

# REPORT ON BOILERS.

Sld. No. 32937

Sld. No. 62216

APR 10 1940

Date of writing Report 19 9.4.40 When made in at Local Office Port of Glasgow  
 No. in Survey held at Annan Date, First Survey 1939 Dec. 28 Last Survey 4-4-1940  
 Reg. Book. on the M/V "TOWER GRANGE" (Number of Visits 12) Gross 5226 Tons Net 3072  
 Built at Sunderland By whom built Wm Donford & Sons Ltd Yard No. 665 660 When built 1940  
 Boilers made at Annan By whom made Loughran & Co Annan Ltd Boiler No. 14517 When made 1940  
 Owners The Tower Steamship Co Ltd Port belonging to London.

**VERTICAL DONKEY BOILER**— No. 20544 Description Bohran Composite Manufacturers of steel Bohiller Ltd  
 Made at Annan By whom made Loughran & Co Annan Ltd When made 1940 Where fixed Upper boiler Working pressure 120 lb  
 tested by hydraulic pressure to 230 Date of test 4-4-40 No. of Certificate 20544 Fire grate area - Description of safety valves Enclosed spring  
 No. of safety valves 2 Area of each 7.060 Pressure to which they are adjusted 120 If fitted with easing gear yes If steam from main boilers can enter the donkey boiler -  
 Diameter of donkey boiler 8'-0" Length 17'-9" Material of shell plates S Thickness 13/16" 21/32"  
 Range of tensile strength 28-32 tons Description of riveting long. seams WR Lap Diameter of rivet holes 1/32" Whether punched or drilled drilled  
 Pitch of rivets 3-15" 3-13" 3-1/8" Lap of plating S Per centage of strength of joint 66.2 53.9 Working pressure of shell by rules 127  
 Thickness of shell crown plates 19/32" 1/32" Radius of do. 4'-0" No. of stays to do. - Diameter of stays - Diameter of furnace—Top - Bottom 7'-0"  
 Length of furnace - Thickness of furnace side plates 23/32" Description of joint bevelled Working pressure of furnace by rules 144  
 Thickness of Ogee ring 1/32" Working pressure of Ogee ring by rules 124 Thickness of furnace crown plates 20/32" Radius of do. 3'-6"  
 Stayed by hemisphere Diameter of uptake 21 1/2" x 25" Thickness of uptake plates 9/16" Thickness of tube plates front 1/4" back 1/4"  
 Mean pitch of stay tubes in nest 8-7 1/8" 8-36" 9-44" Pitch in outer vertical rows 5 1/4" 6-37"  
 Diameter of tube holes FRONT stay 2 3/16" 1 1/16" BACK stay 2" 1 1/2" Working pressure of tube plates by rules 122, 126 Tubes: Material S  
 External diameter stay 2" 1 1/8" Thickness stay 1/32" No. of threads per inch 9 Pitch of tubes 2 7/8" 2 1/16" 3-13" 3-15"  
 Working pressure by rules 215 Manhole compensation; Size of opening in shell plate 21" x 17" Section of compensating ring 9 1/4" x 1 1/32"  
 No. of rivets and diameter of rivet holes 40 @ 1/32" Outer row pitch at ends 4.03"

The foregoing is a correct description,  
 L. L. L. Manufacturer

Dates During progress of work in shops— 1939 Dec. 28, 1940 Jan. 18, 25, Drawing No. 25112  
 During erection on board vessel— Feb. 9, 16, 20, 28, Mar. 8, 14, 21, 29 Apr. 4,  
 Total No. of visits 12 Is the approved plan of boiler forwarded herewith yes

**GENERAL REMARKS** (State quality of workmanship, opinions as to class, &c.)  
 The materials and workmanship are good.  
 The boiler has been constructed under special survey. It will be sent to Pallion yard Sunderland to be fitted in the vessel.  
 Heating surface— exhaust gas 5150 sq. ft. oil fire 5380 sq. ft.  
 This boiler has been securely fixed on board the vessel examined under steam & safety valves adjusted to working pressure in accordance with rule requirements.  
 For recommendation please see N. C. Rpt.  
 H. H. H.

Survey Fee ... £ 5 : 12 : } When applied for...  
 Travelling Expenses (if any) £ : : } When received...  
 COMMITTEE'S MINUTE **GLASGOW 9 APR 1940**  
 Assigned **TRANSMIT TO LONDON**  
 H. H. H. © 2019  
 Engineer Surveyor to Lloyd's Register of Shipping.  
 Lloyd's Register Foundation  
 W224-0212