NEWCASTLE-ON-TYNE. No. 107686

RECEIVED
31 MAY 1950
IN D.O.

REPORT ON BOILERS.

No. 107316

30 MAY 1950
Received at London Office

NEWCASTLE-on-TYNE.

Date of writing Report 25. 5. 1950 When handed in at Local Office 25. 5. 1950 Port of

No. in Reg. Book. 90334 (Supplement) Survey held at WALLSEND-ON-TYNE. Date, First Survey 7. 12. 49. Last Survey 24. 5. 1950

on the M. V. "ATHELBEACH" (Number of Visits 14) Tons Gross 7533 Net 4156

Master ✓ Built at HEBBURN-ON-TYNE By whom built R&W HAWTHORN LESLIE & Co. Ld Yard No. 700 When built ✓

Engines made at NEWCASTLE-ON-TYNE. By whom made R&W HAWTHORN LESLIE & Co. Ld Engine No. 4062 When made ✓

Boilers made at WALLSEND-ON-TYNE By whom made THE NORTH EASTERN MARINE ENG. Co (1938) Ld Boiler No. 3195 When made 1950

Nominal Horse Power 4396/12 = 367 Owners ATHEL LINE LD. Port belonging to LIVERPOOL.

MULTITUBULAR BOILERS ~~MAIN~~, ~~AUXILIARY~~, ~~OR~~ DONKEY.

Manufacturers of Steel COLVILLES Ld (Letter for Record S)

Total Heating Surface of Boilers 2198 x 2 = 4396 sq ft Is forced draught fitted YES Coal or Oil fired OIL.

No. and Description of Boilers TWO SINGLE ENDED. **Working Pressure** 180 Lbs/□

Tested by hydraulic pressure to 320 Lbs/□ Date of test 3. 3. 50 No. of Certificate 1383 Can each boiler be worked separately YES

Area of Firegrate in each Boiler ✓ No. and Description of safety valves to each boiler ONE 2¼ STEEL DOUBLE IMPROVED HIGH LIFT

Area of each set of valves per boiler per Rule 7.05 sq ins as fitted 7.94 sq ins ✓ 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 NO MAIN BOILERS.

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 ✓

Largest internal dia. of boilers 13' 9¾ Length 11' 6 OVERALL **Shell plates:** Material MILD STEEL Tensile strength 29/33 Tons/□

Thickness 1⅛ ✓ Are the shell plates welded or flanged NO ✓ Description of riveting: circ. seams end DC inter. ✓

long. seams TR DOUBLE BUTT STRAPS Diameter of rivet holes in circ. seams 1 3/16 ✓ long. seams 1 3/16 ✓ Pitch of rivets 3½ ✓ 8⅜ ✓

Percentage of strength of circ. end seams plate 66.1% rivets 44.7% Percentage of strength of circ. intermediate seam plate ✓ rivets

Percentage of strength of longitudinal joint plate 85.8% rivets 87.3% combined 89% Working pressure of shell by Rules 185.6 Lbs/□

Thickness of butt straps outer 7/8 ✓ inner 1 ✓ **No. and Description of Furnaces in each Boiler** THREE CORRUGATED DEIGHTON TYPE.

Material MILD STEEL Tensile strength 26/30 Tons/□ Smallest outside diameter 3' 2¼ ✓

Length of plain part top ✓ bottom Thickness of plates crown 1/2" bottom ✓ Description of longitudinal joint FIRE WELD.

Dimensions of stiffening rings on furnace or c.c. bottom NONE Working pressure of furnace by Rules 188 Lbs/□ (184 x 252)

End plates in steam space: Material MILD STEEL Tensile strength 26/30 Tons/□ Thickness 1⅜ ✓ Pitch of stays 17¾ x 24½

How are stays secured NUTS IN & OUT Working pressure by Rules 193.7 Lbs/□

Tube plates: Material front back MILD STEEL Tensile strength 26/30 Tons/□ Thickness 29/32 ✓ 23/32 ✓

Mean pitch of stay tubes in nests 10" ✓ Pitch across wide water spaces 14" Working pressure front 217 Lbs/□ back 234.5 Lbs/□

Girders to combustion chamber tops: Material MILD STEEL Tensile strength 29/33 Tons/□ Depth and thickness of girder

at centre 7" x ¾" ✓ Length as per Rule 2' 7" ✓ Distance apart 6" No. and pitch of stays

in each EW WHOLE LENGTH ✓ Working pressure by Rules 180 Lbs/□ **Combustion chamber plates:** Material MILD STEEL

Tensile strength 26/30 Tons/□ Thickness: Sides 23/32 ✓ Back 11/16 ✓ Top 23/32 ✓ Bottom 23/32

Pitch of stays to ditto: Sides 8⅞ x 11 ✓ Back 9⅞ x 8¾ Top GIRDERS EW Are stays fitted with nuts or riveted over EW TO PLATES.

