

REPORT ON BOILERS.

No. 57024

29 JUN 1936

20 MAY 1936

Date of writing Report 19 When handed in at Local Office 16.5.1936 Port of Glasgow
 No. in Reg. Book. Survey held at Glasgow Date, First Survey 17.12.35 Last Survey 15.5.1936
 on the new steel S/S "BRYNYMOR" (Number of Visits 47) (Gross Tons) (Net Tons)
 Master Buntisland Built at Buntisland By whom built Buntisland S/Bo Yard No. 197 When built 1936
 Engines made at Glasgow By whom made David Rowan & Co Ld. Engine No. 991 When made 1936
 Boilers made at Glasgow By whom made David Rowan & Co Ld. Boiler No. 991 When made 1936
 Nominal Horse Power 377 Owners Swansea Port belonging to Swansea

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Wesingite Stahlwerke AG Thyssen Hütte Muhlheim-Ruhr & Plate-Steel Company of Scotland Ltd. Baro-Bohler Ltd. (Letter for Record (S))
 Total Heating Surface of Boilers 4372 sq ft Is forced draught fitted yes Coal or Oil fired coal
 No. and Description of Boilers Two single ended Working Pressure 220
 Tested by hydraulic pressure to 380 Date of test 24.4.36 No. of Certificate 19711 Can each boiler be worked separately yes
 Area of Firegrate in each Boiler 53.6 sq ft No. and Description of safety valves to each boiler Two direct spring
 Area of each set of valves per boiler {per Rule 11.6270 as fitted 11.8700} Pressure to which they are adjusted 220 lbs Are they fitted with easing gear yes
 In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 15" 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 ^{EXT} internal dia. of boilers 14'-6" Length 11'-0" Shell plates: Material steel Tensile strength 28.32 tons
 Thickness 1 7/16" 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 7/16" B 1 1/2" long. seams 1 1/2"} Pitch of rivets {F 3.988" B 3.986" 10"}
 Percentage of strength of circ. end seams {plate F 61.2 B 62.3 rivets F 45.8 B 50.6} Percentage of strength of circ. intermediate seam {plate - rivets -}
 Percentage of strength of longitudinal joint {plate 85 rivets 93.5 combined 88.9} Working pressure of shell by Rules 222
 Thickness of butt straps {outer 1 3/32" inner 1 7/32"} No. and Description of Furnaces in each Boiler Three Deighton
 Material steel Tensile strength 26-30 tons Smallest outside diameter 40.218"
 Length of plain part {top - bottom -} Thickness of plates {crown 3/4" bottom 5/8"} Description of longitudinal joint welded
 Dimensions of stiffening rings on furnace or c.c. bottom - Working pressure of furnace by Rules 221
 End plates in steam space: Material steel Tensile strength 26-30 tons Thickness 1 7/16" Pitch of stays 22x20
 How are stays secured DN Working pressure by Rules 220
 Tube plates: Material {front steel back "} Tensile strength {26-30 tons "} Thickness {7/8" Wings 3/4" berks 3/2"}
 Mean pitch of stay tubes in nests 9.672" Pitch across wide water spaces 13 3/4" Working pressure {front 222 back W 287. C 233}
 Girders to combustion chamber tops: Material steel Tensile strength 28-32 tons Depth and thickness of girder at centre 2 @ 8 3/4" x 7/8" Length as per Rule 31.594 Distance apart 8 1/4" No. and pitch of stays in each 2 @ 10" Working pressure by Rules 283 Combustion chamber plates: Material steel
 Tensile strength 26-30 tons Thickness: Sides 4 1/4" Back 3 1/2" Top 4 1/4" Bottom 4 1/4"
 Pitch of stays to ditto: Sides 8 1/4" x 10" Back 8" x 8 1/2" Top 8 1/4" x 10" Are stays fitted with nuts or riveted over nuts
 Working pressure by Rules 221 Front plate at bottom: Material steel Tensile strength 26-30 tons
 Thickness 7/8" Lower back plate: Material steel Tensile strength 26-30 tons Thickness 5/8"
 Pitch of stays at wide water space 13 1/2" 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, 3 1/4" & 3" or Over threads -} No. of threads per inch 6 Area supported by each stay 400 x 355 sq"
 Working pressure by Rules 231 & 222 Screw stays: Material steel Tensile strength 26-30 tons
 Diameter {At turned off part, 1 5/8" & 1 3/4" or Over threads -} No. of threads per inch 9 Area supported by each stay 68 & 82.5 sq"

Working pressure by Rules 2247220 Are the stays drilled at the outer ends no Margin stays: Diameter 17/8" At turned off part. or Over threads

No. of threads per inch 9 Area supported by each stay 9.50" Working pressure by Rules 233

Tubes: Material Iron External diameter 3" Thickness 3/8" No. of threads per inch 9

Pitch of tubes 4 1/8" x 4 1/4" & 4 1/8" x 4 3/16" Working pressure by Rules 250 Manhole compensation: Size of opening in shell plate 19 1/2" x 15 1/2" Section of compensating ring 10 1/2" x 1 1/2" No. of rivets and diameter of rivet holes 34 @ 1 1/2"

Outer row rivet pitch at ends 10 1/4" Depth of flange if manhole flanged 3" Steam Dome: Material Iron

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 Smoke tube Manufacturers of For particulars see Nwe No. C 3689

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 1.770" Are the safety valves fitted with easing gear yes Working pressure as per Rules _____ Pressure to which the safety valves are adjusted _____ Hydraulic test pressure _____

tubes _____, castings _____ and after assembly in place 440 lbs 26/5/36 Are drain cocks or valves fitted to free the superheater from water where necessary yes

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.
 Arch. W. Grierson

Dates of Survey During progress of work in shops - - - _____ Are the approved plans of boiler and superheater forwarded herewith yes (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 boilers have been constructed under special survey.

They are being sent to Burnside and to be fitted in the vessel.

16/5/36

These boilers have been efficiently fitted on board, examined under steam & safety valves subject test 220 lbs

CR.

Survey Fee £ _____ When applied for, _____

Travelling Expenses (if any) £ _____ When received, _____

S. Dano
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 19 MAY 1936

Assigned SEE ACCOMPANYING MACHINERY REPORT

FRI. 9 JUL 1936

Lloyd's Register Foundation