rings on furnace or c.c. bottom

End plates in steam space: Material Steel Tensile strength 26 - 30 Thickness 27/32" Pitch of stays 16 1/2" x 15"

How are stays secured Double nuts and washers and screwed into both plates.

Tube plates: Material {front Steel Tensile strength {26-30 Thickness {27/32" back 11/16"

Mean pitch of stay tubes in nests 9.3/16" Pitch across wide water spaces 13 1/2"

Girders to combustion chamber tops: Material Steel Tensile strength 26-30 Depth and thickness of girder

at centre 8 1/2 - 25/32" Length as per Rule 2' 6" Distance apart 5 3/4" No. and pitch of stays

in each Single plate girders Combustion chamber plates: Material Steel

Tensile strength 26 - 30 Thickness: Sides 5/8 Back 12/32" Top 5/8 Bottom 5/8

Pitch of stays to ditto: Sides 10" x 8" Back 9" x 9" Top Welded Are stays fitted with nuts or riveted over nuts

Front plate at bottom: Material Steel Tensile strength 26 - 30

Thickness 27/32" Lower back plate: Material Steel Tensile strength 26 - 30 Thickness 25/32"

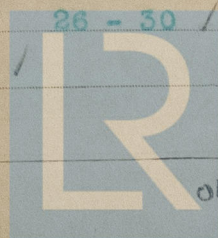
Pitch of stays at wide water space 13 1/2" Are stays fitted with nuts or riveted over nuts

Main stays: Material Steel Tensile strength 28 - 32

Diameter {At body of stay or Over threads 2.3/8" No. of threads per inch 6

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



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Are the stays drilled at the outer ends No ✓ Margin stays? Diameter { At turned off part, or Over threads 1.5/8" ✓

No. of threads per inch 9 ✓

Tubes: Material HR. Weldless S External diameter { Plain 2 1/2" ✓ Stay 2 3/8" ✓ Thickness { 10 W.G. ✓ 5/16" ✓ No. of threads per inch 9 ✓

Pitch of tubes 3 3/4" x 3 3/4" ✓ Manhole compensation: Size of opening in shell plate 21" x 17" ✓ Section of compensating ring 6 1/2" x 1 1/2" ✓ No. of rivets and diameter of rivet holes 56 - 15/16" ✓

Outer row rivet pitch at ends 5.11/16" ✓ Depth of flange of 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 { Plates _____ Rivets _____

Internal diameter _____ Thickness of crown _____ No. and diameter of stays _____ Inner radius of crown _____

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 forgings _____ Steel castings _____ Internal diameter and thickness of tubes _____

Number of elements _____ Material of tubes _____ 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 _____

Pressure to which the safety valves are adjusted _____ Hydraulic test pressure: _____

tubes _____ forgings and 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 _____

The foregoing is a correct description.
H. J. J. J. Manufacturer.

Dates of Survey { During progress of work in shops - - (1947) 12th Nov. (1948) Jan. 7, 29, Feb. 9. Are the approved plans of boiler and superheater forwarded herewith (if not state date of approval) Yes.

while building { During erection on board vessel - - - Total No. of visits 4.

Is this Boiler a duplicate of a previous case Yes If so, state Vessel's name and Report No. Middlesbrough Report No. 18372

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

This boiler has been constructed under Special Survey and in accordance with the Rule Requirements and approved plan.

The materials used and the workmanship are good and upon completion it was hydraulically tested to 275 lbs per sq. inch and found satisfactory.

This boiler is being forwarded to Sweden of A ktiebolaget Gotaverkens Ship No. 630.

Survey Fee £ 30 : 16 : 0 } When applied for 24.2. 19 48.

Travelling Expenses (if any) £ : : } When received, 19

Committee's Minute FRI. 18 NOV 1949

Assigned See F.E. weekly rpt.

C. Norman Stuart
Engineer Surveyor to Lloyd's Register of Shipping.