

REPORT ON BOILERS.

No. 57965

10 FEB 1937

Received at London Office

Date 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. (Number of Visits ✓) Tons { Gross 5205 Net 3126

on the new steel 3/5 "DARLENY"

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

Engines made at Glasgow By whom made David Rowan & Co Ld Engine No. 1001 When made 1936

Boilers made at Glasgow By whom made David Rowan & Co Ld Boiler No. 1001 When made 1936

Nominal Horse Power Owners Douglas & Ramsley Port belonging to Glasgow

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Lochmills 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 3.69 sq ft as fitted 4.8 sq ft 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 OR inter. -

long. seams NBS, TR Diameter of rivet holes in { circ. seams F 1 5/16" B 1 1/4" Pitch of rivets { F 3.2" B 3.46" long. seams 1 1/4" 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 combined 87.8 Working pressure of shell by Rules 220

Thickness of butt straps { outer 29" inner 32" No. and Description of Furnaces in each Boiler Two Weighton ref ✓

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 { 15/16" 13/16"

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 25/32" Back 1 1/16" Top 25/32" Bottom 25/32"

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 15/16" Lower back plate: Material steel Tensile strength 26-30 tons Thickness 1 1/16"

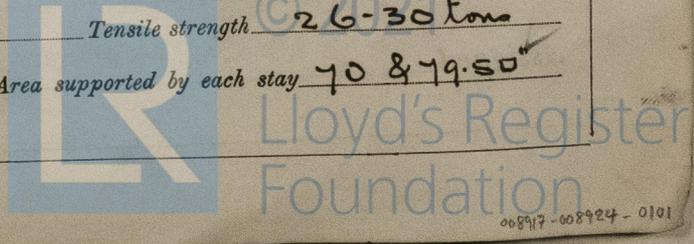
Pitch of stays at wide water space 13 1/4" Are stays fitted with nuts or riveted over nuts

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

Diameter { At body of stay, 2 3/4" & 2 1/2" 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" No. of threads per inch 9 Area supported by each stay 70 & 79.50 sq in



Working pressure by Rules 220 & 228 Are the stays drilled at the outer ends no Margin stays: Diameter ^{At turned off part,} 1 7/8" _{or Over threads}

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.} 5/16" 3/8" 7/16" 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 _____

How connected to shell _____ Inner radius of crown _____ Working pressure by Rules _____

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 - - -} _____ Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) _____

^{while building} ^{During erection on board vessel - - -} _____

SEE ACCOMPANYING MACHINERY REPORT.

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.

11/2/37

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.

