

REPORT ON BOILERS.

No. 59292

JAN 19 1938

Received at London Office

Date of writing Report 19 When handed in at Local Office 15. 1. 1938 Port of Glasgow

No. in Reg. Book. Survey held at Glasgow Date, First Survey Last Survey 14-1-1938

on the new steel S15" NORMAN QUEEN" (Number of Visits) Gross Tons Net

Master Built at Buntisland By whom built Buntisland SBCo Yard No. 216 When built 1938

Engines made at Glasgow By whom made David Rowan & Co Ltd Engine No. 1014 When made 1938

Boilers made at Glasgow By whom made David Rowan & Co Ltd Boiler No. 1014 When made 1938

Nominal Horse Power 129 Owners London & Channel Islands S.S. Co Ltd Port belonging to London

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel L Shille Ltd (Letter for Record (S))

Total Heating Surface of Boilers 1953 sq ft Is forced draught fitted yes Coal or Oil fired coal

No. and Description of Boilers one single ended Working Pressure 200

Tested by hydraulic pressure to 350 Date of test 9-12-37 No. of Certificate 20069 Can each boiler be worked separately

Area of Firegrate in each Boiler 44 5/8 sq ft No. and Description of safety valves to each boiler Two direct spring

Area of each set of valves per boiler {per Rule 11.35 as fitted 11.88 Pressure to which they are adjusted 200 lb/sq in 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 - 6'-0" Is oil fuel carried in the double bottom under boilers

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

Largest internal dia. of boilers 14'-9" Length 10'-6" Shell plates: Material steel Tensile strength 29.33 tons

Thickness 1 9/32 Are the shell plates welded or flanged no Description of riveting: circ. seams {end DR inter. -

Long. seams DBS TR Diameter of rivet holes in {circ. seams F-1/4" B 1 3/8" Pitch of rivets {F 3.209 B 3.68" 1 3/8" 9 5/16"

Percentage of strength of circ. end seams {plate F 61 B 62.6 rivets F 52.3 B 50 Percentage of strength of circ. intermediate seam {plate rivets

Percentage of strength of longitudinal joint {plate 85.2 rivets 92.1 combined 88.4 Working pressure of shell by Rules 201

Thickness of butt straps {outer 3 1/32 inner 1 3/32 No. and Description of Furnaces in each Boiler Three Weighton

Material steel Tensile strength 26-30 tons Smallest outside diameter 3'-7 3/16"

Length of plain part {top bottom Thickness of plates {crown 1 19/32 bottom 1 3/32 Description of longitudinal joint welded

Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules 200

End plates in steam space: Material steel Tensile strength 26-30 tons Thickness 1/4" Pitch of stays 19 1/4" x 19"

How are stays secured DN Working pressure by Rules 200

Tube plates: Material {front steel back " Tensile strength {26-30 tons Thickness {29/32 25/32

Mean pitch of stay tubes in nests 10 1/32 Pitch across wide water spaces 14 1/4 Working pressure {front 202 back 209

Girders to combustion chamber tops: Material steel Tensile strength 28-32 tons Depth and thickness of girder at centre 2 @ 8 3/8" x 7/8" Length as per Rule 2'-7 11/32 Distance apart 9 1/2 No. and pitch of stays in each 3 @ 7 1/2 Working pressure by Rules 201 Combustion chamber plates: Material steel Tensile strength 26-30 tons Thickness: Sides 23/32 Back 11/16 Top 23/32 Bottom 23/32

Pitch of stays to ditto: Sides 10 7/8" x 8 3/4" Back 9 1/4" x 8 1/4" Top 9 1/2" x 7 1/2" Are stays fitted with nuts or riveted over nuts

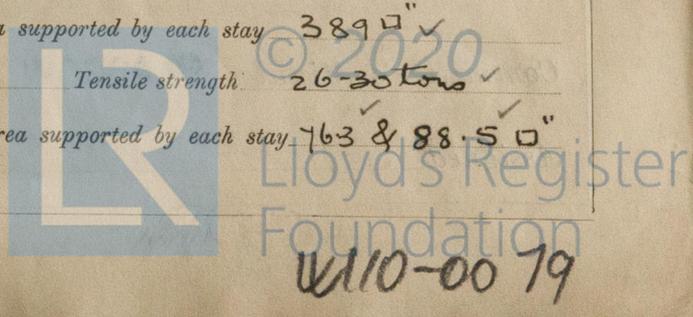
Working pressure by Rules 203 Front plate at bottom: Material steel Tensile strength 26-30 tons Thickness 29/32 Lower back plate: Material steel Tensile strength 26-30 tons Thickness 5 1/64

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

Working Pressure 205 Main stays: Material steel Tensile strength 28-32 tons Diameter {At body of stay, or Over threads 3 No. of threads per inch 6 Area supported by each stay 389 sq in

Working pressure by Rules 202 Screw stays: Material steel 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 Area supported by each stay 763 & 88.5 sq in

Bill 20-1-38



Working pressure by Rules 200 & 205 1/4 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 93.50" ✓ Working pressure by Rules 227 ✓
 Tubes: Material Iron ✓ External diameter ^{Plain} 3 1/4" ✓ ^{Stay} 3 1/4" ✓ Thickness ^{8 W.S.} 1/4" 9/16" 3/8" ✓ No. of threads per inch 9 ✓
 Pitch of tubes 1 1/2" x 4 3/8" ✓ 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 1/4" x 1 9/32" ✓ No. of rivets and diameter of rivet holes 32 @ 1 3/8" ✓
 Outer row rivet pitch at ends 9 9/16" ✓ 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 none 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 _____ 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 of
 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
 Archd. H. Grierson, Manufacturer

Dates of Survey ^{During progress of} _{work in shops - -} _____ ^{During erection on} _{board vessel - - -} _____
 while building _____
 SEE ACCOMPANYING 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. Jersey Queen. Also Rpt No. 57644.

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. It is being sent to Burntisland to be fitted in the vessel ✓
15/1/38
This boiler has been efficiently fitted onboard, examined under steam and safety valves adjusted to 200 lbs/sq. in.
J. J. Campbell

Survey Fee £ See Machinery Dept } When applied for, 10
 Travelling Expenses (if any) £ _____ : _____ : _____ } When received, 10

J. J. Davis
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 18 JAN 1938

FRI. 18 FEB 1938

Assigned SEE ACCOMPANYING MACHINERY REPORT.

