

REPORT ON BOILERS.

13 AUG 1941

Received at London Office

Date of writing Report 10 When handed in at Local Office 12. 8. 1941 Port of Glasgow

No. in Survey held at Annan Date, First Survey 28. 2. 41 Last Survey 30-7-1941

Reg. Book. "EMPIRE GRENFELL" (Number of Visits 14) (Gross 7238)

on the "EMPIRE GRENFELL" Tons (Net 5099)

Built at Sunderland By whom built Wm. Doxford & Sons Ltd Yard No. 678 When built 1941

Boilers made at Annan By whom made Bochran Co Annan Ltd Boiler No. 15009 When made 1941

Owners Ministry of War Transport Port belonging to Sunderland.

VERTICAL DONKEY BOILER— No. one Description Bochran Composite Manufacturers of steel Bohills Ltd

Made at Annan By whom made Bochran Co Annan Ltd When made 1941 Where fixed upper boiler Working pressure 120

tested by hydraulic pressure to 230 Date of test 30-7-41 No. of Certificate 20803 Fire grate area — Description of safety valves two direct spring

No. of safety valves two Area of each 40" Pressure to which they are adjusted 120 If fitted with easing gear no 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" 2 1/32"

Range of tensile strength 28-32 tons Description of riveting long. seams NR lap Diameter of rivet holes 1 1/32" Whether punched or drilled dull Pitch of rivets 3-15" 3-13" 3 1/8" Lap of plating 5" Per centage of strength of joint Rivets 66.2 53.9 Working pressure of shell by Plates 66.2 67.3

rules 127.5 Thickness of shell crown plates 1 1/32" 19/32" 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 1/32" Working pressure of Ogee ring by rules 124 Thickness of furnace crown plates 23/32" Radius of do. 3'-0" Stayed by hemispherical Diameter of uptake 2 1/2" x 25" Thickness of uptake plates 9/16" Thickness of tube plates front 1 1/4" back 1 1/4" Mean pitch of stay tubes in nest 8.729" 8.368" Pitch in outer vertical rows 5 1/4" 6.37"

Diameter of tube holes FRONT stay 2 3/16" 1 1/2" BACK stay 2" 1 1/2" Working pressure of tube plates by rules 8122. 126 Tubes: Material S

External diameter stay 2" 1 1/2" plain 2 1/8" 1 1/8" Thickness stay 1 1/32" plain 10 LSS No. of threads per inch 9 Pitch of tubes 2 7/8" x 2 1/16" 3-18 x 3-13

Working pressure by rules 215 290 Manhole compensation; Size of opening in shell plate 21" x 17" Section of compensating ring 7 1/2" x 1 1/32" No. of rivets and diameter of rivet holes 40 @ 1 1/32" Outer row pitch at ends 4.03"

The foregoing is a correct description, *CHB*

CHB

Manufacturer

FOR COCHRAN & CO., ANNAN, LTD

Dates of Survey while building

During progress of work in shops—	1941 Feb: 28	Mar: 20-27	Apr: 4-18	May: 6-16 22-29	June: "	Drawing No. <u>25112</u>
	During erection on board vessel — July: 8-10-17-30					
	Total No. of visits <u>14</u>					

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.

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

In recommendation please see machin. Rpt.

Job
12/8/41

W. Fraser.

This report to be sent to Sunderland

Survey Fee £ 5 : 14 : } When applied for 19

Travelling Expenses (if any) £ : : } When received 19

MONTHLY ACCOUNT

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

Committee's Minute GLASGOW 12 AUG 1941

Assigned TRANSMIT TO LONDON

FRI. 12 DEC 1941

See Sld. No. 33265

Lloyd's Register Foundation

If not, state whether, and when, one will be sent?

Is a Report also sent on the Hull of the Ship?

Certificate (if required) to be sent to

[5c, 10, 38.—Copyable Ink.]