Working pressure by Rules 181.68 Lbs/□ **Front plate at bottom:** Material MILD STEEL Tensile strength 26/30 Tons/□

Thickness 29/32 ✓ **Lower back plate:** Material MILD STEEL Tensile strength 26/30 Tons/□ Thickness 7/8

Pitch of stays at wide water space 14" ✓ Are stays fitted with nuts or riveted over NO EW THROUGH PLATES ✓

Working pressure 217 Lbs/□ **Main stays:** Material MILD STEEL Tensile strength 28/32 Tons/□

Diameter At body of stay 3" or Over threads 3¼ No. of threads per inch 6 Area supported by each stay 17¾ x 24½

Working pressure by Rules 180.2 Lbs/□ **Screw stays:** Material MILD STEEL Tensile strength 26/30 Tons/□

Diameter At turned off part 1½ & 1⅜ or Over threads 1¾ No. of threads per inch 9 Area supported by each stay 1½ (8¾ x 9⅞)

1¾ STAYS EW TO CC PLATES & SCREWED THRO SHELL. 1⅜ (8⅞ x 11) 1¾ (8⅞ x 11)

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Working pressure by Rules 185 lbs/□" Are the stays drilled at the outer ends No Margin stays: Diameter (At turned off part, or Over threads) 1 3/4 & 1 7/8

No. of threads per inch EW TO PLATES Area supported by each stay 9 5/8 x 11 3/8 Working pressure by Rules 199 lbs/□"

Tubes: Material MILD STEEL External diameter (Plain, Stay) 2 3/4" Thickness 9 wg, 5/16 & 3/8 No. of threads per inch 9

Pitch of tubes 4" x 4" Working pressure by Rules 215 lbs/□" **Manhole compensation:** Size of opening in shell plate ✓ Section of compensating ring ✓ No. of rivets and diameter of rivet holes ✓

Outer row rivet pitch at ends ✓ 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** NONE ✓ Manufacturers of (Tubes ✓, Steel forgings ✓, 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 ✓ 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 Yes.

The foregoing is a correct description,
THE [illegible] MARINE ENGINEERING CO. (1938) LTD.
Harry Hunt[illegible]
Manufacturer

Dates of Survey while building		
During progress of work in shops	1949 DEC. 7. 13. 1950 JAN. 24. 30. FEB. 20 MAR. 3.	Are the approved plans of boiler ~~and superheater~~ forwarded herewith 31.12.4[illegible] (If not state date of approval.)
~~During erection on board vessel~~	10. 17. 28. APR. 5. 13. 23. MAY 12. 24.	Total No. of visits 14.

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.) These two donkey boilers have been constructed under Special Survey in accordance with the Approved Plan & the Society's Rules.
The materials & workmanship are good
The boilers will be despatched to Hebburn-on-Tyne to be installed in Messrs R. & W. Hawthorn Leslie & Co Ltd. YARD No 700.

SURVEY OF MACHINERY
NEWCASTLE-ON-TYNE

The Boilers referred to herein have been satisfactorily installed in M/V "ATHELBEACH" & safety valves adjusted under steam to 180 lbs/□", and accumulation test carried out with satisfactory results. Compress^r Rings. Port Blr. P. 5/16". S. 5/16". Star Blr. P. 3/8". S. 3/8"

A Butler
Newcastle.
SURVEYOR TO LLOYD'S REGISTER
NEWCASTLE-ON-TYNE.

Survey Fee 317 [illegible] £ 61 : 14 : 0 When applied for, 26 MAY 1950
Travelling Expenses (if any) £ : : When received 19

T. A. Orde
Engineer Surveyor to Lloyd's Register of Shipping.

FRI. 13 OCT 1950

Committee's Minute

Assigned See minute on S. E. Rpt.