

REPORT ON BOILERS.

No. 97322

APR 4 1939

Received at London Office

Date of writing Report 19 When handed in at Local Office 31/3/39 Port of NEWCASTLE-ON-TYNE

No. in Reg. Book. Survey held at South Shields Date, First Survey 2 May 1938 Last Survey Mar 21 1939

90254 on the S.S. THORNIEBANK (Number of Visits) Gross 5568.54 Tons Net 3249.39

Master Built at S. Shields By whom built J. Readhead & Sons Ltd Ward No. 515 When built 1939

Engines made at South Shields By whom made J. Readhead & Sons Ltd Engine No. 515 When made 1939

Boilers made at South Shields By whom made J. Readhead & Sons Ltd Boiler No. 515 When made 1939

Nominal Horse Power Owners Bank Line Ltd Port belonging to Glasgow

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel The Steel Company of Scotland (Letter for Record S)

Total Heating Surface of Boilers 1958 sq ft Is forced draught fitted Yes Coal or Oil fired Coal

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

Tested by hydraulic pressure to 3800 lbs Date of test 20-1-39 No. of Certificate 812 Can each boiler be worked separately Yes

Area of Firegrate in each Boiler 47 sq ft No. and Description of safety valves to each boiler 2 Double spring loaded H.L.

Area of each set of valves per boiler per Rule 6.94 sq ft as fitted 7.08 sq ft Pressure to which they are adjusted 220 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 1-7 Is oil fuel carried in the double bottom under boilers No

Smallest distance between shell of boiler and tank top plating 2-4 Is the bottom of the boiler insulated Yes

Largest internal dia. of boilers 13-6 3/8 Length 11-9 Shell plates: Material S.W. Steel Tensile strength 29-33 Tons

Thickness 1 5/16 Are the shell plates welded or flanged No Description of riveting: circ. seams end D.R.L.S. inter.

long. seams T.R.D.B.S. Diameter of rivet holes in circ. seams 1 3/8 long. seams 1 3/8 Pitch of rivets 4 1/4

Percentage of strength of circ. end seams plate 67.7 rivets 42.2 Percentage of strength of circ. intermediate seam plate rivets

Percentage of strength of longitudinal joint plate 85.13 rivets 90.9 combined 88.4 Working pressure of shell by Rules 221 lbs

Thickness of butt straps outer 1 1/8 inner 1 1/8 No. and Description of Furnaces in each Boiler 3 Dighton Type

Material S.W. Steel Tensile strength 26-30 Tons Smallest outside diameter 3-2 15/16

Length of plain part top bottom Thickness of plates crown 1 9/32 bottom 3/32 Description of longitudinal joint

Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules 221 lbs

End plates in steam space: Material S.W. Steel Tensile strength 26-30 Tons Thickness 1 3/16 Pitch of stays 17x19

How are stays secured Double nuts, washers outside (11 dia x 1 blk) Working pressure by Rules 233 lbs

Tube plates: Material front S.W. Steel back S.W. Steel Tensile strength 26-30 Tons Thickness 25/32

Mean pitch of stay tubes in nests 9 5/8 Pitch across wide water spaces 14 Working pressure front 224 lbs back 235 lbs

Girders to combustion chamber tops: Material S.W. Steel Tensile strength 29-33 Tons Depth and thickness of girder

at centre 8 1/2 x 1 3/4 Length as per Rule 2-7 1/2 Distance apart 9 7/8 No. and pitch of stays

in each 209 Working pressure by Rules 222 lbs Combustion chamber plates: Material S.W. Steel

Tensile strength 26-30 Tons Thickness: Sides 3/4 Back 3/4 Top 3/4 Bottom 7/8

Pitch of stays to ditto: Sides 9 3/4 x 9 Back 10 x 8 3/4 Top 9 x 9 1/8 Are stays fitted with nuts or riveted over Yes

Working pressure by Rules 222 lbs Front plate at bottom: Material S.W. Steel Tensile strength 26-30 Tons

Thickness 1 5/16 Lower back plate: Material S.W. Steel Tensile strength 26-30 Tons Thickness 7/8

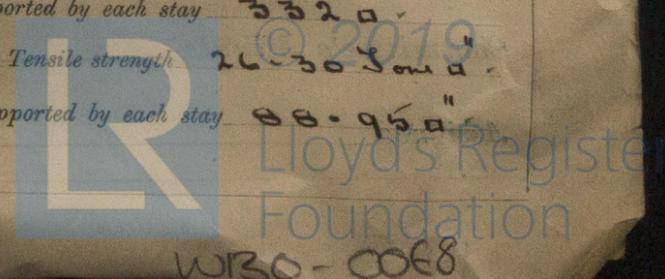
Pitch of stays at wide water space 14 x 8 3/4 Are stays fitted with nuts or riveted over Yes

Working Pressure 228 lbs Main stays: Material S.W. Steel Tensile strength 28-32 Tons

Diameter At body of stay 3 1/8 Over threads No. of threads per inch 6 Area supported by each stay 332 sq

Working pressure by Rules 221 lbs Screw stays: Material S.W. Steel Tensile strength 26-30 Tons

Diameter At turned off part 1 7/8 Over threads No. of threads per inch 9 Area supported by each stay 88.95 sq



W130-0068

Working pressure by Rules 240 lb Are the stays drilled at the outer ends No Margin stays: Diameter ^{At turned off part.} 2" or ^{Over threads.} 2"
 No. of threads per inch 9 Area supported by each stay 105" Working pressure by Rules 237 lb
 Tubes: Material Iron External diameter ^{Plain} 3" ^{Stay} 3" Thickness 5/16 - 3/8 No. of threads per inch 9
 Pitch of tubes 11 1/2" x 8 1/4" Working pressure by Rules 246 lb Manhole compensation: Size of opening in shell plate 16" x 12" Section of compensating ring 8" x 15/16" No. of rivets and diameter of rivet holes 28 2 1/8"
 Outer row rivet pitch at ends 9 1/4" 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 ✓
 How connected to shell ✓ Inner radius of crown ✓ Working pressure by Rules ✓
 of rivets in outer row in dome connection to shell ✓ Size of doubling plate under dome ✓ Diameter of rivet holes and pitch ✓

Type of Superheater

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 _____
 valves fitted to free the superheater from water where necessary _____ Are drain cocks or _____

Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with _____

J. H. Matthews
The foregoing is a correct description,

Manufacturer.

Dates of Survey ^{During progress of work in shops - -} See Weekly Report
 while building ^{During erection on board vessel - -} See Weekly Report

Are the approved plans of boiler and superheater forwarded herewith 2-12-37
 (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. SUTHERLAND. 96205.

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. Hydraulic test satisfactory. It has been efficiently & ^{independently} examined under steam & the safety valves adjusted to the approved pressure.

Survey Fee ... See Weekly Report When applied for, 10
 Travelling Expenses (if any) £ ... When received, 10

J. H. Matthews
Engineer Surveyor to Lloyd's Register of Shipping.

REC 12 APR 1939

Committee's Minute

Assigned

See No. J.C. 97322



© 2019

Lloyd's Register Foundation