

REPORT ON BOILERS.

21 JAN 1931

Received at London Office 22 JAN 1931

Date of writing Report 19... When handed in at Local Office 19... Port of Newcastle-on-Tyne

No. in Reg. Book. Survey held at South Shields Date, First Survey July 14th Last Survey Jan 12th 1931

11336 on the S.S. LORCA (Number of Visits 8) Tons { Gross 4814.5 Net 3007

Master Built at S. Shields By whom built John Readhead & Sons Ltd No. 504 When built 1931

Diameter of Engines made at S. Shields By whom made John Readhead & Sons Ltd Engine No. 504 When made 1931

Boilers made at S. Shields By whom made " " " " Boiler No. 504 When made 1931

Nominal Horse Power 86 Owners Gay Strick (Steamers) Ltd Port belonging to London

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

Manufacturers of Steel Messrs The Steel Co of Scotland Ltd (Letter for Record r)

Total Heating Surface of Boilers 1290 sq ft Is forced draught fitted No Coal or Oil fired Coal

No. and Description of Boilers Single Ended Multitubular Working Pressure 120 lbs sq

Tested by hydraulic pressure to 230 lbs sq Date of test 4-9-30 No. of Certificate 497 Can each boiler be worked separately Yes

Area of Firegrate in each Boiler 34 sq ft No. and Description of safety valves to each boiler One double spring - grants high lift

Area of each set of valves per boiler { per Rule 7.96 sq ft as fitted 7.96 sq ft Pressure to which they are adjusted 120 lbs sq Are they fitted with easing gear Yes

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler No

Smallest distance between boilers or uptakes and bunkers or woodwork 2'-0" Is oil fuel carried in the double bottom under boilers No

Smallest distance between shell of boiler and tank top plating 2'-6" Is the bottom of the boiler insulated No

Largest internal dia. of boilers 142.56" Length 10'-6" Shell plates: Material S.M. Steel Tensile strength 29-33 Tons

Thickness 23/32" Are the shell plates welded or flanged No Description of riveting: circ. seams { end D.R. inter. 15"

long. seams D.R.D.B. Diameter of rivet holes in { circ. seams 15" long. seams 15" Pitch of rivets { 4 15/16" 3"

Percentage of strength of circ. end seams { plate 68.7% rivets 50.8% Percentage of strength of circ. intermediate seam { plate 81.2% rivets 87.2% combined 91.1% Working pressure of shell by Rules 126 lbs sq

Thickness of butt straps { outer 5/8" inner 3/4" No. and Description of Furnaces in each Boiler 2 Plain

Material S.M. Steel Tensile strength 26-30 Tons Smallest outside diameter 3'-6 1/2"

Length of plain part { top 6'-8 3/4" bottom 7'-3" Thickness of plates { crown 21/32" bottom 3/32" Description of longitudinal joint Weld

Dimensions of stiffening rings on furnace or c.c. bottom Yes Working pressure of furnace by Rules 123 lbs sq

End plates in steam space: Material S.M. Steel Tensile strength 26-30 Tons Thickness 13/16" Pitch of stays 17" x 15 1/2"

How are stays secured Double nuts & thick washers Working pressure by Rules 129 lbs sq

Tube plates: Material { front S.M. Steel back S.M. Steel Tensile strength { 26-30 Tons Thickness { 3/4" 3/8" 5/8" 3/16" 3/16" 3/16" 3/16" 3/16"

Mean pitch of stay tubes in nests 9 1/2" Pitch across wide water spaces 14" Working pressure { front 128 lbs sq back 152 lbs sq

Girders to combustion chamber tops: Material S.M. Steel Tensile strength 29-33 Tons Depth and thickness of girder at centre 6" x 20 13/16" Length as per Rule 26" Distance apart 11 1/2" No. and pitch of stays in each 208 Working pressure by Rules 130 lbs sq Combustion chamber plates: Material S.M. Steel

Tensile strength 26-30 Tons Thickness: Sides 19/32" Back 19/32" Top 19/32" Bottom 13/16"

Pitch of stays to ditto: Sides 10" x 9" Back 10 1/4" x 9" Top 11 1/2" x 8" Are stays fitted with nuts or riveted over Nuts

Working pressure by Rules 123.5 lbs sq Front plate at bottom: Material S.M. Steel Tensile strength 26-30 Tons Thickness 3/4" Lower back plate: Material S.M. Steel Tensile strength 26-30 Tons Thickness 21/32"

Pitch of stays at wide water space 14" x 9" Are stays fitted with nuts or riveted over Nuts

Working Pressure 124 lbs sq Main stays: Material S.M. Steel Tensile strength 28-32 Tons

Diameter { At body of stay, 2 1/2" No. of threads per inch 6 Area supported by each stay 16" x 15 3/8" Over threads 2 1/2"

Working pressure by Rules 119 lbs sq Screw stays: Material Special W.S. Tensile strength 21 1/2 Tons

Diameter { At turned off part, 1 1/2" No. of threads per inch 9 Area supported by each stay 10 1/2" x 9" Over threads 1 1/2"

Working pressure by Rules **133 & 0** Are the stays drilled at the outer ends **No** Margin stays: Diameter ^{At turned off part.} **1 3/4** ✓
 No. of threads per inch **9** ✓ Area supported by each stay **12 x 10 1/2** ✓ Working pressure by Rules **148 & 0**
 Tubes: Material **S.O. Steel** External diameter ^{Plain} **3 1/2** ✓ ^{Stay} **3 1/2** ✓ Thickness ^{10 W.G.} **5/16** ✓ No. of threads per inch **9** ✓
 Pitch of tubes **4 3/4 x 4 3/4** ✓ Working pressure by Rules **Plain 120 lbs & Stay 142 lbs & 0** Manhole compensation: Size of opening in
 shell plate **16 x 12** ✓ Section of compensating ring **23/32** ✓ No. of rivets and diameter of rivet holes **38 - 13/16** ✓
 Outer row rivet pitch at ends **5** ✓ Depth of flange if manhole flanged ✓ 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 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 Manufacturers of ^{Tubes} ^{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, castings and after assembly in place Are drain cocks or valves fitted
 to free the superheater from water where necessary

FOR JOHN READHEAD & SONS, LTD.

J. H. Readhead
 The foregoing is a correct description,
 CHAIRMAN & MANAGING DIRECTOR

Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with
 Dates of Survey ^{During progress of work in shops - -} **July 14-25 - Aug 6-20-26** ✓
 while building ^{During erection on board vessel - - -} **Sept 7-17** ✓
 Are the approved plans of boiler and superheater forwarded herewith **Yes**
 (If not state date of approval.)
 Total No. of visits **8**

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.) *This boiler has been built under special survey in accordance with rule requirements approved plan. Materials workmanship are good. It has been efficiently installed & fixed in vessel, examined under steam its safety valves adjusted.*

Survey Fee £ : : When applied for, 19
 Travelling Expenses (if any) £ ✓ : : When received, 19

for E. F. Knowles. *R. Shaw J. W. Matthews*
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **3 FEB 1931**

TUE. 6 DEC 1932

Assigned *See other I.C. Rpt*

