

REPORT ON WATER TUBE BOILERS.

No. 14953

Received at London Office **13 APR 1950**
 of writing Report 19 When handed in at Local Office **8/4/1950** Port of **Belfast**
 No. in Survey held at **Belfast** Date, First Survey **Visits included in 72. weekly** Last Survey 19
 g. Bk. on the **Twin Screw "Runic"** (Number of Visits) Tons **GROSS 13586.87**
 Net
 at **Belfast** By whom built **Harland & Wolff Ltd.** When built **1950**
 Lines made at **D.** By whom made **D.** When made **1950**
 Makers made at **D.** By whom made **D.** When made **1950**
 Principal Horse Power **3280** Owners **Shaw Savill & Albion Co. Ltd.** Port belonging to **Southampton**

WATER TUBE BOILERS—MAIN, AUXILIARY, OR DONKEY.—Manufacturers of Steel

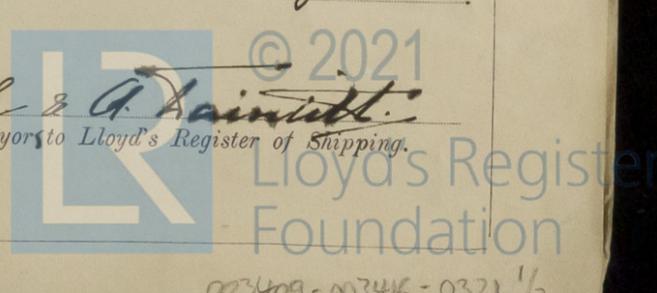
Boilers **2 Foster Wheeler Controlled Steam** DESIGN Working Pressure **490 lb.** Tested by Hydraulic Pressure to **785 lb.** Number and Description or Type
 of Certificate **1430** Can each boiler be worked separately **yes** Total Heating Surface of Boilers **15590 Sq. Ft.** Date of Test **2-2-50**
 forced draught fitted **yes** Area of fire grate (coal) in each Boiler **3 Outboard (Sat.) 4 Inboard (S.H.V.) Wallend Type.** No. and description of safety valves on
 and type of burners (oil) in each boiler **3 Outboard (Sat.) 4 Inboard (S.H.V.) Wallend Type.** per rule **app** Pressure to which they
 boiler **1-2 1/2 Full Bore Single Valve Steam Drum** Area of each set of valves per boiler **as fitted 4.9087 sq.**
 adjusted **490 lbs.** Are they fitted with easing gear **yes** In case of donkey boilers state whether steam from main boilers can enter
 donkey boiler **No.** Smallest distance between boilers or uptakes and bunkers or woodwork **24"** Height of boiler **21'11"**
 width and Length **25'0" x 17'0"** Steam Drums:—Number in each boiler **One** Inside diameter **4'6 3/8"**
 thickness of plates **WRAPPER PLATE 1 1/4" TUBE PLATE 2 3/4"** Range of Tensile Strength **28/32 tons/sq.** Are drum shell plates welded
 changed **Welded** If fusion welded, state name of welding firm **Broomfield Boiler Works Co.** Have all the requirements of the rules
 Class I vessels been complied with **yes** Description of riveting:—Cir. seams — long. seams —
 diameter of rivet holes in long. seams — Pitch of rivets — Thickness of straps — Percentage strength of
 joint:—Plate — Rivet **36.75 FOR 1 1/4"** Diameter of tube holes in drum **1 1/4, 2, 3 1/4, 5"** Pitch of tube holes **4 x 3 1/2 FOR 2"**
 percentage strength of shell in way of tubes **35.5 x 49.6 FOR 2"** Steam Drum Heads or Ends:—Range of tensile strength **26/30 tons/sq.**
 thickness of plates **1 1/2, 1 5/8"** Radius or how stayed **4'0" RAD. INSIDE** Size of manhole or handhole **16 x 12"** Water Drums:—Number
 each boiler **2** Inside Diameter **2'0"** Thickness of plates **1 3/4"** Range of tensile strength **28/32 tons/sq.** Are drum shell plates
 welded or stanged **Forged** If fusion welded, state name of welding firm — Have all the requirements of the rules
 Class I vessels been complied with **yes** Description of riveting:—Cir. seams — long. seam —
 diameter of rivet holes in long. seams — Pitch of rivets — Thickness of straps — Percentage strength of long. joint:—Plate — Rivet
 percentage strength of drum shell in way of tubes **35.5 x 49.6 FOR 2"** Water Drum Heads or Ends:—Range of Tensile strength **28/32 tons/sq.**
 thickness of plates **2 1/2"** Radius or how stayed **2'11" RAD. INSIDE** Size of manhole or handhole **16 x 12"**
 ends or Sections:—Number **3** Material **Steel** Thickness **1"** Tested by Hydraulic Pressure to **785 lb./sq.**
 diameters:—Diameter **1 1/4, 2, 3 1/4, 5"** Thickness **1 1/4-0.116 3 1/4-0.3125 5-0.341** Number **2-269 5-104** Steam Dome or Collector:—Description of
 diameter to Shell — Inside diameter — Thickness of shell plates — Range of tensile
 strength — Description of longitudinal joint — If fusion welded, state name of welding
 Have all the requirements of the rules for Class I vessels been complied with — Diameter of rivet holes —
 diameter of rivets — Thickness of straps — Percentage strength of long. joint:—Plate — Rivet —
 main or End Plates:—Range of tensile strength — Thickness — Radius or how stayed —
 SUPERHEATER. Drums or Headers:—Number in each boiler **2** Inside Diameter **6 5/8" Rad.**
 thickness **1 1/2"** Material **Steel** Range of tensile strength **28/32 tons/sq.** Are drum shell plates welded
 changed **Forged** If fusion welded, state name of welding firm — Have all the requirements of the rules
 Class I vessels been complied with **yes** Description of riveting:—Cir. seams — long. seams —
 diameter of rivet holes in long. seams — Pitch of rivets — Thickness of straps — Percentage strength of
 joint:—Plate — Rivet — Diameter of tube holes in drum **1 1/8"** Pitch of tube holes **1 1/16"** Percentage strength of
 shell in way of tubes **37.9** Drum Heads or Ends:—Ends. Thickness **1 3/4"** Range of tensile strength **28/32 tons**
 radius or how stayed **Flat** Size of manhole or handhole — Number, diameter, and thickness of tubes **292, 1 1/8" 0.116"**
 tested by Hydraulic Pressure to **785 lb./sq.** Date of Test **2-2-50** Is a safety valve fitted to each section of the superheater which
 can be shut off from the boiler — No. and description of Safety Valves **1-2 1/2 Full Bore Double Spring** Area of each set
 valves **9.8174 sq.** Pressure to which they are adjusted **435 lb./sq.** Is easing gear fitted **yes**
 Easing Gear. Has the spare gear required by the rules been supplied **yes**

