

REPORT ON BOILERS.

No. 95173

JUN 25 1937

Received at London Office

Date of writing Report 20 When handed in at Local Office 24/6/37 Port of NEWCASTLE-ON-TYNE

No. in Reg. Book. Survey held at Wallsend Date, First Survey 3rd Nov 1936 Last Survey 17 June 1937

on the Twin Screw Steamer "BACHAQUERO" (Number of Visits) Gross Tons Net Tons

Master [Signature] Built at [Signature] By whom built Furness S. B. Co. Yard No. 266 When built 1937

Engines made at Wallsend By whom made North Eastern Marine Engineering Co. Ltd. Engine No. 2870 When made 1937

Boilers made at Wallsend By whom made North Eastern Marine Engineering Co. Ltd. Boiler No. 2870 When made 1937

Nominal Horse Power 551 Owners Lago Shipping Co. Port belonging to London

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Steel Company of Scotland - Colvilles Ltd. (Letter for Record S)

Total Heating Surface of Boilers 8870 sq ft Is forced draught fitted Yes Coal or Oil fired Oil

No. and Description of Boilers Two single ended multitubular Working Pressure 225 lbs

Tested by hydraulic pressure to 388 lbs Date of test 4-3-1937 No. of Certificate 708 Can each boiler be worked separately Yes

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

Area of each set of valves per boiler per Rule 23.9 sq ft Pressure to which they are adjusted 230 lbs Are they fitted with easing gear Yes

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler Improved High Lift

Smallest distance between boilers or uptakes and bunkers or woodwork 9'-6" Is oil fuel carried in the double bottom under boilers No

Smallest distance between shell of boiler and tank top plating 3'-0" Is the bottom of the boiler insulated Yes

Largest internal dia. of boilers 17'-5 5/8" Length 11'-9" Shell plates: Material Steel Tensile strength 29 1/2 - 33 1/2 tons

Thickness 1 1/16" Are the shell plates welded or flanged No Description of riveting: circ. seams end Lap double Riv

long. seams Trch Riv double straps Diameter of rivet holes in circ. seams 1 1/16" Pitch of rivets 4 3/8"

Percentage of strength of circ. end seams plate 61.0 rivets 47.2 Percentage of strength of circ. intermediate seam plate rivets

Percentage of strength of longitudinal joint plate 85.1 rivets 85.2 combined 87.2 Working pressure of shell by Rules 226 lbs

Thickness of butt straps outer 1 5/16" inner 1 3/16" No. and Description of Furnaces in each Boiler Four - Morrison Type

Material Steel Tensile strength 26-30 tons Smallest outside diameter 41 9/16"

Length of plain part top bottom Thickness of plates crowns 2 1/8" bottoms 2 1/8" Description of longitudinal joint weld

Dimensions of stiffening rings on furnace or c.c. bottom none Working pressure of furnace by Rules 230 lbs

End plates in steam space: Material Steel Tensile strength 26-30 tons Thickness 1 5/16" Pitch of stays 20" x 17 1/4"

How are stays secured double nuts Working pressure by Rules 231 lbs

Tube plates: Material front Steel back Steel Tensile strength 26-30 tons Thickness 1 3/16"

Mean pitch of stay tubes in nests 8 1/16" Pitch across wide water spaces 14" Working pressure front 239 lbs back 258 lbs

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

at centre 10 1/4" x 2 @ 1" Length as per Rule 39" Distance apart 9 1/2" No. and pitch of stays

in each 3 @ 8 3/8" Working pressure by Rules 230 lbs Combustion chamber plates: Material Steel

Tensile strength 26-30 tons Thickness: Sides 1 3/16" Back 1 3/16" Top 1 3/16" Bottom 1"

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

Working pressure by Rules 277 lbs Front plate at bottom: Material Steel Tensile strength 26-30 tons

Thickness 1" Lower back plate: Material Steel Tensile strength 26-30 tons Thickness 7/8"

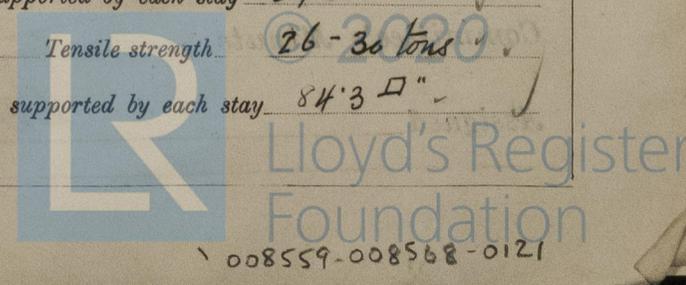
Pitch of stays at wide water space 14 1/2" x 7 1/2" Are stays fitted with nuts or riveted over nuts outside - riveted over inside

Working Pressure 235 lbs Main stays: Material Steel Tensile strength 28-32 tons

Diameter At body of stay 3" Over threads - No. of threads per inch 6 Area supported by each stay 345 sq in

Working pressure by Rules 227 lbs Screw stays: Material Steel Tensile strength 26-30 tons

Diameter At turned off part 1 5/8" or 1 7/8" Over threads - No. of threads per inch 9 Area supported by each stay 84.3 sq in



Working pressure by Rules 250 lbs Are the stays drilled at the outer ends. Yes Margin stays: Diameter ^{At turned off part.} 1 7/8" _{or Over threads}

No. of threads per inch 9 Area supported by each stay 87.6 sq" Working pressure by Rules 243 lbs

Tubes: Material Seamless Steel External diameter ^{Plain} 2 1/4" _{Stay} 2 1/4" Thickness 9/16" No. of threads per inch 9

Pitch of tubes 3 1/2" x 3 1/2" Working pressure by Rules 350 lbs 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 1/8" Steam Dome: Material

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

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 Not fitted 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

Area of each safety valve Is a safety valve fitted to every part of the superheater which can be shut off from the boiler

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,
 For THE NORTH EASTERN MACHINE ENGINEERING CO LTD
John Neill Manufacturer.

Dates of Survey ^{During progress of work in shops - -} _{while building} ^{During erection on board vessel - -} See Machy report

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

Total No. of visits _____

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

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) These boilers have been built under Special Survey, in accordance with the approved plan and the Rules: the workmanship and materials are sound and good: on completion they were tested by water pressure to 388 lbs per square inch and found tight and satisfactory. The boilers have been fitted in the ship in an efficient manner, tried under steam and found satisfactory.

Survey Fee ... £ charged on } When applied for, 10
 Travelling Expenses (if any) £ Machy Rpt } When received, 10

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

Committee's Minute _____
 Assigned _____ See Mach. Rpt. 16030

