

REPORT ON BOILERS.

No. 20514

Received at London Office MAR -2 1938

Date of writing Report 31. 12 1937 When handed in at Local Office 25th Feb. 1938. Port of Glasgow

No. in Survey held at Glasgow Date, First Survey 14th March 1934 Last Survey 25th February 1938

g. Book. T/Ss "Glen Buchanan" (Number of Visits ☒) Gross 7265.91 Tons Net 3692.25

Master J.M. Built at Glasgow By whom built Glasgow Dockyard Ltd Yard No. 431 When built 1938
Engines made at Glasgow By whom made John & Macrae & Co Ltd Engine No. 690 When made 1938
Boilers made at ditto By whom made ditto Boiler No. 690 When made 1938
Nominal Horse Power Owners The Glen Line Steamers Ltd Port belonging to Glasgow
Cayser & Irvine (Managers)

MULTITUBULAR BOILERS—MAIN, ~~FIXED~~, OR DONKEY.

Manufacturer. Manufacturers of Steel Balvill & Steel Co of Scotland (Letter for Record S ✓)

21. 2 Total Heating Surface of Boilers 14780 ✓ Is forced draught fitted Yes ✓ Coal & Oil fired Both ✓

No. and Description of Boilers 5 Single Ended ✓ Working Pressure 220 ✓

Tested by hydraulic pressure to 380 ✓ Date of test 27.12.37 No. of Certificate SA 2134 Can each boiler be worked separately Yes ✓

37 Area of Firegrate in each Boiler 80.5 ✓ No. and Description of safety valves to each boiler 2 Cochran Improved high lift ✓

Area of each set of valves per boiler { per Rule 9.45 ✓ as fitted 9.82 ✓ Pressure to which they are adjusted 225 ✓ Are they fitted with easing gear Yes ✓

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler Yes ✓

Smallest distance between boilers or uptakes and bunkers or woodwork 1'-6" ✓ Is oil fuel carried in the double bottom under boilers No ✓

Smallest distance between shell of boiler and tank top plating 1'-10" ✓ Is the bottom of the boiler insulated Yes ✓

4. 4 Largest internal dia. of boilers 16'-8 3/4" Length 12'-0" Shell plates: Material S ✓ Tensile strength 29.33 ✓

Thickness 1 5/8" Are the shell plates welded or flanged Yes ✓ Description of riveting: circ. seams { end DR inter. Yes ✓

Long. seams TR + D B S ✓ Diameter of rivet holes in { circ. seams 1 21/32" ✓ long. seams 1 27/8" ✓ Pitch of rivets { 4 6/4" ✓ 10 2/4" ✓

W.E.L. 482 Percentage of strength of circ. end seams { plate 64.5 ✓ rivets 45.4 ✓ Percentage of strength of circ. intermediate seam { plate 84.88 ✓ rivets 88.1 ✓

Percentage of strength of longitudinal joint { plate 84.88 ✓ rivets 88.1 ✓ Working pressure of shell by Rules 224 ✓

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

Material S ✓ Tensile strength 26-30 ✓ Smallest outside diameter 3'-4 5/16" ✓

Length of plain part { top 21 1/32" ✓ bottom 21 1/32" ✓ Thickness of plates { crown 21 1/32" ✓ bottom 21 1/32" ✓ Description of longitudinal joint weld ✓

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

End plates in steam space: Material S ✓ Tensile strength 26-30 ✓ Thickness 1 1/4" ✓ Pitch of stays 20x16 ✓

How are stays secured DN + Washers ✓ Working pressure by Rules 222 ✓

4. 4 Tube plates: Material { front S ✓ back S ✓ Tensile strength { 26-30 ✓ Thickness { 25 1/32" ✓

Mean pitch of stay tubes in nests 9.666 ✓ Pitch across wide water spaces 14" ✓ Working pressure { front 224 ✓ back 234 ✓

Girders to combustion chamber tops: Material S ✓ Tensile strength 29.33 ✓ Depth and thickness of girder

at centre 10 1/4' x 3 1/4' (2) ✓ Length as per Rule 34. 17 1/32" ✓ Distance apart 8 1/2" ✓ No. and pitch of stays

in each 3 at 8 1/4" ✓ Working pressure by Rules 257 ✓ Combustion chamber plates: Material S ✓

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

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

Working pressure by Rules 229 ✓ Front plate at bottom: Material S ✓ Tensile strength 26-30 ✓

Thickness 1 5/16" ✓ Lower back plate: Material S ✓ Tensile strength 26-30 ✓ Thickness 7/8" ✓

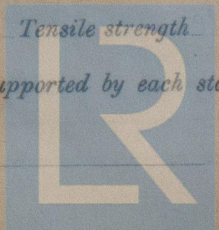
Pitch of stays at wide water space 14" ✓ Are stays fitted with nuts or riveted over Nuts ✓

Working Pressure 223 ✓ Main stays: Material S ✓ Tensile strength 28.32 ✓

Diameter { At body of stay, 3" ✓ No. of threads per inch 6 ✓ Area supported by each stay 320 ✓

Working pressure by Rules 245 ✓ Screw stays: Material S ✓ Tensile strength 26-30 ✓

Diameter { At turned off part, 1 3/4" ✓ No. of threads per inch 9 ✓ Area supported by each stay 42.25 ✓



Working pressure by Rules 250 Are the stays drilled at the outer ends Yes Margin stays: Diameter 1 7/8 At turned off part or Over threads ✓

No. of threads per inch 9 Area supported by each stay 95 sq in Working pressure by Rules 224

Tubes: Material S External diameter 3 Thickness 8 WG No. of threads per inch 9

Pitch of tubes 4 1/8" x 4 1/4" Working pressure by Rules 231 Manhole compensation: Size of opening

shell plate 16 1/2" x 20 1/2" Section of compensating ring 3 3/8" x 3 5/8" x 1 5/8" No. of rivets and diameter of rivet holes 36 at 1 2 1/2"

Outer row rivet pitch at ends 1 1/4" Depth of flange if manhole flanged 3 3/4" 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 North Eastern Marine Manufacturers of

Tubes
Steel forgings
Steel castings

Number of elements Material of tubes Internal diameter and thickness of tubes

Material of headers For particulars see Newcastle Bull. No. 5276 attached Can the superheater be shut off from the boiler 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 3.1416 sq in Are the safety valves fitted with easing gear Yes Working pressure as per Rules 220 Pressure to which the safety valves are adjusted 220 Hydraulic test pressure

tubes 440 lb forgings and castings 440 lb and after assembly in place Yes Are drain cocks

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,
For JOHN G. KINCAID & CO. LIMITED.

W. G. Kincaid Director. Manufacture

Dates of Survey During progress of work in shops - -
while building During erection on board vessel - -

See Machinery Report

Are the approved plans of boiler and superheater forwarded herewith Yes
(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. T/S "Clayburning" 1st Sept 2048

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) These Boilers have been built under Special Survey in accordance with the approved plans & the workmanship & material are of good quality. They are now securely fitted on board.

This Report accords with that of the Machinery.

Survey Fee £10 charged on Machinery Report

Travelling Expenses (if any) £

When applied for, 19

When received, 19

W. G. Kincaid

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 1-MAR 1938

Assigned SEE ACCOMPANYING MACHINERY REPORT



© 2021

Lloyd's Register
Foundation