

REPORT ON BOILERS.

No. 61943

JAN 24 1940

Received at London Office

Date of writing Report 19 When handed in at Local Office 20.1. 1940 Port of Glasgow
 No. in Survey held at Glasgow Date, First Survey 1939 July 7th Last Survey 11th Jan. 1940
 Reg. Book. on the S/S "CHARLBURY" (Number of Visits 54) Gross Tons Net
 Master Built at Burntisland By whom built Burntisland SBC Co. Ltd. No. 238 When built
 Engines made at Glasgow By whom made David Rowan & Co. Ltd. Engine No. 1048 When made 1940
 Boilers made at Glasgow By whom made David Rowan & Co. Ltd. Boiler No. 1048 When made 1940
 Nominal Horse Power 458 Owners Port belonging to

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Colvilles Ltd. (Letter for Record 3)
 Total Heating Surface of Boilers 1180 sq (1266 oil burn?) Is forced draught fitted No Coal or Oil fired either
 No. and Description of Boilers one single ended Working Pressure 220 lb.
 Tested by hydraulic pressure to 380 lb. Date of test 3/11/39 No. of Certificate 20476 Can each boiler be worked separately Yes
 Area of Firegrate in each Boiler 32.9 sq No. and Description of safety valves to each boiler 2 spring loaded I.H.L. 1 3/4" dia.
 Area of each set of valves per boiler {per Rule 3.3670" Pressure to which they are adjusted - 220 lb. Are they fitted with easing gear Yes
 {as fitted 4.80"
 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 PLACED IN RECESS, STOKED HOLD, FOR MAIN BOILERS. Is oil fuel carried in the double bottom under boilers -
 BACK OF BOILER TO HOLD BULKHEAD = 23".
 Smallest distance between shell of boiler and tank top plating - 2'-6" Is the bottom of the boiler insulated - Yes.
 Largest internal dia. of boilers 11'-6" Length 10'-6" Shell plates: Material steel Tensile strength 29/33 tons
 Thickness 1 7/16" Are the shell plates welded or flanged No Description of riveting: circ. seams {end D.R. inter. 3.1875" Pitch of rivets 8"
 long, seams DBS TR Diameter of rivet holes in {circ. seams 1 3/16" long, seams
 Percentage of strength of circ. end seams {plate 62.7 rivets 49.7 Percentage of strength of circ. intermediate seam {plate - rivets -
 Percentage of strength of longitudinal joint {plate 85.16 rivets 92.7 Working pressure of shell by Rules 222 lb.
 combined 88.9
 Thickness of butt straps {outer 27/32" inner 31/32" No. and Description of Furnaces in each Boiler Two Brighten
 Material steel Tensile strength 26/30 tons Smallest outside diameter 3'-4 3/4"
 Length of plain part {top - bottom - Thickness of plates {crown 5/8" bottom Description of longitudinal joint welded
 Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules 223 lb.
 End plates in steam space: Material steel Tensile strength 26/30 tons Thickness 1 1/4" Pitch of stays 2 1/2" x 1/4"
 How are stays secured D.N. Working pressure by Rules 221 lb.
 Tube plates: Material {front steel back Tensile strength 26/30 tons Thickness {15/16" 25/32"
 Mean pitch of stay tubes in nests 9.7" Pitch across wide water spaces 14" Working pressure {front 229 lb. back 232 lb.
 Girders to combustion chamber tops: Material steel Tensile strength 28/32 tons Depth and thickness of girder
 at centre 20 7/16" x 7/8" Length as per Rule 28 1/16" Distance apart 9 1/4" No. and pitch of stays
 in each 20 8 7/8" Working pressure by Rules 220 lb. Combustion chamber plates: Material steel
 Tensile strength 26/30 tons Thickness: Sides 3/4" Back 2 1/32" Top 3/4" Bottom 3/4"
 Pitch of stays to ditto: Sides 8 7/8" x 9 1/4" Back 8" x 8 1/2" Top 8 7/8" x 9 1/4" Are stays fitted with nuts or riveted over nuts
 Working pressure by Rules 220 lb. Front plate at bottom: Material steel Tensile strength 26/30 tons
 Thickness 15/16" Lower back plate: Material steel Tensile strength 26/30 tons Thickness 5 3/64"
 Pitch of stays at wide water space 13 1/2" Are stays fitted with nuts or riveted over nuts
 Working Pressure 227 lb. Main stays: Material steel Tensile strength 28/32 tons
 Diameter {At body of stay, 2 3/4" + 3" No. of threads per inch 6 Area supported by each stay 280 sq" + 321 sq"
 {Over threads Working pressure by Rules 233 + 244 lb. Screw stays: Material steel Tensile strength 26/30 tons
 Diameter {At turned off part, 1 5/8" + 1 3/4" No. of threads per inch 9 Area supported by each stay 68 + 83 sq"

Working pressure by Rules 224 & 220 Are the stays drilled at the outer ends no Margin stays: Diameter { At turned off part, Over threads 1 3/4" & 1 7/8"
No. of threads per inch 9 Area supported by each stay 83 & 91 sq" Working pressure by Rules 220 & 234 lb.
Tubes: Material Iron External diameter { Plain 3" Thickness { 8 WG No. of threads per inch 9
Pitch of tubes 4 3/16" x 4 1/8" Working pressure by Rules 250 lb. Manhole compensation: Size of opening in
shell plate 19 1/2" x 15 1/2" Section of compensating ring 8 3/4" x 1 7/4" No. of rivets and diameter of rivet holes 32 @ 1 1/4"
Outer row rivet pitch at ends 8 1/4" Depth of flange if manhole flanged 3" Steam Dome: Material none
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 none 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 of
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,
For David Rougan & Co. Ltd. Manufacturers
Arch. N. Grierson

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

Is this Boiler a duplicate of a previous case Yes If so, state Vessel's name and Report No. "DAN-Y-BRYN" GLS. REG. NO. 61742

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, and the materials and workmanship are good. It has been sent to Bruntsland to be fitted in the vessel.

Pop
20/1/40
This boiler has been efficiently fitted on board & the safety valves adjusted to 220 lbs/sq. in.
J. I. Campbell.

Survey Fee ... £ See Mach. Rep. When applied for, 19
Travelling Expenses (if any) £ See Mach. Rep. When received, 19

Committee's Minute GLASGOW 23 JAN 1940
Assigned SEE ACCOMPANYING MACHINERY REPORT
Engineer Surveyor to Lloyd's Register of Shipping.
FRI 19 APR 1940
See Lth. 76. 20067
Lloyd's Register Foundation