

## REPORT ON BOILERS.

No. 49884

Received at London Office

27 NOV 1929

Date of writing Report

19

When handed in at Local Office

25

11

10

89

Port of

Glasgow

No. in Reg. Book

Survey held at

Glasgow

Date, First Survey

3.10.29

Last Survey

13.11.29

1929

on the

S.S. THE MONARCH

(Number of Visits

9

Gross

824

Net

405

Master

Built at

Troom

By whom built

Ailsa Steel Co. Ltd

Yard No. 412

When built 1929

Engines made at

Troom

By whom made

Ailsa Steel Co. Ltd

Engine No.

When made 1929

Boilers made at

Glasgow

By whom made

Dana Rowan &amp; Co. Ltd

Boiler No. 375

When made 1929

Nominal Horse Power

Owners

J. Hay &amp; Sons

Port belonging to

Glasgow

## MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel James Dunlop &amp; Co. Ltd. Daniel Beattie &amp; Sons Ltd. (Letter for Record (S))

Total Heating Surface of Boilers 2021 sq ft Is forced draught fitted no Coal or Oil fired coal

No. and Description of Boilers one single ended 1 SB Working Pressure 200

Tested by hydraulic pressure to 350 Date of test 13-11-29 No. of Certificate 18517 Can each boiler be worked separately

Area of Firegrate in each Boiler 575 sq ft No. and Description of safety valves to each boiler two direct opening

Area of each set of valves per boiler {per Rule 11110 10.34 as fitted 11880 Pressure to which they are adjusted Are they fitted with easing gear

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

Smallest distance between shell of boiler and tank top plating Is the bottom of the boiler insulated

Largest internal dia. of boilers 15'-0" Length 10'-9" Shell plates: Material steel Tensile strength 29.33 tons

Thickness 1 5/16" Are the shell plates welded or flanged no Description of riveting: circ. seams {end DR inter. 11110 10.34

long. seams DBS. TR Diameter of rivet holes in {circ. seams F 1 3/16" B 1 3/8" Pitch of rivets {F 3.09" B 3.746" 1 7/8" 9 1/2"

Percentage of strength of circ. end seams {plate F 61.5 B 63.2 rivets F 42.9 B 48 Percentage of strength of circ. intermediate seam {plate 85.5 rivets 88.1

Percentage of strength of longitudinal joint {plate 85.5 rivets 88.1 combined 88.7 Working pressure of shell by Rules 200

Thickness of butt straps {outer 63" inner 64" No. and Description of Furnaces in each Boiler Three Deighton 3 of 1

Material steel Tensile strength 26-30 tons Smallest outside diameter 3'-11 7/16"

Length of plain part {top 21 1/2" bottom 3 3/2" Thickness of plates {crown 21 1/2" bottom 3 3/2" Description of longitudinal joint welded

Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules 203

End plates in steam space: Material steel Tensile strength 26-30 tons Thickness 1 3/2" Pitch of stays 19 1/2" x 19 7/8"

How are stays secured DR Working pressure by Rules 200

Tube plates: Material {front steel Tensile strength 26-30 tons Thickness {29" 32" 49" 64"

Mean pitch of stay tubes in nests 10 1/4" Pitch across wide water spaces 14 1/4" Working pressure {front 202 back 200

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

at centre 2 @ 7" x 8 1/2" Length as per Rule 33.58" Distance apart 9 1/2" No. and pitch of stays

in each 2 @ 10 3/8" Working pressure by Rules 203 Combustion chamber plates: Material steel

Tensile strength 26-30 tons Thickness: Sides 3/4" Back 2 1/8" Top 7/4" Bottom 3/4"

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

Working pressure by Rules 201 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 25" 32"

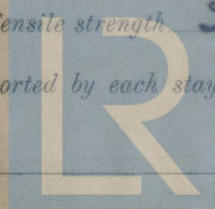
Pitch of stays at wide water space 13 1/2" Are stays fitted with nuts or riveted over nuts

Working Pressure 200 Main stays: Material steel Tensile strength 28-32 tons

Diameter {At body of stay, 3" Over threads 3 1/4" No. of threads per inch 6 Area supported by each stay 3880"

Working pressure by Rules 202 Screw stays: Material steel Tensile strength 26-30 tons

Diameter {At turned off part, 1 5/8" Over threads 1 5/8" No. of threads per inch 9 Area supported by each stay 74 sq in



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Working pressure by Rules 206 Are the stays drilled at the outer ends no Margin stays: Diameter { At turned off part, 1 3/4 & 1 7/8" Over threads }  
No. of threads per inch 9 Area supported by each stay 91 & 100 sq" Working pressure by Rules 200 & 213  
Tubes: Material Iron External diameter { Plain 3 1/4" Stay 3 1/4" } Thickness { 8 WS, 1/4" 5/16" 3/8" } No. of threads per inch 9  
Pitch of tubes 4 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 1/2 x 15 1/2 No. of rivets and diameter of rivet holes 32 @ 1 7/8"  
Outer row rivet pitch at ends 9 1/2 Depth of flange if manhole flanged 3" Steam Dome: Material none  
Tensile strength Thickness of shell Description of longitudinal joint  
Diameter of rivet holes 5 1/4 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 none 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 Rowan & Co. Ltd. Manufacturer.  
Arch. H. Grierson

Dates of Survey { During progress of work in shops - - 1929 Oct 5 4 7 15 29 Nov 6 11 12 13 Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval) }  
while building { During erection on board vessel - - - }  
Total No. of visits 9

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.)

The materials and workmanship are good.  
The boiler has been constructed under special survey in accordance with the Rules.

The boiler to be fitted on board the vessel at Troon.

Survey Fee £ 13 : 10 : When applied for, 25 NOV 1929

Travelling Expenses (if any) £ : : When received, 27 NOV 1929

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 20 NOV 1929

Assigned TRANSMIT TO LONDON

See G.L. Rpt. No. 50004  
Lloyd's Register Foundation

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