

# REPORT ON BOILERS.

No. 49823

Date of writing Report 1929 When handed in at Local Office 11.11.29 Port of Glasgow

No. in Reg. Book. 118 Date, First Survey 27.11.28 Last Survey 1929 (Number of Visits 32)

on the new steel S/S "BRYNYMOR"

Master Built at Buntisland By whom built Buntisland SBCs Yard No. 156 When built 1929

Engines made at Glasgow By whom made David Rowan & Co. Ld. Engine No. 912 When made 1929

Boilers made at Glasgow By whom made David Rowan & Co. Ld. Boiler No. 912 When made 1929

Nominal Horse Power 331 Owners Port belonging to

## MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Witkowitz & Co. Ltd. Eisenhütten-Genossenschaft in Witkowitz (Letter for Record (S) )

Total Heating Surface of Boilers 5190 sq. ft. Is forced draught fitted no Coal or Oil fired coal

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

Tested by hydraulic pressure to 350 Date of test 19.10.29 No. of Certificate 18476 Can each boiler be worked separately yes

Area of Firegrate in each Boiler 64.5 sq. ft. No. and Description of safety valves to each boiler two, direct opening.

Area of each set of valves per boiler { per Rule 15.08 sq. ft. as fitted 16.58 sq. ft. Pressure to which they are adjusted 205 lbs. 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 1'-2" 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 16'-0 5/32" Length 11'-8" Shell plates: Material steel Tensile strength 29.33 tons

Thickness 10R lap Are the shell plates welded or flanged no Description of riveting: circ. seams { end 10R lap inter. B 4.08" F 3.41"

Long. seams DBS.T.R Diameter of rivet holes in { circ. seams B 1 1/2" F 1 1/2" Pitch of rivets { long. seams 1 1/2" 10 5/32"

Percentage of strength of circ. end seams { plate B 63.2 F 61.5 rivets B 48.4 F 44.4 Percentage of strength of circ. intermediate seam { plate 85.2 rivets 92.7

Percentage of strength of longitudinal joint { rivets 88.6 combined 88.6 Working pressure of shell by Rules 203

Thickness of butt straps { outer 1 5/16" inner 1 13/64" No. and Description of Furnaces in each Boiler three Weighton

Material steel Tensile strength 26-30 tons Smallest outside diameter 48 11/32"

Length of plain part { top ✓ bottom ✓ Thickness of plates { crown 1 43/64" bottom 1 43/64" Description of longitudinal joint welded

Dimensions of stiffening rings on furnace or c.c. bottom ✓ Working pressure of furnace by Rules 204

End plates in steam space: Material steel Tensile strength 26-30 tons Thickness 1 13/32" Pitch of stays 23 1/8" x 19 3/4"

How are stays secured WN Working pressure by Rules 200

Tube plates: Material { front steel Tensile strength 26-30 tons Thickness { 29 1/32" 25 1/32" back " " " " " "

Pitch of stay tubes in nests 10.3" Pitch across wide water spaces 14 1/4" Working pressure { front 202 back 206

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

Centre 2 @ 1 7/8" x 8 1/2" Length as per Rule 35 1/16" Distance apart 8" No. and pitch of stays

Each 3 @ 8 3/8" Working pressure by Rules 200 Combustion chamber plates: Material steel

Tensile strength 26-30 tons Thickness: Sides 5/8" Back 2 1/32" Top 5/8" Bottom 7/8"

Pitch of stays to ditto: Sides 8 3/8" x 8" Back 9" x 8 1/4" Top 8 3/8" x 8" 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 1/32" 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 200 Main stays: Material steel Tensile strength 28-32 tons

meter { At body of stay, 3 1/4" No. of threads per inch 6 Area supported by each stay 475 sq. in. Over threads 3 1/2"

Working pressure by Rules 200 Screw stays: Material steel Tensile strength 26-30 tons

meter { At turned off part, 1 5/8" No. of threads per inch 9 Area supported by each stay 64 sq. in. Over threads



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Working pressure by Rules 228 Are the stays drilled at the outer ends *no* Margin stays: Diameter { At turned off part, or Over threads 1 3/4 ✓  
No. of threads per inch 9 Area supported by each stay *no* Working pressure by Rules 204  
Tubes: Material *Iron* External diameter { Plain 3 1/4" Stay 3 1/4" Thickness { 8 w.s. 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 *no*  
end shell plate 16" x 12" Section of compensating ring *no* No. of rivets and diameter of rivet holes *no*  
Outer row rivet pitch at ends - Depth of flange if manhole flanged 4 Steam Dome: Material *none*  
Tensile strength *251* Thickness of shell *1/2"* Description of longitudinal joint *no*  
Diameter of rivet holes *1/2"* Pitch of rivets *2"* Percentage of strength of joint { Plate Rivets *no*  
Internal diameter *15"* Working pressure by Rules *230* Thickness of crown *1/2"* No. and diameter of *no*  
stays *15* Inner radius of crown *15"* Working pressure by Rules *230*  
How connected to shell *no* Size of doubling plate under dome *15"* Diameter of rivet holes and pitch *no*  
of rivets in outer row in dome connection to shell *no*

Type of Superheater *none* Manufacturers of { Tubes Steel castings  
Number of elements *no* Material of tubes *no* Internal diameter and thickness of tubes *no*  
Material of headers *no* Tensile strength *no* Thickness *no* Can the superheater be shut off and *no*  
the boiler be worked separately *no* Is a safety valve fitted to every part of the superheater which can be shut off from the boiler *no*  
Area of each safety valve *no* Are the safety valves fitted with easing gear *no* Working pressure as per *no*  
Rules *no* Pressure to which the safety valves are adjusted *no* Hydraulic test pressure: *no*  
tubes *no* castings *no* and after assembly in place *no* Are drain cocks or valves fitted *no*  
to free the superheater from water where necessary *no*  
Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with *no*

The foregoing is a correct description,  
For David Rowan & Co. Ltd.  
Arch. W. Greenson Manufacturer.

Dates of Survey { During progress of work in shops - - See Accompanying *no* Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) *no*  
while building { During erection on board vessel - - *no* machy Report *no* Total No. of visits 32

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)  
The materials and workmanship are good.  
The boilers have been constructed under special survey in accordance with the Rules.

These boilers have been efficiently fitted on board  
their safety valves have been adjusted under steam.  
John Houston  
Leith.

Survey Fee ... £ *200* When applied for, 192  
Travelling Expenses (if any) £ *200* When received, 192

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

Committee's Minute GLASGOW 12 NOV 1929

Assigned See Accompanying machy Report

TUE. 17 DEC 1929  
Lloyd's Register  
Foundation