

## REPORT ON BOILERS.

1- DEC 1942  
Sld. N° 33545  
Sld. No. 66112

23 SEP 1942

Date of writing Report 19 When handed in at Local Office 22: 9: 16 42 Port of Glasgow  
 No. in Survey held at Annan Date, First Survey 27: 2: 42 Last Survey 17-9-1942  
 Reg. Book. on the HARPAGUS (Number of Visits 19) Gross 7271 Tons Net 5044  
 Built at Sunderland By whom built W. Dorey & Son Ltd Yard No. 695 When built 1942  
 Boilers made at Annan By whom made Buchanan & Co Annan Ltd Boiler No. 15390 When made 1942  
 Owners National Steamship Co Ltd Port belonging to London.

VERTICAL DONKEY BOILER— No. one Description Composite Manufacturers of steel Buchan Ltd.  
 Made at Annan By whom made Buchanan & Co Annan Ltd When made 1942 Where fixed Ness. Working pressure 120  
 Tested by hydraulic pressure to 230 Date of test 17-9-42 No. of Certificate 21176 Fire grate area — Description of safety valves Lever Spring.  
 No. of safety valves 2 Area of each 4.06 sq 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 2 1/2" 13/16"  
 Range of tensile strength 28-32 tons Description of riveting long. seams DR Lap Diameter of rivet holes 1 1/2" Whether punched or drilled drilled Pitch of rivets 3-15" 3-13" 3/8" Lap of plating 5" Per centage of strength of joint Rivets 66.2 53.9 Working pressure of shell by Plates 66.3 67.3  
 rules 127 Thickness of shell crown plates 32. 13/32 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 2 3/32" Description of joint Seamless Working pressure of furnace by rules 144 Thickness of Ogee ring 1 1/2" Working pressure of Ogee ring by rules 124 Thickness of furnace crown plates 2 3/32" Radius of do. 3'-6" Stayed by Hemisphere Diameter of uptake 20" x 23 1/2" Thickness of uptake plates 5/8" Thickness of tube plates front 1 1/2" back 1 1/2" Mean pitch of stay tubes in nest 8-7 1/2" 8-36 9-47" Pitch in outer vertical rows 5 1/2" 6-37"  
 Diameter of tube holes FRONT stay 2 1/2" 1 1/2" BACK stay 2" 1 1/2" Working pressure of tube plates by rules F122 8126 B196 8161 Tubes: Material S  
 External diameter stay 2" 1 1/2" plain 2" 1 1/2" Thickness stay 1 1/2" plain 1 1/2" No. of threads per inch 9 Pitch of tubes 2 5/8" x 2 1/2" 3-18 7/8" x 3-13"  
 Working pressure by rules 215 Manhole compensation; Size of opening in shell plate 21" x 17" Section of compensating ring 7 1/2" x 1 1/2" No. of rivets and diameter of rivet holes 40 @ 1 1/2" Outer row pitch at ends 4-03"

The foregoing is a correct description,

E. A. R. R.

Manufacturer

FOR COCHRAN &amp; CO. ANNAN, LTD.

Dates of Survey while building During progress of work in shops 1942 Feb 27 Mar: 5-12 Apr: 3-21 May: 7-14-27 June: 10-19 Drawing No. 26845  
 During erection on board vessel 26 July: 2-14-29 Aug: 13-14-25 Sep: 10-17  
 Total No. of visits 19

Is the approved plan of boiler forwarded herewith yes

## GENERAL REMARKS (State quality of workmanship, opinions as to class, &amp;c.)

The materials and workmanship are good.  
 The boiler has been constructed under Special Survey. It will be sent to Sunderland to be fitted in the vessel.

Heating surface - oil fires 538 sq'. Exhaust gas net 515 sq'. Total 1053 sq'

This boiler has been securely fixed on board the vessel & safety valves adjusted to working pressure.

In recommendation please see Machinery Rpt.

W. H. Fraser.

Survey Fee ... £ 5 : 14 : } When applied for 4/9/42 19  
 Travelling Expenses (if any) £ : : } When received 19

Committee's Minute GLASGOW 22 SEP 1942

Assigned

Deferred for completion

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

TUE 15 DEC 1942

Lloyd's Register Foundation

003147-003153-0141