

NOV 13 1937

Sld. No. 32235
Mab. No. 16111

REPORT ON BOILERS.

SEP 30 1937

Received at London Office

pt. 5a.

Form of writing Report 10 When handed in at Local Office 29.9.37 Port of Middlesbrough

No. in Survey held at Stockton Date, First Survey 31st Mar Last Survey 2nd Sept 1937

on the M/V "ETTRICKBANK." (Number of Visits 13) Tons { Gross 5138
Net 3040

Master Built at Sunderland. By whom built W. Donford Smith Yard No. 637 When built 1937

Engines made at Sunderland By whom made Wm. Donford & Sons L^{td} Engine No. 634 When made 1937

Boiler made at Stockton By whom made Stockton C.E. & Riley Boilers L^{td} Boiler No. 6252 When made 1937

Nominal Horse Power 684. Owners Inver Transport & Trading L^{td} Port belonging to Glasgow.

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Steel Company of Scotland L^{td} (Letter for Record S)

Total Heating Surface of Boilers 1626 Is forced draught fitted no. Coal or Oil fired oil

No. and Description of Boilers 1 Sp. Working Pressure 120 lbs

Tested by hydraulic pressure to 230 lbs Date of test 2.9.37 No. of Certificate 6916 Can each boiler be worked separately ✓

Area of Firegrate in each Boiler No. and Description of safety valves to each boiler 2 Series Spring

Area of each set of valves per boiler { per Rule 15.05"
as fitted 19.2" Pressure to which they are adjusted 120 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 ✓ Is oil fuel carried in the double bottom under boiler Yes (u/f)

Smallest distance between shell of boiler and tank top plating 2'-0" Is the bottom of the boiler insulated Yes

Largest internal dia. of boilers 11'-10 3/8" Length 11'-6" Shell plates: Material Steel Tensile strength 26/30

Thickness 1/16 Are the shell plates welded or flanged no Description of riveting: circ. seams { end DR
inter. ✓

Long. seams T.R. D.B.S. Diameter of rivet holes in { circ. seams 1 1/16
long. seams 1 3/16 Pitch of rivets { 3 3/8
5 3/8

Percentage of strength of circ. end seams { plate 68.5
rivets 45.5 Percentage of strength of circ. intermediate seam { plate ✓
rivets ✓

Percentage of strength of longitudinal joint { plate 84.9
rivets 83.8 Working pressure of shell by Rules 123 lbs

Thickness of butt straps { outer 9/16
inner 1/16 No. and Description of Furnaces in each Boiler 2 cf

Material Steel Tensile strength 26/30 Smallest outside diameter 3'-11 1/2"

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

Dimensions of stiffening rings on furnace or c.c. bottom ✓ Working pressure of furnace by Rules 121 lbs

End plates in steam space: Material Steel Tensile strength 26/30 Thickness 27/32 Pitch of stays 17 x 16"

How are stays secured D.N.T.W. Working pressure by Rules 142 lbs

Tube plates: Material { front Steel
back Steel Tensile strength { 26/30 Thickness { 27/32
13/16

Mean pitch of stay tubes in nests 9 3/8 Pitch across wide water spaces 14 Working pressure { front 157
back 249

Orders to combustion chamber tops: Material Steel Tensile strength 28/32 Depth and thickness of girder

centre 7" x 7/8" double Length as per Rule 30 1/2 Distance apart 9" No. and pitch of stays

each 2 @ 9 1/2" Working pressure by Rules 126 lbs Combustion chamber plates: Material Steel

Tensile strength 26/30 Thickness: Sides 9/32 Back 9/16 Top 19/32 Bottom 7/8

Pitch of stays to ditto: Sides 9 x 9 3/8 Back 9 1/4 x 8 3/4 Top 9 x 9 1/2 Are stays fitted with nuts or riveted over nuts

Working pressure by Rules 129 lbs Front plate at bottom: Material Steel Tensile strength 26/30

Thickness 27/32 Lower back plate: Material Steel Tensile strength 26/30 Thickness 27/32

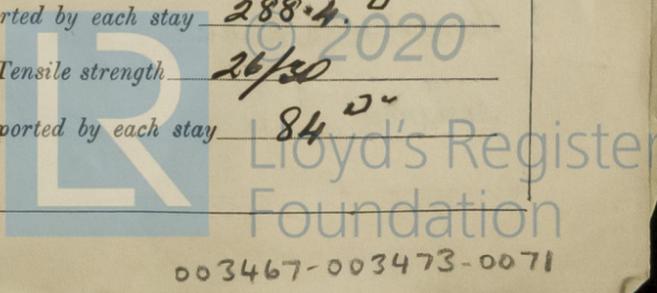
Pitch of stays at wide water space 13 1/2 x 9 1/4 Are stays fitted with nuts or riveted over nuts

Working Pressure 201 Main stays: Material Steel Tensile strength 28/32

Diameter { At body of stay, 2 1/4
or
Over threads ✓ No. of threads per inch 6 Area supported by each stay 288.4 sq"

Working pressure by Rules 120 lbs Screw stays: Material Steel Tensile strength 26/30

Diameter { At turned off part, 1 3/8
or
Over threads ✓ No. of threads per inch 9 Area supported by each stay 84 sq"



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Working pressure by Rules 120 lbs Are the stays drilled at the outer ends NO Margin stays: Diameter ^{At turned off part,} 1 7/8" or ^{Over threads} 1 7/8"
 No. of threads per inch 9 Area supported by each stay 100 sq Working pressure by Rules 152 lbs
 Tubes: Material Lap Weld Iron External diameter ^{Plain} 2 3/4 Thickness ^{Stay} 2 3/4 8 W.G. No. of threads per inch 9
 Pitch of tubes 3 1/4 Working pressure by Rules 275 lbs Manhole compensation: Size of opening
 shell plate 20 x 15 Section of compensating ring 7" x 1" No. of rivets and diameter of rivet holes 44 1 5/16
 Outer row rivet pitch at ends 6 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
 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
 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
 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 yes or and on behalf of
Stockton Chemical Engineers & Riley Boilers Ltd.
 The foregoing is a correct description,
M. H. Riley - Manufactu
 DIRECTOR

Dates of Survey ^{During progress of} 1937: Mar 31, Apr 6, 14, 23, 26, May 7, 21 Are the approved plans of boiler and superheater forwarded herewith
^{work in shops - -} in 5, 10, 23, Aug 3, 13, Rep 2 (If not state date of approval.) held for duplicate
^{while} ^{During erection on} _____ Total No. of visits 13
^{building} ^{board vessel - - -} _____

Is this Boiler a duplicate of a previous case yes. If so, state Vessel's name and Report No. M.V. TROMA Mdb 16040

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) This boiler has been made under special survey in accordance with the approved plan & requirements of the Rules. The material & workmanship are good & the boiler was found to be sound & tight under hydraulic pressure & has been forwarded to Sunderland.

This boiler has been securely fixed on board the vessel, examined under steam, safety valves adjusted to working pressure & accumulator test carried out satisfactorily.

For recommendation please see Mech. Rpt.

M. H. Riley

Survey Fee £ 10 : 16 : 0 When applied for, 28. 9. 1937
 Travelling Expenses (if any) £ : : When received, 12. 11. 1937

Bellifant
 Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute _____
 Assigned See Std. S.E. 32285

FRI 19 NOV 1937