

REPORT ON BOILERS.

No. 67272

Received at London Office

17 JUL 1943

Date of writing Report 28.6.43 When handed in at Local Office 10/13 Port of Glasgow

No. in Reg. Book 19 Survey held at Glasgow Date, First Survey 20th Nov 1942 Last Survey 18th June 1943

on the S.S. "BRIGHTON." (Number of Visits 17) Gross Tons 17 Net Tons 17

Built at Burntisland By whom built Burntisland S.B. Co. Ltd. Yard No 271 When built 1943

Engines made at Glasgow By whom made David Brown & Co. Ltd. Engine No 1128 When made 1943

Boilers made at -do- By whom made -do- Boiler No 1116 When made 1943

Nominal Horse Power 512 Owners -do- Port belonging to -do-

MULTITUBULAR BOILERS - MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Colvilles, Ltd. (Letter for Record S)

Total Heating Surface of Boilers 7248 sq ft Is forced draught fitted Yes Coal or Oil fired Coal

No. and Description of Boilers 3 Single-ended Working Pressure 220 lb

Tested by hydraulic pressure to 380 lb Date of test 22-2-43 No. of Certificate 21360 Can each boiler be worked separately Yes

Area of Firegrate in each Boiler 55 sq ft No. and Description of safety valves to each boiler 1-3" diameter

Area of each set of valves per boiler 12.950 sq ft Pressure to which they are adjusted 220 lb 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 front of boiler to bulkhead = 9'-0" Is oil fuel carried in the double bottom under boilers No.

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

Largest external dia. of boilers 15'-3" Length 11'-6" Shell plates: Material S Tensile strength 29/33 tons

Thickness 1 7/16" Are the shell plates welded or flanged No Description of riveting: circ. seams end inter. date

long. seams DBS TR Diameter of rivet holes in circ. seams B 1 1/2" F 1 3/8" Pitch of rivets B 4.13" F 3.435"

Percentage of strength of circ. end seams plate rivets 47.2 Percentage of strength of circ. intermediate seam plate rivets 85.36

Percentage of strength of longitudinal joint plate rivets 89 combined 88.5

Thickness of butt straps outer 1 3/32" inner 1 7/32" No. and Description of Furnaces in each Boiler 3 Single

Material S Tensile strength 26/30 tons Smallest outside diameter 3'-9 3/8"

Length of plain part top - bottom - Thickness of plates crown 11/16" Description of longitudinal joint welded

Dimensions of stiffening rings on furnace or c.c. bottom -

End plates in steam space: Material S Tensile strength 26/30 tons Thickness 1 3/8" Pitch of stays 19" x 22"

How are stays secured D.N.

Tube plates: Material front S back S Tensile strength 26/30 tons Thickness 15/16" 25/32"

Mean pitch of stay tubes in nests 9.66" Pitch across wide water spaces 14"

Girders to combustion chamber tops: Material S Tensile strength 28/32 tons Depth and thickness of girder at centre 2 @ 8 3/4" x 7/8" Length as per Rule 33 1/2" Distance apart 8" No. and pitch of stays in each 3 @ 8 1/4"

Combustion chamber plates: Material S Tensile strength 26/30 tons Thickness: Sides 21/32" Back 23/32" Top 21/32" Bottom 13/16"

Pitch of stays to ditto: Sides 8 1/4" x 8" Back 10" x 8" Top 8 1/4" x 8" Are stays fitted with nuts or riveted over Nuts

Front plate at bottom: Material S Tensile strength 26/30 tons Thickness 15/16" Lower back plate: Material S Tensile strength 26/30 tons Thickness 13/16"

Pitch of stays at wide water space 13 7/16" Are stays fitted with nuts or riveted over Nuts

Main stays: Material S Tensile strength 28/32 tons

Diameter At body of stay, or Over threads 3" + 3 1/4" No. of threads per inch 6

Screw stays: Material S Tensile strength 26/30 tons

Diameter At turned off part, or Over threads 1 5/8" + 1 3/4" No. of threads per inch 9

Are the stays drilled at the outer ends No ✓ Margin stays: Diameter { At turned off part, or Over threads 1 7/8" ✓

No. of threads per inch 9

Tubes: Material S External diameter { Plain 3" Stay } Thickness { 1/4" 5/16" 3/8" } No. of threads per inch 9

Pitch of tubes 4 1/8" x 4 3/16" Manhole compensation: Size of opening in shell plate 16" x 12" Section of compensating ring ✓ No. of rivets and diameter of rivet holes ✓

Outer row rivet pitch at ends ✓ Depth of flange if manhole flanged 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 _____ Thickness of crown _____ No. and diameter of stays _____ Inner radius of crown _____

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 Smokestack type 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 _____

Pressure to which the safety valves are adjusted _____ Hydraulic test pressure: tubes _____ forgings and 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 _____

The foregoing is a correct description,
For David Rowan & Co. Ltd Manufacturer.
Arch. H. Grierson

Dates of Survey { During progress of work in shops - - } 1942 Nov 26 Dec 1, 8, 15, 18, 29 1943 Jan 19, 27 Feb 11, 22, Mar 4, 9, 11, 12, 17, 26 Jun 18. Are the approved plans of boiler and superheater forwarded herewith Yes ✓ (If not state date of approval.)

while building { During erection on board vessel - - - } _____ Total No. of visits 17

Is this Boiler a duplicate of a previous case Yes ✓ If so, state Vessel's name and Report No. "CARLTON" No. Rpt. 66000

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) These boilers have been built under special survey in accordance with the Rules and approved plans, and the materials and workmanship are good. They have been sent to Burntisland for installation in the vessel.

These boilers have been efficiently fitted on board and the safety valves adjusted to 220 lbs/sq. in.

J. F. Campbell.

Survey Fee £ _____ When applied for, _____ 19 _____

Travelling Expenses (if any) £ See mach. 7 p. 101. When received, _____ 19 _____

M. Brown.
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 29 JUN 1943

Assigned TUES. 31 AUG 1943
see minute on 14th Feb. Rpt.



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22-6-43