

REPORT ON BOILERS.

No. 57965

10 FEB 1937

Received at London Office

Site of writing Report 19 When handed in at Local Office 1. 2. 10 37 Port of Glasgow

No. in Survey held at Glasgow Date, First Survey 34.4.36 Last Survey 27-1-1937

g. Book. on the new steel 315 "DARLENY" (Number of Visits ✓) Tons Gross 5205
Net 3126

Master Built at Port Glasgow By whom built Wm Hamilton & Co Ltd Yard No. 427 When built 1936

Engines made at Glasgow By whom made Davie Rowan & Co Ltd Engine No. 1001 When made 1936

Boilers made at Glasgow By whom made Davie Rowan & Co Ltd Boiler No. 1001 When made 1936

Indicated Horse Power Owners Douglas & Ramsey Port belonging to Glasgow

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Lohillies Ltd (Letter for Record (S))

Total Heating Surface of Boilers 1390 sq ft 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 11-9-36 No. of Certificate 19807 Can each boiler be worked separately ✓

Area of Firegrate in each Boiler 40 1/4 sq ft No. and Description of safety valves to each boiler Two Improved high lift

Area of each set of valves per boiler {per Rule 3.690"
as fitted 4.80" 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 - 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 12'-6" Length 10'-6" Shell plates: Material steel Tensile strength 29-33 tons

Thickness 1 3/16" Are the shell plates welded or flanged no Description of riveting: circ. seams {end DR
inter. -

long. seams DRS, TR Diameter of rivet holes in {circ. seams F 1 5/16" B 1 1/4"
long. seams 1 1/4" Pitch of rivets {F 3.2" B 3.46"
8 3/4"

Percentage of strength of circ. end seams {plate F 62.9 B 63.8
rivets F 46.1 B 47.3 Percentage of strength of circ. intermediate seam {plate -
rivets -

Percentage of strength of longitudinal joint {plate 85.7
rivets 87.7 Working pressure of shell by Rules 220
combined 87.8

Thickness of butt straps {outer 2 3/32"
inner 1 1/32" No. and Description of Furnaces in each Boiler Two Weigh-ton

Material steel Tensile strength 26-30 tons Smallest outside diameter 45.375"

Length of plain part {top -
bottom - Thickness of plates {crown 1 1/16"
bottom 1 1/16" Description of longitudinal joint welded

Dimensions of stiffening rings on furnace or c.c. bottom - Working pressure of furnace by Rules 222

End plates in steam space: Material steel Tensile strength 26-30 tons Thickness 1 3/32" Pitch of stays 15" x 15 1/2"

How are stays secured DN Working pressure by Rules 220

Tube plates: Material {front steel
back " Tensile strength {26-30 tons
" " Thickness {1 5/16"
1 3/16"

Mean pitch of stay tubes in nests 10 1/4" Pitch across wide water spaces 14" Working pressure {front 222
back 225

Girders to combustion chamber tops: Material steel Tensile strength 28-32 tons Depth and thickness of girder

at centre 2 @ 7 3/8" x 7" Length as per Rule 28.5" Distance apart 8 1/2" No. and pitch of stays

in each 2 @ 9 3/8" Working pressure by Rules 243 Combustion chamber plates: Material steel

Tensile strength 26-30 tons Thickness: Sides 2 5/32" Back 1 1/16" Top 2 5/32" Bottom 2 5/32"

Pitch of stays to ditto: Sides 9 3/8" x 8 1/2" Back 8 1/2" x 8 1/4" Top 8 1/2" x 9 3/8" Are stays fitted with nuts or riveted over nuts

Working pressure by Rules 236 Front plate at bottom: Material steel Tensile strength 26-30 tons

Thickness 1 5/16" Lower back plate: Material steel Tensile strength 26-30 tons Thickness 1 3/16"

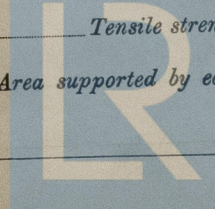
Pitch of stays at wide water space 13 1/4" Are stays fitted with nuts or riveted over nuts

Working Pressure 220 Main stays: Material steel Tensile strength 28-32 tons

Diameter {At body of stay, 2 3/4" & 2 1/2"
or
Over threads - No. of threads per inch 6 Area supported by each stay 240 & 235 sq in

Working pressure by Rules 272 & 227 sq in Screw stays: Material steel Tensile strength 26-30 tons

Diameter {At turned off part, 1 7/8" & 1 3/4"
or
Over threads - No. of threads per inch 9 Area supported by each stay 70 & 79.50 sq in



Lloyd's Register Foundation

Working pressure by Rules 220 & 228 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 Area supported by each stay 90 sq Working pressure by Rules 236
Tubes: Material Iron External diameter { Plain 3 1/4" Thickness { 8 W.G. No. of threads per inch 9
Pitch of tubes 4 3/8 x 4 1/2 Working pressure by Rules 230 Manhole compensation: Size of opening in
shell plate 15 1/2 x 19 1/2 Section of compensating ring 9 1/2 x 1 3/16 No. of rivets and diameter of rivet holes 34 @ 1 1/4"
Outer row rivet pitch at ends 8 3/4" 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 Manufacturers of { Tubes 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, 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 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.)
SEE ACCOMPANYING MACHINERY REPORT.
Total No. of visits

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.)
The materials and workmanship are good
The boiler has been constructed under special survey, satisfactorily fitted in the vessel and its safety valves adjusted under steam.

12/2/37

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

S. Davis

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 9-FEB 1937
Assigned SEE ACCOMPANYING MACHINERY REPORT.