The foregoing is a correct description,
 T. Russell & A. Haintell, Manufacturer.
 Is the approved plan of boiler forwarded herewith
 Total No. of visits

This boiler a duplicate of a previous case **No** If so, state vessel's name and report No.

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) **The boilers have been constructed under
 usual survey in accordance with the Rules and approved plans. The materials and workmanship are
 good. The boilers have been satisfactorily installed on board the vessel, tested under full
 working conditions and found in good order. Safety valves adjusted under steam to stated pressures.**
 Survey Fee £ : : } When applied for, 19
 Travelling Expenses (if any) £ : : } When received, 19

Committee's Minute **FRI, 5 MAY 1950**
 Signed **Sir F.E. Welch, rpt.**
 T. Russell & A. Haintell, Engineer Surveyor to Lloyd's Register of Shipping.



Steel T.S. Steamer "Runic"

Barland & Wolff Ltd. Yard N° 1414.

During the course of fitting the steel sheathing over insulation, the outer downcomer tube between steam drum & superheater side water drum at the aft end of starboard boiler, was pierced by a $\frac{3}{16}$ " dia drill about 9" from the steam drum.

As a new pipe could not be obtained for some considerable time the hole was tapped (fine thread) & a screwed plug fitted, with a small head on inside of tube projecting about $\frac{1}{16}$ " beyond outer wall & spot welded. This repair was carried under full working pressure & found in order.

The above was effected in cooperation with the Owners' Supt. who requested that the renewal of the tube might be deferred to Owners' convenience, the intention being that the new tube would be fitted within the guarantee period of 12 months.



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