

REPORT ON BOILERS.

No. 65197

12 MAR 1942

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on the SS. "WILLIAM PEARMAN" (Number of Visits 33) Tons { Gross Net

Master Built at Burntisland By whom built Burntisland S.B. Co. Yard No. 257 When built 1942

Engines made at Glasgow By whom made Messrs David Rowan & Co Engine No. 1098 When made 1942

Boilers made at Glasgow By whom made Messrs David Rowan & Co Boiler No. 1098 When made 1942

Nominal Horse Power 184 Owners Port belonging to

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Colvilles Ltd (Letter for Record S)

Total Heating Surface of Boilers 2750 sq. ft. Is forced draught fitted Yes Coal or Oil fired Coal

No. and Description of Boilers One Single Ended Working Pressure 200 lbs/sq. in.

Tested by hydraulic pressure to 350 lbs Date of test 2-2-42 No. of Certificate 20968 Can each boiler be worked separately

Area of Firegrate in each Boiler 63.2 sq. ft. No. and Description of safety valves to each boiler 2-3 1/4" dia. double spring

Area of each set of valves per boiler { per Rule 15.99" as fitted 16.59" Pressure to which they are adjusted 200 lbs. Are they fitted with easing gear Yes

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 front of boiler to bunker = 7'-0". Is oil fuel carried in the double bottom under boilers

Smallest distance between shell of boiler and tank top plating No tank Is the bottom of the boiler insulated Yes

Largest internal dia. of boilers 15'-9 1/4" Length 11'-6" Shell plates: Material S Tensile strength 29/33 Tons/sq. in. DR. Kop

Thickness 1 3/8" Are the shell plates welded or flanged No Description of riveting: circ. seams { end 8E. 1 7/8" FE. 1 5/8" as fitted 1 7/8" Pitch of rivets { 8E. 3.94" FE. 3.364" 9 1/8"

Percentage of strength of circ. end seams { plate 8E. 63.5 FE. 61.0 rivets 8E. 47.8 FE. 46.5 Percentage of strength of circ. intermediate seam { plate 85.16 rivets 89.3

Percentage of strength of longitudinal joint { plate 89.3 rivets 88.4 Working pressure of shell by Rules

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

Material S Tensile strength 26/20 Tons/sq. in. Smallest outside diameter 3'-11 7/16"

Length of plain part { top 2 1/32" bottom 2 1/32" Thickness of plates { crown 2 1/32" bottom 2 1/32" Description of longitudinal joint welded

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

End plates in steam space: Material S Tensile strength 26/30 Tons/sq. in. Thickness 1 3/8" Pitch of stays 22" x 20"

How are stays secured Double nuts Working pressure by Rules 29/32"

Tube plates: Material { front S back S Tensile strength { 26/30 Tons/sq. in. Thickness { 25/32"

Lean pitch of stay tubes in nests 10.75" Pitch across wide water spaces 14" Working pressure { front 29/32" back 25/32"

Girders to combustion chamber tops: Material S Tensile strength 28/32 Tons/sq. in. Depth and thickness of girder 8 7/8" x 7/8"

Distance apart 7 1/4" C ; 9" W No. and pitch of stays 3 @ 8 1/4"

Working pressure by Rules Combustion chamber plates: Material S

Tensile strength 26/30 Tons/sq. in. Thickness: Sides 2 1/32" Back 1 1/16" Top 2 1/32" Bottom 25/32"

Pitch of stays to ditto: Sides 8 1/4" x 9 1/8" Back 8 1/2" x 9 1/8" Top 8 1/4" x 9"; 8 1/4" x 7 1/4" Are stays fitted with nuts or riveted over Nuts

Working pressure by Rules Front plate at bottom: Material S Tensile strength 26/30 Tons/sq. in.

Thickness 29/32" Lower back plate: Material S Tensile strength 26/30 Tons/sq. in. Thickness 25/32"

Pitch of stays at wide water space 13 1/2" Are stays fitted with nuts or riveted over Nuts

Working Pressure Main stays: Material S Tensile strength 28/32 Tons/sq. in.

Diameter { At body of stay, 6 @ 3/4"; 4 @ 3" No. of threads per inch 6 Area supported by each stay

Working pressure by Rules Screw stays: Material S Tensile strength 26/30 Tons/sq. in.

Diameter { At turned off part, 1 5/8" & 1 3/4" W & E No. of threads per inch 9 Area supported by each stay

Working pressure by Rules
No. of threads per inch 9
Tubes: Material S
Pitch of tubes 4 1/4" x 4 1/8"
End plate 16" x 12"
Outer row rivet pitch at ends
Tensile strength
Diameter of rivet holes
Internal diameter
stays
How connected to shell
of rivets in outer row in dome connection to shell
Are the stays drilled at the outer ends
Area supported by each stay
External diameter
Working pressure by Rules
Section of compensating ring
Depth of flange if manhole flanged
Thickness of shell
Pitch of rivets
Working pressure by Rules
Inner radius of crown
Size of doubling plate under dome
Margin stays: Diameter
Working pressure by Rules
Thickness
No. of threads per inch 9
Manhole compensation: Size of opening in
No. of rivets and diameter of rivet holes
Steam Dome: Material
Percentage of strength of joint
Thickness of crown
Working pressure by Rules
Diameter of rivet holes and pitch
Type of Superheater
Number of elements
Material of headers
the boiler be worked separately
Area of each safety valve
Rules
tubes
valves fitted to free the superheater from water where necessary
Material of tubes
Tensile strength
Is a safety valve fitted to every part of the superheater which can be shut off from the boiler
Are the safety valves fitted with easing gear
Pressure to which the safety valves are adjusted
forgings and castings
and after assembly in place
Working pressure as per
Hydraulic test pressure:
Are drain cocks or
Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with

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

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

Is this Boiler a duplicate of a previous case
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 and in accordance with the rules. The materials and workmanship are good. On completion it has been tested by hydraulic pressure with satisfactory results.

This boiler has been efficiently fitted on board, and the safety valves adjusted to 200 lbs/sq. in.
J. J. Campbell

Survey Fee ... £
Travelling Expenses (if any) £
When applied for, 10
When received, 10

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 10 MAR 1942

Assigned SEE ACCOMPANYING MACHINERY REPORT.

TUE. 21 APR 1942
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