

REPORT ON BOILERS.

No. 61209

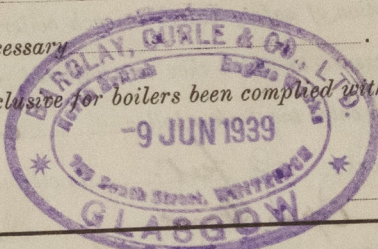
Date of writing Report 8th June 1939 When handed in at Local Office 12: 6: 1939 Port of Glasgow
 Received at London Office JUN 14 1939
 No. in Reg. Book. Survey held at Glasgow Date, First Survey 21: 2: 39 Last Survey 8: 6: 1939
 on the Boiler No. 38-13 "Revenue" (Number of Visits 12)
 Tons { Gross
 Net
 Master Built at Selby By whom built Cochrane & Sons Ltd Yard No. When built
 Engines made at Newbury By whom made Plenty & Son Ltd Engine No. 2771 When made
 Boilers made at Glasgow By whom made Barclay Curwen Boiler No. 38-13 When made 1939
 Nominal Horse Power Owners Port belonging to

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Colvilles Ltd (Letter for Record S)
 Total Heating Surface of Boilers 3229 sq ft Is forced draught fitted Yes Coal or Oil fired Coal
 No. and Description of Boilers 1 - S.E. multitubular Working Pressure 200 lbs.
 Tested by hydraulic pressure to 350 lbs. Date of test 30.5.39 No. of Certificate 203 90 Can each boiler be worked separately ✓
 Area of Firegrate in each Boiler 75 sq ft No. and Description of safety valves to each boiler 1 - 3 1/2" Double Spring
 Area of each set of valves per boiler { per Rule 18.8
 as fitted 19.24 Pressure to which they are adjusted 300 lbs. 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 feet Is oil fuel carried in the double bottom under boilers No
 Smallest distance between shell of boiler and tank top plating Open floor Is the bottom of the boiler insulated
 Largest internal dia. of boilers 16' 6" Length 12' 0" Shell plates: Material Steel Tensile strength 29/33 tons
 Thickness 1 15/32" Are the shell plates welded or flanged No Description of riveting: circ. seams { end D.R. Lap
 inter.
 long. seams T. R. D. B. S. Diameter of rivet holes in { circ. seams 1 1/2" Pitch of rivets { 4.01"
 { long. seams 1 1/2" { 10 7/16"
 Percentage of strength of circ. end seams { plate 62.5
 rivets 47.7 Percentage of strength of circ. intermediate seam { plate
 rivets
 Percentage of strength of longitudinal joint { plate 85.5
 rivets 85.7 Working pressure of shell by Rules 204 lbs.
 combined 88.1
 Thickness of butt straps { outer 1 1/8"
 inner 1 1/4" No. and Description of Furnaces in each Boiler 4 - Deighton
 Material Steel Tensile strength 26/30 Smallest outside diameter 42 1/4"
 Length of plain part { top
 bottom Thickness of plates { crown 19/32" Description of longitudinal joint welded
 { bottom
 Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules 204 lbs.
 End plates in steam space: Material Steel Tensile strength 26/30 Thickness 1 1/32" Pitch of stays 17 1/2" x 23"
 How are stays secured Double Nuts Working pressure by Rules 200 lbs.
 Tube plates: Material { front Steel Tensile strength { 26/30 Thickness { 27/32"
 { back Steel { 23/32"
 Mean pitch of stay tubes in nests 9 3/8" Pitch across wide water spaces 13 1/2" Working pressure { front 213 lbs.
 { back 209 lbs.
 Orders to combustion chamber tops: Material Steel Tensile strength 28/32 Depth and thickness of girder
 centre 10 1/4" x 20 3/4" Length as per Rule 36 3/32" Distance apart 9 1/4" No. and pitch of stays
 each 30 85/8" Working pressure by Rules 205 lbs. Combustion chamber plates: Material Steel
 Tensile strength 26/30 Thickness: Sides 1 1/16" Back 1 1/16" Top 1 1/16" Bottom 3/4"
 Pitch of stays to ditto: Sides 8 5/8" x 9 1/4" Back 9" x 9" Top 8 5/8" x 9 1/4" Are stays fitted with nuts or riveted over Nuts
 Working pressure by Rules 203 lbs. Front plate at bottom: Material Steel Tensile strength 26/30
 Thickness 27/32" Lower back plate: Material Steel Tensile strength 26/30 Thickness 13/16"
 Pitch of stays at wide water space 13 1/2" x 9" Are stays fitted with nuts or riveted over Nuts
 Working Pressure 203 lbs. Main stays: Material Steel Tensile strength 28/32
 Diameter { At body of stay, 3 3/8"
 or
 Over threads No. of threads per inch 6 Area supported by each stay 402 sq in
 Working pressure by Rules 228 lbs. Screw stays: Material Steel Tensile strength 26/30
 Diameter { At turned off part, 1 3/4"
 or
 Over threads No. of threads per inch 9 Area supported by each stay 81 sq in

Working pressure by Rules 224 lbs. Are the stays drilled at the outer ends No. Margin stays: Diameter { At turned off part, or Over threads. 7/8"
No. of threads per inch 9 Area supported by each stay 101.25 sq" Working pressure by Rules 210 lbs.
Tubes: Material S.D. Steel External diameter { Plain 2 1/2" Thickness { 94.56 No. of threads per inch 9
Pitch of tubes 3 3/4" x 3 3/4" Working pressure by Rules 230 lbs. Manhole compensation: Size of opening in
shell plate 20 1/2" x 16 1/2" Section of compensating ring 22" x 1 5/32" No. of rivets and diameter of rivet holes 40 @ 1 1/2"
Outer row rivet pitch at ends 10 7/16" Depth of flange if manhole flanged 4 1/4" Nil Steam Dome: Material Nil
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 Nil 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 _____ Are drain cocks
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 _____



The foregoing is a correct description,
Alvander Macdonald Manufacturer
Chief Draughtsman

Dates of Survey { During progress of work in shops - - 1939 Feb: 21 Mar: 6-13 22-28 Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) Yes.
while building { During erection on board vessel - - - Apr: 11-20-27 May: 4-12-30 Total No. of visits 12
June: 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 the Rules and approved plans. The materials and workmanship are good. This Boiler is to the order of Plenty & Son and is intended for a tug building, Cochrane & Sons Ltd, Selby.

Gsb
12/6/39

Survey Fee ... £ 21 : 10 : 0 When applied for 12 JUN 1939
Travelling Expenses (if any) £ : : When received 10/8/39 L.S.

S.R. Macdonald

Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute GLASGOW 13 JUN 1939

Assigned TRANSMIT TO LONDON



58277

Lloyd's Register Foundation