

# REPORT ON BOILERS.

No. 50784

17 SEP 1930

When handed in at Local Office 15.9.1930 Port of Glasgow  
 Date, First Survey 28.1.30 Last Survey 11.9.30  
 (Number of Visits 68) Gross 5572 Tons Net 3265  
 No. in Survey held at Glasgow  
 on the new steel S/S "MELMAY"  
 Built at Greenock By whom built Greenock Dockyard Yard No. 419 When built 1930  
 Engines made at Glasgow By whom made Daine Rowan & Co Ltd Engine No. 932 When made 1930  
 Boilers made at Glasgow By whom made Daine Rowan & Co Ltd Boiler No. 932 When made 1930  
 Nominal Horse Power 604 Owners The Melmay Shipping Co Ltd Port belonging to Glasgow

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

Manufacturers of Steel Klochner-Werk a. S. Abteilung Georg Meier & Co. Ltd (Wappenplatz) Witkowitz Bergbau- und Eisenhütten-Gesellschaft in Witkowitz (Letter for Record S)  
 Total Heating Surface of Boilers 8775 sq ft Is forced draught fitted yes Coal or Oil fired oil & coal  
 No. and Description of Boilers Three single ended Working Pressure 225  
 Tested by hydraulic pressure to 388 Date of test 20.5.30 No. of Certificate 18733 Can each boiler be worked separately yes  
 Area of Firegrate in each Boiler 66.6 No. and Description of safety valves to each boiler Two "Improved High Lift"  
 Area of each set of valves per boiler per Rule 9.14 sq ft as fitted 9.8 sq ft Pressure to which they are adjusted 230 Are they fitted with easing gear yes  
 In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler no  
 Smallest distance between boilers or uptakes and bunkers or woodwork 18" 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'-3" Length 12'-0" Shell plates: Material steel Tensile strength 30-34 tons  
 Thickness 1 3/8" Are the shell plates welded or flanged no Description of riveting: circ. seams end WR  
 Long. seams WR S. TR Diameter of rivet holes in circ. seams F 1 1/2" B 1 7/8" long. seams 1 7/8" Pitch of rivets F 3.765 B 4.442  
 Percentage of strength of circ. end seams plate F 60.1 B 63.4 rivets F 46.6 B 46.3 Percentage of strength of circ. intermediate seam plate rivets  
 Percentage of strength of longitudinal joint plate 85.05 rivets 88.5 combined 88.8 Working pressure of shell by Rules 226  
 Thickness of butt straps outer 1 1/8" inner 1 1/4" No. and Description of Furnaces in each Boiler Four Beighton  
 Material steel Tensile strength 26-30 tons Smallest outside diameter 41.406"  
 Length of plain part top bottom Thickness of plates crown 45" bottom 64" Description of longitudinal joint welded  
 Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules 238  
 End plates in steam space: Material steel Tensile strength 26-30 tons Thickness 1 7/16" Pitch of stays 21" x 20 1/2"  
 How are stays secured WN Working pressure by Rules 226  
 Tube plates: Material front steel back " Tensile strength 26-30 tons Thickness 7/8" W 3/4" C 13/16"  
 Mean pitch of stay tubes in nests 9 1/4" Pitch across wide water spaces 13 3/8" Working pressure front 227 back 236  
 Girders to combustion chamber tops: Material steel Tensile strength 28-32 tons Depth and thickness of girder No. and pitch of stays  
 at centre 2 @ 10" x 7/8" Length as per Rule 36 1/2" Distance apart 9 1/8"  
 in each 3 @ 8 3/4" Working pressure by Rules 225 Combustion chamber plates: Material steel  
 Tensile strength 26-30 tons Thickness: Sides 23" 32" Back 23" 32" Top 23" 32" Bottom 25" 32"  
 Pitch of stays to ditto: Sides 9 1/8" x 8 3/4" Back 9" x 8 7/8" Top 9 1/8" x 8 3/4" Are stays fitted with nuts or riveted over nuts  
 Working pressure by Rules 227 Front plate at bottom: Material steel Tensile strength 26-30 tons Thickness 3 1/2"  
 Thickness 7/8" Lower back plate: Material steel Tensile strength 26-30 tons Thickness 3 1/2"  
 Pitch of stays at wide water space 13 3/8" x 8 7/8" Are stays fitted with nuts or riveted over nuts  
 Working Pressure 226 Main stays: Material steel Tensile strength 28-32 tons  
 Diameter At body of stay, 3 1/4" & 3 1/2" Over threads No. of threads per inch 6 Area supported by each stay 460 sq in & 395 sq in  
 Working pressure by Rules 235 & 234 Screw stays: Material steel Tensile strength 26-30 tons  
 Diameter At turned off part, 1 3/4" Over threads No. of threads per inch 9 Area supported by each stay 79.8 sq in



Working pressure by Rules 227 Are the stays drilled at the outer ends no Margin stays: Diameter { At turn-d off part, or Over threads 2" No. of threads per inch 9 Area supported by each stay 99" Working pressure by Rules 249 Tubes: Material Iron External diameter { Plain 2 1/2 Stay 2 3/4 Thickness { 9 w.g. 5/16 3/8 7/16 No. of threads per inch 9 Pitch of tubes 3 7/8 x 3 7/4 Working pressure by Rules 230 Manhole compensation: Size of opening shell plate 15 1/2 x 19 1/2 Section of compensating ring 11 x 1 3/4 No. of rivets and diameter of rivet holes 32 @ 1 7/8 Outer row rivet pitch at ends 10 7/8 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 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 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 yes The foregoing is a correct description, For David Rowan & Co. Ltd. Archd. N. Grierson Manufacture

Dates of Survey { During progress of work in shops - - - See accompanying machy report Are the approved plans of boiler and superheater forwarded herewith yes while building { During erection on board vessel - - - Total No. of visits 68

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 in accordance with the Rules satisfactorily fitted in the vessel and their safety valves adjusted under steam.

Survey Fee £ : When applied for, 19 Travelling Expenses (if any) £ : When received, 19

Committee's Minute GLASGOW 16 SEP 1930 Assigned See accompanying machy report