

REPORT ON BOILERS.

No. 61209

Date of writing Report 8th June 1939 When handed in at Local Office 12:6:39 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.

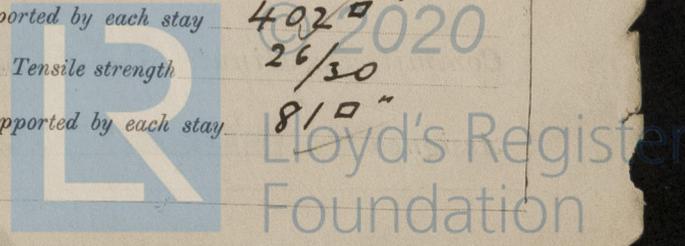
Manufacturers of Steel Colvilles Ltd (Letter for Record S)
Total Heating Surface of Boilers 3229 Is forced draught fitted Yes Coal or Oil fired Coal
No. and Description of Boilers 1 - S.E. multitubular Working Pressure 200 lbs.
Tested by hydraulic pressure to 350 lbs. Date of test 30.5.39 No. of Certificate 20390 Can each boiler be worked separately ✓
Area of Firegrate in each Boiler 75 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 None
Smallest distance between boilers or uptakes and bunkers or woodwork 9 feet Is oil fuel carried in the double bottom under boilers No
Smallest distance between shell of boiler and tank top plating Open floors 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. ✓
Type of seams T. R. D. B. S. Diameter of rivet holes in {circ. seams 1 1/2" Pitch of rivets {4.01" 10 7/16"
Percentage of strength of circ. end seams {plate 62.5 rivets 47.7 Percentage of strength of circ. intermediate seam {plate 85.5 rivets 85.7
Percentage of strength of longitudinal joint {plate 85.5 rivets 85.7 combined 88.1 Working pressure of shell by Rules 204 lbs.

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" bottom ✓ Description of longitudinal joint welded
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 back Steel Tensile strength {26/30 Thickness {27/32" 23/32"

Lean 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 8 5/8" 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, or Over threads 3 3/8" No. of threads per inch 6 Area supported by each stay 402 2020
Working pressure by Rules 228 lbs. Screw stays: Material Steel Tensile strength 26/30
Diameter {At turned off part, or Over threads 1 3/4" No. of threads per inch 9 Area supported by each stay 810"



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 lbs Neil 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 at 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 _____



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 June: 8 Total No. of visits 12

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) £ : : } sent to Hull 10/8/39 L.S.

S.R. Macdonald
 Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute GLASGOW 13 JUN 1939 MB

Assigned TRANSMIT TO LONDON

