

# REPORT ON BOILERS.

No. 65721

19 JUN 5

Received at London Office

When handed in at Local Office 8.5.1035 Port of Glasgow  
 Date, First Survey 29.10.34 Last Survey 30.4.1935  
 on the new steel S/S "HARPAGON" (Number of Visits 62) Gross 5719 Tons Net 3378  
 Built at Port Glasgow By whom built Lethbride & Co Ltd Yard No. 874 When built 1935  
 By whom made David Rowan & Co Ltd Engine No. 972 When made 1935  
 By whom made David Rowan & Co Ltd Boiler No. 972 When made 1935  
 Owners J.R. Harrison Port belonging to London  
 Principal Horse Power 475

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

Manufacturers of Steel Plates—steel by Scotland Ltd Bar-bolles Ltd (Letter for Record (m) ✓)  
 Heating Surface of Boilers 1406 sq ft Is forced draught fitted yes Coal or Oil fired both  
 and Description of Boilers one single ended Working Pressure 220  
 Date of test 22.2.35 No. of Certificate 19516 Can each boiler be worked separately -  
 No. and Description of safety valves to each boiler 2 Improved High Lift  
 Pressure to which they are adjusted 2 Are they fitted with easing gear yes  
 Is oil fuel carried in the double bottom under boilers no  
 Is the bottom of the boiler insulated yes  
 Shell plates: Material steel Tensile strength 29.33 tons  
 Description of riveting: circ. seams {end 15/16" inter. 15/16"}  
 Pitch of rivets {9" 15/16"}  
 Percentage of strength of circ. end seams {plate 85.4 rivets 90.1 combined 88.9}  
 Percentage of strength of longitudinal joint {plate 85.4 rivets 90.1 combined 88.9}  
 Working pressure of shell by Rules 222  
 No. and Description of Furnaces in each Boiler Three Daylight  
 Tensile strength 26-30 tons Smallest outside diameter 36.218"  
 Thickness of plates {crown 3/32" bottom 3/16"}  
 Description of longitudinal joint welded  
 Working pressure of furnace by Rules 245  
 Plates in steam space: Material steel Tensile strength 26-30 tons Thickness 15/32" Pitch of stays 18x15 3/4  
 Working pressure by Rules 220  
 Front plate: Material steel Tensile strength 26-30 tons Thickness 15/16"  
 Back plate: Material steel Tensile strength 26-30 tons Thickness 15/16"  
 Working pressure {front 229 back 242}  
 Pitch across wide water spaces 14"  
 Material steel Tensile strength 28-32 tons Depth and thickness of girder  
 Length as per Rule 31.56" Distance apart 8" No. and pitch of stays  
 Working pressure by Rules 221 Combustion chamber plates: Material steel  
 Thickness: Sides 23/32" Back 23/32" Top 23/32" Bottom 23/32"  
 Are stays fitted with nuts or riveted over nuts  
 Front plate at bottom: Material steel Tensile strength 26-30 tons  
 Lower back plate: Material steel Tensile strength 26-30 tons Thickness 13/16"  
 Are stays fitted with nuts or riveted over nuts  
 Main stays: Material steel Tensile strength 28-32 tons  
 No. of threads per inch 6 Area supported by each stay 2800"  
 Screw stays: Material steel Tensile strength 21 1/2 tons  
 No. of threads per inch 9 Area supported by each stay 68 & 800"

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Working pressure by Rules 266 lb Are the stays drilled at the outer ends no Margin stays: Diameter { At turned off part, or Over threads 1 7/8"  
No. of threads per inch 9 Area supported by each stay 83 sq' Working pressure by Rules 257  
Tubes: Material 2 in External diameter { Plain 3" Stay 3" Thickness 8 W 9.1/4" No. of threads per inch 9  
Pitch of tubes 4 3/16" x 4 7/8" Working pressure by Rules 250 Manhole compensation: Size of opening in shell plate 19 1/2" x 15 1/2" Section of compensating ring 9 1/2" x 1 1/4" No. of rivets and diameter of rivet holes 34 @ 1 5/16"  
Outer row rivet pitch at ends 9" Depth of flange if manhole flanged 3" Steam Dome: Material none  
Tensile strength Thickness of shell Description of longitudinal joint  
Diameter of rivet holes 5/8" Pitch of rivets Percentage of strength of joint { Plate Rivets  
Internal diameter 57 1/2" 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 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  
Arch. N. Grierson. Manufacturer.

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

Is this Boiler a duplicate of a previous case yes If so, state Vessel's name and Report No. Harburg. GLR 53960

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)  
GLASGOW 30-4-35  
The materials and workmanship are good.  
The boiler has been constructed under Special Survey and has been placed on board the vessel.

7/5/35  
Survey Fee £ See note When applied for, 19  
Travelling Expenses (if any) £ See note When received, 19  
See note  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 8 MAY 1935  
Assigned SEE ACCOMPANYING MACHINERY REPORT.