

# REPORT ON BOILERS.

No. 54510

Received at London Office 16 MAY 1934

Date of writing Report 19 When handed in at Local Office 8. 5. 1934 Port of Glasgow  
 No. in Survey held at Glasgow Date, First Survey 11. 5. 33 Last Survey 5-5-1934  
 Book. on the new steel S/S "ARGOW" (Number of Visits 71) Tons { Gross 4118 Net 2479  
 Master Built at Port Glasgow By whom built Lithgows Ltd Yard No. 866 When built 1934  
 Engines made at Glasgow By whom made Davie Rowan & Co Ltd Engine No. 963 When made 1934  
 Boilers made at Glasgow By whom made Davie Rowan & Co Ltd Boiler No. 963 When made 1934  
 Nominal Horse Power 352 Owners Argow Shipping Co Ltd Port belonging to London

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

Manufacturers of Steel Cochilles Ltd (Letter for Record (S))  
 Total Heating Surface of Boilers 3712 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 24-8-33 No. of Certificate 19273 Can each boiler be worked separately -  
 Area of Firegrate in each Boiler 950 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 4.930" as fitted 6.280" 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 15" Is oil fuel carried in the double bottom under boilers no  
 Smallest distance between shell of boiler and tank top plating 2'-1" Is the bottom of the boiler insulated yes  
 Largest internal dia. of boilers 13'-6" Length 11'-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 WTR inter. -  
 Long. seams WBS TR Diameter of rivet holes in { circ. seams F 1 3/16" B 1 3/8" Pitch of rivets { F 3.156" B 3.74" long. seams 1 3/8" 9 5/16"  
 Percentage of strength of circ. end seams { plate F 62.3 B 63.2 rivets F 42.4 B 49.2 Percentage of strength of circ. intermediate seam { plate 85.23 rivets /  
 Percentage of strength of longitudinal joint { plate 92.2 rivets 88.9 Working pressure of shell by Rules 220  
 Thickness of butt straps { outer 31/32 inner 13/32 No. and Description of Furnaces in each Boiler Three Weighon  
 Material steel Tensile strength 26-30 tons Smallest outside diameter 39.1875  
 Length of plain part { top bottom Thickness of plates { crown 19" bottom 32" Description of longitudinal joint welded  
 Dimensions of stiffening rings on furnace or c.c. bottom - Working pressure of furnace by Rules 220  
 End plates in steam space: Material steel Tensile strength 26-30 tons Thickness 1 9/32 Pitch of stays 18" x 15 1/2"  
 How are stays secured 10N Working pressure by Rules 221  
 Tube plates: Material { front steel back " Tensile strength { 26-30 tons Thickness { 15/16 25/32  
 Lean pitch of stay tubes in nests 9.5" Pitch across wide water spaces 14" Working pressure { front 221 back 242  
 Girders to combustion chamber tops: Material steel Tensile strength 28-32 tons Depth and thickness of girder  
 At centre 2 @ 7 3/4" x 7/8" Length as per Rule 31.5625 Distance apart 8 1/4" No. and pitch of stays  
 At each 2 @ 10" Working pressure by Rules 224 Combustion chamber plates: Material steel  
 Tensile strength 26-30 tons Thickness: Sides 3/4" Back 21/32 Top 3/4" Bottom 3/4"  
 Pitch of stays to ditto: Sides 10" x 7 1/2" Back 8 1/2" x 8" Top 8 1/4" x 10" Are stays fitted with nuts or riveted over nuts  
 Working pressure by Rules 220 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 13/16  
 Pitch of stays at wide water space 13 7/16 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" No. of threads per inch 6 Area supported by each stay 296 sq in  
 Over threads Working pressure by Rules 221 Screw stays: Material steel Tensile strength 26-30 tons  
 Diameter { At turned off part, 1 5/8 1 3/4 No. of threads per inch 9 Area supported by each stay 68.8 sq in  
 Over threads

Working pressure by Rules 224 & 220 no Are the stays drilled at the outer ends no Margin stays: Diameter At turned off part, 1 3/4"  
 No. of threads per inch 9 Area supported by each stay 82.7 sq" Working pressure by Rules 220  
 Tubes: Material Iron External diameter 3" Thickness 8 W.G. No. of threads per inch 9  
 Pitch of tubes 4 1/4" x 4 3/8" Working pressure by Rules 250 Manhole compensation: Size of opening in  
 shell plate 15 1/2" x 19 1/2" Section of compensating ring 9 1/4" & 1 1/2" No. of rivets and diameter of rivet holes 32 @ 1 3/8"  
 Outer row rivet pitch at ends 9 5/16" 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  
 Internal diameter \_\_\_\_\_ Working pressure by Rules \_\_\_\_\_ Thickness of crown \_\_\_\_\_ Rivets \_\_\_\_\_  
 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 \_\_\_\_\_ Manufacturers of Tubes  
 Number of elements \_\_\_\_\_ Material of tubes \_\_\_\_\_ Steel castings \_\_\_\_\_  
 Material of headers \_\_\_\_\_ Tensile strength \_\_\_\_\_ Internal diameter and thickness of tubes \_\_\_\_\_  
 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 yes  
 The foregoing is a correct description,  
 For David Rowan & Co. Ltd. Manufacturer  
 Archd. H. Grierson

Dates of Survey During progress of work in shops - - Are the approved plans of boiler and superheater forwarded herewith  
 while building During erection on board vessel - - (If not state date of approval.)  
 SEE ACCOMPANYING MACHINERY REPORT. Total No. of visits \_\_\_\_\_

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, satisfactorily fitted  
 in the vessel and their safety valves adjusted under steam.  
 7/5/34

Survey Fee ... £ See Machinery Rule : \_\_\_\_\_ When applied for, \_\_\_\_\_ 19 \_\_\_\_\_  
 Travelling Expenses (if any) £ \_\_\_\_\_ : \_\_\_\_\_ When received, \_\_\_\_\_ 19 \_\_\_\_\_

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

Committee's Minute GLASGOW 15 MAY 1934  
 Assigned SEE ACCOMPANYING MACHINERY REPORT.

