

REPORT ON BOILERS.

Received at London Office 26 MAY 1943

Date of writing Report 19th MAY 1943. When handed in at Local Office 20th MAY 1943. Port of GREENOCK

No. in Surrey held at GREENOCK Date, First Survey 15th SEPTEMBER 1941. Last Survey 19th MAY 1943.

Reg. Book. 5444 57829 on the SINGLE SCREW "NINELLA" OIL ENGINE TANKER (Number of Visits 42.) Tons {Gross 8134 Net 4745}

Built at GLASGOW By whom built BLYTHSWOOD S.B. CO L^{td} Yard No. 70 When built 1943

Engines made at GREENOCK By whom made JOHN G. KINCAID & CO L^{td} Engine No. 1146 When made 1943

Boilers made at GREENOCK By whom made JOHN G. KINCAID & CO L^{td} Boiler No. 1146 When made 1943

Nominal Horse Power 502 Owners OCEAN GOING OIL TANKER Port belonging to LONDON

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel COLVILLES L^{td} (Letter for Record S)

Total Heating Surface of Boilers 3502 Is forced draught fitted Yes Coal or Oil fired and/or Exhaust Working Pressure 180 lbs

No. and Description of Boilers One SE cylindrical

Tested by hydraulic pressure to 320 lb Date of test 7-12-42 No. of Certificate 2314 Can each boiler be worked separately Yes

Area of Firegrate in each Boiler No. and Description of safety valves to each boiler One double spring 1 1/2

Area of each set of valves per boiler {per Rule 11.22 as fitted 14.14} Pressure to which they are adjusted 180 lb Are they fitted with easing gear Yes

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler Yes

Smallest distance between boilers or uptakes and bunkers or woodwork 4'-4" Is oil fuel carried in the double bottom under boilers Yes

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

Largest internal dia. of boilers 16'-3" Length 12'-6" Shell plates: Material S Tensile strength 29/33 tons

Thickness 1 5/16" Are the shell plates welded or flanged No Description of riveting: circ. seams end DR inter. 3.953"

long. seams TR. DBS Diameter of rivet holes in {circ. seams 1 3/8" long. seams 1 5/16" Pitch of rivets 8.937"

Percentage of strength of circ. end seams {plate 65.2 rivets 45.3} Percentage of strength of circ. intermediate seam {plate 85.3 rivets 85.7 combined 87.6}

Thickness of butt straps {outer 1" inner 1 1/8"} No. and Description of Furnaces in each Boiler Three Dighton

Material S Tensile strength 26/30 tons Smallest outside diameter 3'-11 3/16"

Length of plain part {top bottom} Thickness of plates {crown 19/32 bottom 1/32} Description of longitudinal joint Weld

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

End plates in steam space: Material S Tensile strength 26/30 tons Thickness 1 1/4" Pitch of stays 17 1/2" x 19 1/2"

How are stays secured Double nuts & loose washers

Tube plates: Material {front back} S Tensile strength {26/30 tons} Thickness {15/16" 23/32"}

Mean pitch of stay tubes in nests 9.375" Pitch across wide water spaces 1-1 1/2"

Girders to combustion chamber tops: Material S Tensile strength 29/33 tons Depth and thickness of girder at centre 9 3/4" x 1 1/2" Length as per Rule 3'-2 9/32" Distance apart 9" No. and pitch of stays in each Four @ 7 3/4"

Tensile strength 26/30 tons Thickness: Sides 1 1/16" Back 1 1/16" Top 1 1/16" Bottom 7/8" NUTS TO TOP MARGIN

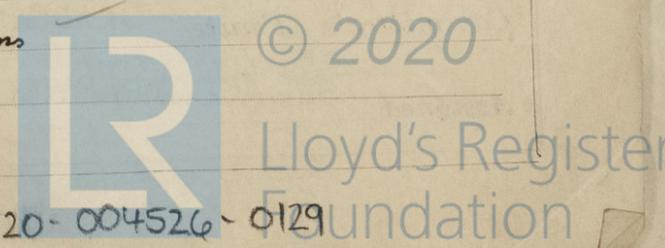
Pitch of stays to ditto: Sides 7 1/4" x 7 3/4" Back 6 3/4" x 8 1/16" Top 9" x 7 3/4" Are stays fitted with nuts or riveted over 2/16" riveted over

Front plate at bottom: Material S Tensile strength 26/30 tons Thickness 15/16" Lower back plate: Material S Tensile strength 26/30 tons Thickness 13/16"

Pitch of stays at wide water space 14" x 8 1/16" Are stays fitted with nuts or riveted over NUTS

Main stays: Material S Tensile strength 28/32 tons Diameter {At body of stay, or Over threads} 3" No. of threads per inch 6

Screw stays: Material S Tensile strength 26/30 tons Diameter {At turned off part, or Over threads} 1 3/8" No. of threads per inch 9



Are the stays drilled at the outer ends No ✓ Margin stays: Diameter $\left\{ \begin{array}{l} \text{At turned off part, } 1\frac{3}{8}'' \\ \text{or} \\ \text{Over threads} \end{array} \right.$

No. of threads per inch 9

Tubes: Material Wheat Iron External diameter $\left\{ \begin{array}{l} \text{Plain } 2\frac{1}{2}'' \\ \text{Stay } 2\frac{1}{2}'' \end{array} \right.$ Thickness $\left\{ \begin{array}{l} 9\text{wg} \\ 9/32'' \text{ } 11/32'' \end{array} \right.$ No. of threads per inch 9

Pitch of tubes $3\frac{3}{4}'' \times 3\frac{3}{4}''$ Manhole compensation: Size of opening in shell plate $16\frac{1}{2}'' \times 20\frac{1}{2}''$ Section of compensating ring $2'-10\frac{1}{2}'' \times 3'-1\frac{1}{2}'' \times 1\frac{1}{32}''$ No. of rivets and diameter of rivet holes $38 - 1\frac{1}{2}''$

Outer row rivet pitch at ends $10\frac{1}{4}''$ Depth of flange if manhole flanged Flat/plak type door Steam Dome: Material _____

Tensile strength _____ Thickness of shell _____ Description of longitudinal joint _____

Diameter of rivet holes _____ Pitch of rivets _____ Percentage of strength of joint $\left\{ \begin{array}{l} \text{Plate} \\ \text{Rivets} \end{array} \right.$

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 $\left\{ \begin{array}{l} \text{Tubes} \\ \text{Steel forgings} \\ \text{Steel castings} \end{array} \right.$

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 _____

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,
 For JOHN G. KINCAID & CO. LTD.
 Robert Green Director. Manufacturer.

Dates of Survey $\left\{ \begin{array}{l} \text{During progress of work in shops - -} \\ \text{while building } \left\{ \begin{array}{l} \text{During erection on board vessel - - -} \end{array} \right. \end{array} \right.$ See machinery report

Are the approved plans of boiler and superheater forwarded herewith Yes (If not state date of approval.)

Total No. of visits _____

Is this Boiler a duplicate of a previous case Yes If so, state Vessel's name and Report No. "NARAHIO" GRN 22141

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

This boiler has been built under Special Survey in accordance with the Rules and approved plans. The materials & workmanship are sound & good. The Safety valves have been adjusted under steam 180 lbs/2" accumulation nil. For recommendations please see engine report.

Survey Fee ... £ : : When applied for, 19

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

See machinery report

Charles Hunter
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 25 MAY 1943

Assigned SEE ACCOMPANYING MACHINERY REPORT

