

REPORT ON BOILERS.

No. 95512

Received at London Office OCT 12 1937

Date of writing Report 19 When handed in at Local Office 11/10/37 Port of NEWCASTLE-ON-TYNE

No. in Survey held at Wallsend Date, First Survey 9 Feb Last Survey 4 Oct 1937

on the S.S. BECKENHAM (Number of Visits) Tons { Gross Net

Master Built at Bundee By whom built Caledon S.B. & Eng Co. Ltd Yard No. 367 When built 1937

Engines made at Wallsend By whom made North Eastern Marine Eng Co. Ltd. Engine No. 2876 When made 1937

Boilers made at Wallsend By whom made North Eastern Marine Eng Co. Ltd Boiler No. 2876 When made 1937

Nominal Horse Power 404 Owners Britain S.S. Co. Port belonging to London

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

Manufacturers of Steel Steel Co of Scotland (Letter for Record 3)

Total Heating Surface of Boilers 1680 Is forced draught fitted no Coal or Oil fired Coal

No. and Description of Boilers One single ended multitubular Working Pressure 220 lbs

Tested by hydraulic pressure to 380 lbs Date of test 27-7-37 No. of Certificate 728 Can each boiler be worked separately ✓

Area of Firegrate in each Boiler 38.5 No. and Description of safety valves to each boiler Two spring loaded

Area of each set of valves per boiler { per Rule 8.9 as fitted 9.82 Pressure to which they are adjusted 225 lbs 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 10'-3" Is oil fuel carried in the double bottom under boilers no

Smallest distance between shell of boiler and tank top plating 2 1/2" Is the bottom of the boiler insulated Yes

Largest internal dia. of boilers 13'-0 15/32" Length 10'-6" Shell plates: Material Steel Tensile strength 29-33 tons

Thickness 1 1/2" Are the shell plates welded or flanged no Description of riveting: circ. seams { end DR Lap inter.

Long. seams T.R. Old Straps Diameter of rivet holes in { circ. seams 1 5/16" long. seams 1 5/16" Pitch of rivets { 3 3/4" 9 1/8"

Percentage of strength of circ. end seams { plate 65 rivets 45.2 Percentage of strength of circ. intermediate seam { plate rivets

Percentage of strength of longitudinal joint { plate 85.6 rivets 87.1 combined 88.6 Working pressure of shell by Rules 222 lbs

Thickness of butt straps { outer 3/8" inner 1 3/32" No. and Description of Furnaces in each Boiler Two daylight

Material Steel Tensile strength 26-30 tons Smallest outside diameter 44 5/8"

Length of plain part { top bottom Thickness of plates { crown 1 1/16" bottom Description of longitudinal joint weld

Dimensions of stiffening rings on furnace or c.c. bottom none Working pressure of furnace by Rules 225 lbs

End plates in steam space: Material Steel Tensile strength 26-30 tons Thickness 1 21/32" Pitch of stays 22" x 16"

How are stays secured double nuts Working pressure by Rules 223 lbs

Tube plates: Material { front Steel back Steel Tensile strength { 26/30 tons Thickness { 31/32" 13/16"

Mean pitch of stay tubes in nests 10'-2" Pitch across wide water spaces 14 1/2" Working pressure { front 225 lbs back 225 lbs

Girders to combustion chamber tops: Material Steel Tensile strength 29-33 tons Depth and thickness of girder

at centre 9 1/2" x 2 @ 25/32" Length as per Rule 2'-8" Distance apart 10 3/16" No. and pitch of stays

in each 2 @ 9 1/2" Working pressure by Rules 236 lbs Combustion chamber plates: Material Steel

Tensile strength 26-30 tons Thickness: Sides 25/32" Back 25/32" Top 25/32" Bottom 25/32"

Pitch of stays to ditto: Sides 10" x 9 1/2" Back 10 3/16" x 9 1/2" Top 10 3/16" x 9 1/2" Are stays fitted with nuts or riveted over Nuts

Working pressure by Rules 224 lbs Front plate at bottom: Material Steel Tensile strength 26-30 tons

Thickness 31/32" Lower back plate: Material Steel Tensile strength 26-30 tons Thickness 15/16"

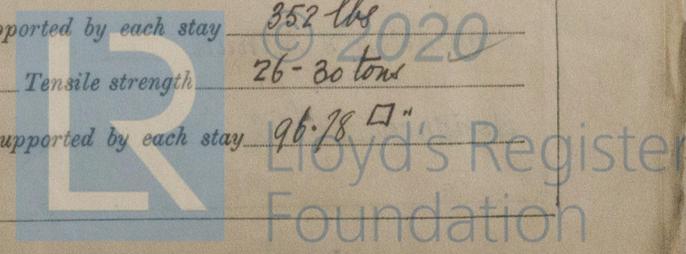
Pitch of stays at wide water space 15" x 9 1/2" Are stays fitted with nuts or riveted over Nuts

Working Pressure 229 lbs Main stays: Material Steel Tensile strength 28-32 tons

Diameter { At body of stay 3" or No. of threads per inch 6 Area supported by each stay 352 lbs

Working pressure by Rules 223 lbs Screw stays: Material Steel Tensile strength 26-30 tons

Diameter { At turned off part or No. of threads per inch 9 Area supported by each stay 96.78 sq"



Working pressure by Rules 256 lbs Are the stays drilled at the outer ends no Margin stays: Diameter $\left\{ \begin{array}{l} \text{At turned off part} \\ \text{or} \\ \text{Over threads} \end{array} \right. \left. \begin{array}{l} - \\ \\ 2\frac{1}{2}'' \end{array} \right.$

No. of threads per inch 9 Area supported by each stay 111.6 sq" Working pressure by Rules 255 lbs

Tubes: Material Steel S.S. External diameter $\left\{ \begin{array}{l} \text{Plain } 3\frac{1}{2}'' \\ \text{Stay } 3\frac{1}{4}'' \end{array} \right.$ Thickness $\left\{ \begin{array}{l} 3/8'' \text{ \& } 5/16'' \\ 8 \text{ \& } 9 \end{array} \right.$ No. of threads per inch 9

Pitch of tubes 4 1/2" x 4 3/8" Working pressure by Rules 230 lbs P. 257 stay Manhole compensation: Size of opening in END 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 4" Steam Dome: Material

Tensile strength Thickness of shell Description of longitudinal joint

Diameter of rivet holes Pitch of rivets Percentage of strength of joint $\left\{ \begin{array}{l} \text{Plate} \\ \text{Rivets} \end{array} \right. \left. \begin{array}{l} \input checked="" type="checkbox"} \\ \input checked="" type="checkbox"} \right.$

Internal diameter Working pressure by Rules Thickness of crown No. and diameter of stays

How connected to shell Inner radius of crown Working pressure by Rules

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 $\left\{ \begin{array}{l} \text{Tubes} \\ \text{Steel castings} \end{array} \right. \left. \begin{array}{l} \input checked="" type="checkbox"} \\ \input checked="" type="checkbox"} \right.$

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 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 See

The foregoing is a correct description,
 THE NORTH EASTERN MARINE ENGINEERING CO., LTD. Manufacturer.

John Neill
 General Manager

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

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

Total No. of visits 1

Is this Boiler a duplicate of a previous case Yes If so, state Vessel's name and Report No. "Blackheath" Rpt No 93815.

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 plan. The materials and workmanship are good. It has been fitted on board in an efficient manner, tried under working conditions and found satisfactory.

Survey Fee £ Charged on When applied for, 19
 Travelling Expenses (if any) £ Machinery Rpt When received, 19

J. Seller
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE 2 NOV 1937

Assigned See Run 9007

