

REPORT ON BOILERS.

No. 20634.

Date of writing Report 16.8.38 When handed in at Local Office 26th SEPT. 1938. Port of Greenock

No. in Survey held at Greenock

Date First Survey 9th August 1934. Last Survey 23rd SEPTEMBER 1938.on the S/S "Coulter" **RETAIN**(Number of Visits ✓) Gross 3458.43.
Tons Net 2155.26.

Master Built at Glasgow By whom built Littlejohn & Co. Yard No. 913 When built 1938
 Engines made at Greenock By whom made Rankine & Blackmore, Ltd. Engine No. 459 When made 1938
 Boilers made at ditto By whom made ditto Boiler No. 459 When made 1938
 Nominal Horse Power Owners Donohoe Shipping Co. Port belonging to Glasgow.

MULTITUBULAR BOILERS, AUXILIARY,

Manufacturers of Steel Colville, Scottish D.S.C.

(Letter for Record S ✓)

Total Heating Surface of Boilers 1495 ft² Is forced draught fitted No ✓ Coal or Oil fired Coal

No. and Description of Boilers one Single Ended Working Pressure 220

Tested by hydraulic pressure to 380 Date of test 22.4.38 No. of Certificate 2148 Can each boiler be worked separately Yes

Area of Firegrate in each Boiler 45 ft² No. and Description of safety valves to each boiler 2 Corliss down & up high lift.

Area of each set of valves per boiler {per Rule 4.8 as fitted 4.8 P. Pressure to which they are adjusted 225 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 5'-0" Is oil fuel carried in the double bottom under boilers No

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 13'-4" 1/16" Length 10'-6" Shell plates: Material S Tensile strength 29.33

Thickness 1 5/16" Are the shell plates welded or flanged ✓ Description of riveting: circ. seams {end DR inner ✓

long. seams T.R.D.B.S. Diameter of rivet holes in {circ. seams 13/8" long. seams 1 5/16" Pitch of rivets {4 1/32" 8 15/16" ✓

Percentage of strength of circ. end seams {plate 66 rivets 44.3 ✓ Percentage of strength of circ. intermediate seam {plate 86.3 rivets 85.4 ✓

Percentage of strength of longitudinal joint {plate 85.4 rivets 84.8 combined 84.8 Working pressure of shell by Rules 224

Thickness of butt straps {outer 1" inner 1 1/8" No. and Description of Furnaces in each Boiler 3 Deighton

Material S Tensile strength 26.30 Smallest outside diameter 3'-4 1/4" ✓

Length of plain part {top ✓ bottom ✓ Thickness of plates {crown 5/8" bottom 5/8" Description of longitudinal joint weld

Dimensions of stiffening rings on furnace or c.c. bottom ✓ Working pressure of furnace by Rules 226

End plates in steam space: Material S Tensile strength 26.30 Thickness 1 3/8" Pitch of stays 22 1/4" 14 1/2" ✓

How are stays secured D.N. & Washburn Working pressure by Rules 222

Tube plates: Material {front S back S Tensile strength {26.30 Thickness {1 3/16" 1 5/16" ✓

Mean pitch of stay tubes in nests 10' 23 1/4" Pitch across wide water spaces 14 1/4" Working pressure {front 250 back 230

Girders to combustion chamber tops: Material S Tensile strength 29.33 Depth and thickness of girder

at centre 10' 3 1/4" (2) Length as per Rule 34 15/32" Distance apart 9 1/4" No. and pitch of stays

in each 3 at 9 1/4" Working pressure by Rules 228 Combustion chamber plates: Material S

Tensile strength 26.30 Thickness: Sides 25/32" Back 23/32" Top 25/32" Bottom 7/8" ✓

Pitch of stays to ditto: Sides 9 1/4" 10" Back 8 1/2" 9 5/8" Top 9 1/4" 9 1/4" Are stays fitted with nuts or riveted over Nuts

Working pressure by Rules 231 Front plate at bottom: Material S Tensile strength 26.30

Thickness 1" Lower back plate: Material S Tensile strength 26.30 Thickness 7/8" ✓

Pitch of stays at wide water space 14 1/4" Are stays fitted with nuts or riveted over Nuts

Working Pressure 231 Main stays: Material S Tensile strength 28.32

Diameter {At body of stay, 3 3/8" No. of threads per inch 6 Area supported by each stay 381 in² ✓
Over threads

Working pressure by Rules 229 Screw stays: Material S Tensile strength 26.30

Diameter {At turned off part, 1 7/8" No. of threads per inch 9 Area supported by each stay 92.5 in² ✓
Over threads

Working pressure by Rules 231 Are the stays drilled at the outer ends No Margin stays: Diameter { At turned off part, 2"
 No. of threads per inch 9 Area supported by each stay 1.01 sq Working pressure by Rules 244
 Tubes: Material 9100 External diameter { Plain } 3 1/4" Thickness { 5/16, 3/8 } No. of threads per inch 9
 Pitch of tubes 4 3/8" x 4 1/2" Working pressure by Rules 231 Manhole compensation: Size of opening in
 shell plate 16" x 12" Section of compensating ring 3' 0" x 2' 4" x 5/16" No. of rivets and diameter of rivet holes 32 at 1 5/16"
 Outer row rivet pitch at ends 8 15/16" Depth of flange if manhole flanged — 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
 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 Manufacturers of { Tubes
 Number of elements Material of tubes Steel forgings
 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 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 Yes

The foregoing is a correct description,
RANKIN & BLACKMORE LTD., Manufacturer.
N. Brown DIRECTOR.

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

Is this Boiler a duplicate of a previous case Yes If so, state Vessel's name and Report No. S/S "Wellpark" Ent. Reg. No. 20586
 GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) This Boiler has been built under Special Survey in accordance with the approved plan. The workmanship and material are of good quality. Boiler now securely fitted on board.
This Report accompanies that of the Machinery

Survey Fee £ charged on Machinery Report } When applied for, 19
 Travelling Expenses (if any) £ } When received, 19

W. Gordon Maclellan
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 29 SEP 1938 JMA
 Assigned See First Entry Machinery Report.