

## REPORT ON BOILERS.

No. 105481

Received at London Office 25 AUG 1948

Date of writing Report 23 AUG 1948 When handed in at Local Office 23 AUG 1948 Port of NEWCASTLE-ON-TYNE

No. in Reg. Book. Survey held at HEBBURN-ON-TYNE Date, First Survey 28/1/48 Last Survey 30/7/48 19

75881 on the "STANFIRTH" Ex "BEAULY FIRTH" (Number of Visits 31) Tons Gross 7285 Net 5147

Master Built at S. Shields By whom built J. Readhead &amp; Sons Ltd. Yard No. 541 When built 6.1945

Engines made at S. Shields By whom made J. Readhead &amp; Sons Ltd. Engine No. 541 When made 1945

Boilers made at S. Shields By whom made J. Readhead &amp; Sons Ltd. Boiler No. 541 When made 1945

Nominal Horse Power 663 H.P. Owners Stanhope &amp; Co. Ltd. Port belonging to London

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

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

Total Heating Surface of Boilers 10650 Is forced draught fitted Yes Coal or Oil fired Oil

No. and Description of Boilers 3 S.B. (Spt.) Working Pressure 220 lbs/sq. in.

Tested by hydraulic pressure to 380 lbs/sq. in. Date of test 23.3.44 No. of Certificate 4.8.44 Can each boiler be worked separately Yes

Area of Firegrate in each Boiler 6.79 sq. ft. No. and Description of safety valves to each boiler Two Cockburns Improved Patent High Lift

Area of each set of valves per boiler per Rule 7.94 sq. ft. Pressure to which they are adjusted 220 lbs/sq. in. 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 18" Is oil fuel carried in the double bottom under boilers

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

Largest internal dia. of boilers 15'-0" Length 10'-8 1/2" Shell plates: Material Steel Tensile strength 29/33 Tons/sq. in.

Thickness 1 5/32" Are the shell plates welded or flanged No. Description of riveting: circ. seams Double riveted.

long. seams Treb Riv. Double Butt Strap Diameter of rivet holes in circ. seams 1 1/2" Pitch of rivets 4.07" 10 3/8"

Percentage of strength of circ. end seams plate 63.1% rivets 46.7% Percentage of strength of circ. intermediate seam plate 88.8% rivets 86.0%

Percentage of strength of longitudinal joint plate 88.3% rivets 86.0% Working pressure of shell by Rules 225 lbs/sq. in.

Thickness of butt straps outer 1 1/8" inner 1 1/4" No. and Description of Furnaces in each Boiler 3 Deighton Section

Material S.M. Steel Tensile strength 26/30 Tons/sq. in. Smallest outside diameter 45 1/8"

Length of plain part top 9 1/2" bottom 9 1/2" Thickness of plates crown 1 1/16" bottom 1 1/16" Description of longitudinal joint Butt

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

End plates in steam space: Material S.M. Steel Tensile strength 26/30 Tons/sq. in. Thickness 1 3/32" Pitch of stays 20"/21"

How are stays secured Nuts inter &amp; ext. Working pressure by Rules

Tube plates: Material front S.M. Steel back S.M. Steel Tensile strength 26/30 Tons/sq. in. Thickness 25/32"

Mean pitch of stay tubes in nests 8 1/2" Pitch across wide water spaces 14" Working pressure front back

Girders to combustion chamber tops: Material S.M. Steel Tensile strength 28/32 Depth and thickness of girder

at centre 10 1/2" x 1 1/16" Length as per Rule 33 1/2" Distance apart 9 1/4" No. and pitch of stays

in each 3 Stays 8" Pitch Working pressure by Rules Combustion chamber plates: Material S.M. Steel

Tensile strength 26/30 Tons/sq. in. Thickness: Sides 1 1/16" Back 1 1/16" Top 1 1/16" Bottom 1 3/16"

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

Working pressure by Rules Front plate at bottom: Material S.M. Steel Tensile strength 26/30 Tons/sq. in.

Thickness 1 5/16" Lower back plate: Material S.M. Steel Tensile strength 26/30 Tons/sq. in. Thickness 27/32"

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

Working pressure Main stays: Material S.M. Steel Tensile strength 28/32 Tons/sq. in.

Diameter At body of stay 3/2" No. of threads per inch 6 Area supported by each stay 420 sq. in.

Working pressure by Rules Screw stays: Material Steel Tensile strength 26/30 Tons/sq. in.

Diameter At turned off part 1 3/4" No. of threads per inch 9 Area supported by each stay 74 sq. in.



Working pressure by Rules... Are the stays drilled at the outer ends... No ✓ Margin stays: Diameter { At turned off part, or Over threads... 1 7/8" ✓ # 2"  
No. of threads per inch... 9 ✓ Area supported by each stay... 63 sq" Working pressure by Rules... ✓  
Tubes: Material... S.D. Steel External diameter { Plain... 3" Stay... 3" Thickness { 3/8" 3/16" No. of threads per inch... 9 ✓  
Pitch of tubes... 4 1/8" 4 1/4" Working pressure by Rules... ✓ Manhole compensation: Size of opening in shell plate... ✓ 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... Smoke Tube Type Manufacturers of { Tubes... Steel forgings... Steel castings... Internal diameter and thickness of tubes... ✓  
Number of elements... 47 Material of tubes... S.D. Steel Thickness... ✓ Can the superheater be shut off and the boiler be worked separately... Yes ✓ Is a safety valve fitted to every part of the superheater which can be shut off from the boiler... Yes ✓  
Area of each safety valve... 1.76 sq" Are the safety valves fitted with easing gear... Yes ✓ Working pressure as per Rules... 220 lbs/sq" Pressure to which the safety valves are adjusted... 220 lbs/sq" ✓ 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... Yes ✓  
Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with... Yes ✓  
The foregoing is a correct description, Manufacturer...

Dates of Survey while building { During progress of work in shops - - - Are the approved plans of boiler and superheater forwarded herewith... 13.11.43 (If not state date of approval.)  
During erection on board vessel - - - Total No. of visits...

Is this Boiler a duplicate of a previous case... Yes... If so, state Vessel's name and Report No... "LINARIA" ex "NOBAY FIFTH"

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)  
The machinery & Boilers of this vessel were constructed under Special Survey in 1945, the Boilers being opened out & examined and the safety valves adjusted under steam at this time.

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

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute...

Assigned... Su F.E. moly rpt.

FRI. 24 SEP 1948



© 2021

Lloyd's Register Foundation