

REPORT ON BOILERS.

Sld. No. 33265

Sld. No. 64213

13 AUG 1941

Received at London Office

Date of writing Report 10 When handed in at Local Office 12. 8. 19 41 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) Tons { Gross 7238 Net 5099

Built at Sunderland By whom built Wm. Dargone & Son Ltd Yard No. 678 When built 1941

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

Owners Ministry of War Transport Port belonging to Sunderland.

VERTICAL DONKEY BOILER— No. one Description Cochran Composite Manufacturers of steel Robt. Williams Ltd

Made at Annan By whom made Cochran 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 40. If steam from main boilers can enter the donkey boiler — Diameter of donkey boiler 8'-0" Length 14'-9" Material of shell plates S Thickness 13/16" 2 1/32"

Range of tensile strength 28-32 tons Description of riveting long. seams HR lap Diameter of rivet holes 1 1/32" Whether punched or drilled duller 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 66.8 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 Hemisphere Diameter of uptake 21 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 8126.161 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.

R. A. Rax.

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: 11 Drawing No. 25112

{ During erection on board vessel — July: 8-10-17-30

Total No. of visits 14 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 mach. Rpt.

Eob 14/8/41

Not 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

H. 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

00122-00828-0020