

REPORT ON WATER TUBE BOILERS.

No. 15283

12 NOV 1951

Received at London Office

Writing Report 19 When handed in at Local Office 5.11.1951 Port of BELFAST
 Survey held at BELFAST Date, First Survey Last Survey 19
 on the T.S. SS. "RHODESIA CASTLE" (Number of Visits) Tons { Gross 17040.76. Net 9434.56.
 at BELFAST By whom built HARLAND & WOLFF. LTD. When built 10/51.
 made at - do - By whom made - do - When made 10/51.
 made at - do - By whom made - do - When made 10/51.
 nominal Horse Power M.N. 2940. Owners LION CASTLE MAIL S.S. CO. LTD. Port belonging to LONDON.

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

of Approval of plan SECRETARY'S LETTER 3A.51 & SUBSEQUENTLY. Number and Description or Type
 boilers 3. B.W. INTEGRAL FURNACE TYPE. DESIGN WORKING Pressure 505. Tested by Hydraulic Pressure to 808 Date of Test 4.4.51, 19.4.51.
 of Certificate 1479-80-81. Can each boiler be worked separately YES. Total Heating Surface of Boilers SUPERHEATER 1476. GENERATING 18075. TOTAL 19551 sq ft.
 forced draught fitted YES. Area of fire grate (coal) in each Boiler
 and type of burners (oil) in each boiler 5. BABCOCK & WILCOX. No. and description of safety valves on
 boiler 2-2 1/2" C.S. COCKBURN IMP. HIGH LIFT. Area of each set of valves per boiler { per rule Pressure to which they
 adjusted 495 lbs/sq. in. Are they fitted with easing gear YES. In case of donkey boilers state whether steam from main boilers can enter
 donkey boiler. Smallest distance between boilers or uptakes and bunkers or woodwork 10'-0" Height of boiler 18'-9"
 width and Length 15'-5" x 14'-5". Steam Drums:—Number in each boiler ONE. Inside diameter TUBE PLATE 1'-11 9/32 Rqd. WRAPPER PLATE 2'-0 1/4 Rqd.
 thickness of plates TUBE PLATE 3/8" WRAPPER PLATE 1/16". Range of Tensile Strength 28/32 TONS/sq. in. Are drum shell plates welded
 flanged WELDED. If fusion welded, state name of welding firm HARLAND & WOLFF. LTD. 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 1/4", 2", 3 1/4", 4 1/2" Pitch of tube holes 1 3/4" FOR 1 1/4" O/D TUBES, 4" x 3 1/8" FOR 2" O/D TUBES.
 percentage strength of shell in way of tubes 27.7% FOR 1 1/4" O/D TUBES, 38% + 52.5% FOR 2" O/D TUBES. Steam Drum Heads or Ends:—Range of tensile strength 26/30 TONS/sq. in.
 thickness of plates 1 1/2" Radius or how stayed 3'-6" Rqd. INSIDE. Size of manhole or handhole 16" x 12". Water Drums:—Number
 each boiler ONE. Inside Diameter TUBE 1'-2 1/2" Rqd. WRAPPER 1 1/16". Thickness of plates TUBE 15/16". Range of tensile strength 28/32 TONS/sq. in. Are drum shell plates
 welded or flanged WELDED. If fusion welded, state name of welding firm HARLAND & WOLFF. LTD. 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 Diameter of tube holes in drum 1 1/4", 2", 3 1/4", 4 1/2" Pitch of tube holes 1 3/4" " 1 1/4" " 4" x 3 1/8" FOR 2" O/D TUBES.
 percentage strength of drum shell in way of tubes 27.7% FOR 1 1/4" O/D TUBES, 38% + 52.5% FOR 2" O/D TUBES. Water Drum Heads or Ends:—Range of Tensile strength 26/30 TONS/sq. in.
 thickness of plates 1" Radius or how stayed 2'-6" Rqd. INSIDE. Size of manhole or handhole 16" x 12".
 Headers or Sections:—Number ONE. Material M.S. Thickness 7/8" END 3/4" Tested by Hydraulic Pressure to 808 lbs/sq. in.
 diameters:—Diameter 1 1/4", 2", 3 1/4", 4 1/2" Thickness 1 1/4" 10 S.W.G. 3 1/4" 3 S.W.G. 1 1/4" 13 S.W.G. 3 1/4" 7. Number 2" 117. 4 1/2" 12. Steam Dome or Collector:—Description of
 to Shell Inside diameter Thickness of shell plates Range of tensile
 length 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 Plate Rivet
 of rivets Thickness of straps Percentage strength of long. Joint Plate Rivet
 on or End Plates:—Range of tensile strength Thickness Radius or how stayed
 SUPERHEATER. Drums or Headers:—Number in each boiler 2. Inside Diameter 6" SQUARE. INSIDE.
 thickness 1 1/8". Material STEEL. Range of tensile strength 28/32 TONS/sq. in. Are drum shell plates welded
 flanged FORGED. If fusion welded, state name of welding firm Have all the requirements of the rules
 Class I vessels been complied with GLS CERT. NO. 85883. 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 1/4" Pitch of tube holes 1 7/8" Percentage strength of
 shell in way of tubes 32.5%. Drum Heads or Ends:—ENDS. Thickness 1" Range of tensile strength 28/32.
 radius or how stayed FLAT. Size of manhole or handhole 32 1/2" sq. Number, diameter, and thickness of tubes 110-1 1/4" O/D-10 S.W.G.
 tested by Hydraulic Pressure to 810 lbs/sq. in. Date of Test 6.6.51-8.6.51-28.6.51. 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" C.S. COCKBURN. IMP. HIGH LIFT. Area of each set
 of valves 4.908 sq. ins. Pressure to which they are adjusted 485 lbs/sq. in. Is easing gear fitted YES.
 Easing Gear. Has the spare gear required by the rules been supplied YES.

The foregoing is a correct description, FOR HARLAND AND WOLFF, LIMITED Manufacturer.

Is the approved plan of boiler forwarded herewith RETAINED FOR USE ON SISTER VESSEL YARD NO. 1432. Total No. of visits

This boiler is 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.) These Boilers were constructed and installed under Special Survey in accordance with Rules approved plans and Secretary's orders. The materials and workmanship are good. On completion, each boiler was examined under full working conditions, and Safety Valves adjusted to above pressures.

Survey Fee £ : : When applied for, 19
 Travelling Expenses (if any) £ : : When received, 19

Committee's Minute TUES. 4 DEC. 1951
 Signed Su F. E. mchey spk
 A. Tennant & B. Smith
 Engineer Surveyor to Lloyd's Register of Shipping.

