

## REPORT ON BOILERS.

Sld. No. 33747

Sld. No. 66842

24 MAR 1943

Date of writing Report 19 When handed in at Local Office 22-3 1943 Port of Glasgow  
 No. in Survey held at Annan Date, First Survey 7. 1. 43 Last Survey 16-3- 1943  
 Reg. Book. "EMPIRE CHEER" (Number of Visits 8) Tons {Gross 7297 Net 4926  
 on the  
 Built at Sunderland By whom built Wm Doxford & Sons Ltd Yard No. 702 When built 1943  
 Boilers made at Annan By whom made Cochran & Co Annan Ltd Boiler No. 15648 When made 1943  
 Owners Ministry of War Transport Port belonging to Sunderland

VERTICAL DONKEY BOILER— No. one Description Composite Manufacturers of steel Cochran & Co  
 Made at Annan By whom made Cochran & Co Annan Ltd When made Where fixed Upper boiler Working pressure 120  
 tested by hydraulic pressure to 230 Date of test 16-3-43 No. of Certificate 21343 Fire grate area Description of safety valves ordinary  
 No. of safety valves 2 Area of each 7.06" 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 19'-9" Material of shell plates S Thickness 13" 21" 16 32  
 Range of tensile strength 28-32 tons Description of riveting long. seams D.R. 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  
 rules 127 Thickness of shell crown plates 19" 1 1/2" 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" 3/2" 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 23" 3/2" Radius of do. 3'-6" Stayed by hemisphere Diameter of uptake 20" x 23 1/2" Thickness of uptake  
 plates 5" Thickness of tube plates front 1 1/2" back 1 1/4" Mean pitch of stay tubes in nest 8-7 1/2" 8-36" 9-47" 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" F 122 126 Working pressure of tube plates by rules 8196 161 Tubes: Material S  
 External diameter stay 2" 1 1/2" Thickness stay 11/32" No. of threads per inch 9 Pitch of tubes 2 5/8" x 2 1/16" 3-18" x 3-13"  
 plain 2" 1 1/2" Thickness plain 10/16" No. of threads per inch 9 Pitch of tubes 2 5/8" x 2 1/16" 3-18" 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,

FOR COCHRAN &amp; CO., ANNAN, LTD. Manufacturer

Dates of Survey while building { During progress of work in shops - 1943 Jan 7, 21, 28 Feb 4, 11, 25 Mar 4, 16  
 { During erection on board vessel - - -  
 Total No. of visits 8

Drawing No. 26845

Is the approved plan of boiler forwarded herewith No  
Retained for duplicate cases

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

The workmanship and materials 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 fired 538 sq'. Exhaust gas nest 515 sq'. Total 1053 sq'.

This boiler has been securely fixed on board the vessel & safety valves adjusted to working pressure as above.  
 For recommendation please see Machinery Rpt.

J. H. H. H.

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

Committee's Minute GLASGOW 23 MAR 1943  
 Assigned TRANSMIT TO LONDON

Engineer Surveyor to Lloyd's Register of Shipping.

Lloyd's Register  
 Foundation