

REPORT ON WATER TUBE BOILERS

No. 6216

Received at London Office

23 AUG 1944

Date of writing Report **29th May, 1944** When handed in at Local Office **29th May, 1944** Port of **Vancouver, B. C.**
 No. in Survey held at **Vancouver, B. C.** Date, First Survey **2nd Feb., 1944** Last Survey **27th May, 1944**
 Reg. Bk. on the **Steel Single Screw Steamer "FORT KILMAR"** (Number of Visits **28**)
 Gross Tons **7199.71**
 Net Tons **4003.23**
 Built at **Vancouver, B. C.** By whom built **Burrard Dry Dock Co. Ltd.** When built **1944**
 Engines made at **Montreal** By whom made **Dominion Engineering Works, Ltd.** When made **1944**
 Boilers made at **Vancouver, B. C.** By whom made **Vancouver Iron Works, Ltd.** When made **1944**
 Nominal Horse Power **628** Owners **Minister of Munitions & Supply of Canada.** Port belonging to

WATER TUBE BOILERS—MAIN, AUXILIARY, OR DONKEY. Manufacturers of Steel **Steel Co. of Canada, Page-Hersey Tubes, Combustion Eng. Co., Chattanooga.**

Date of Approval of plan **17-7-43** (Spt. 230 lb.) Number and Description or Type of Boilers **2 Sinuous Header Watertube** Working Pressure **250 lbs.** Tested by Hydraulic Pressure to **425 lbs.** Date of Test **9-2-44 & 10-2-44**
 No. of Certificate **Nos. 663 & 668.** Can each boiler be worked separately **Yes** Total Heating Surface of Boilers **9704 sq. ft. (25 Hrs.)**
 Is forced draught fitted **Yes** Area of fire grate (coal) in each Boiler **--**
 No. and type of burners (oil) in each boiler **4 Todd "Hex - Press" Burners** No. and description of safety valves on each boiler **One Twin 4" spring loaded** Area of each set of valves per boiler { per rule **22.9 sq. in.** Pressure to which they are adjusted **250 lbs.** as fitted **25.14 " "**
 Are they fitted with easing gear **Yes** In case of donkey boilers state whether steam from main boilers can enter the donkey boiler **--** Smallest distance between boilers or uptakes and bunkers or woodwork **23"** Height of boiler **16'-5-5/8"**
 Width and Length **14'-7 1/2" x 18'-7 1/2"** Steam Drums:—Number in each boiler **One** Inside diameter **47 3/8"**
 Thickness of plates **15/16"** Range of Tensile Strength **70,000 to 82,000 lbs.** Are drum shell plates welded or flanged **Welded** If fusion welded, state name of welding firm **Vancouver Iron Works, Ltd.** Have all the requirements of the rules for 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 long. joint:—Plate **--** Rivet **--** Diameter of tube holes in drum **4-1/32"** Pitch of tube holes **7"**
 Percentage strength of shell in way of tubes **42.5%** Steam Drum Heads or Ends:—Range of tensile strength **65,000 to 77,000 lbs.**
 Thickness of plates **15/16"** Radius or how stayed **38"** Size of manhole or handhole **12" x 16"** Water Drums:—Number in each boiler **One** Inside Diameter **5 3/8" sq.** Thickness of plates **3/4"** Range of tensile strength **60,000-70,000 lbs.** Are drum shell plates welded or flanged **Solid drawn** If fusion welded, state name of welding firm **--** Have all the requirements of the rules for Class I vessels been complied with **--**
 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 **4-1/32"** Pitch of tube holes **7"**
 Percentage strength of drum shell in way of tubes **42.5%** Water Drum Heads or Ends:—Range of Tensile strength **60,000 to 70,000 lbs.**
 Thickness of plates **9/16" min.** Radius or how stayed **Handholes in end** Size of manhole or handhole **4 1/2" x 5 1/2"**
 Headers or Sections:—Number **22** Material **Steel** Thickness **9/16"** Tested by Hydraulic Pressure to **500 lbs.**
 Tubes:—Diameter **2" & 4"** Thickness **10&6 BWG (.134" & .203")** Number **602-2", 44-4"** Steam Dome or Collector:—Description of joint to Shell **--** Inside diameter **--** Thickness of shell plates **--** Range of tensile strength **--**
 Description of longitudinal joint **--** If fusion welded, state name of welding firm **--** Have all the requirements of the rules for Class I vessels been complied with **--** Diameter of rivet holes **--**
 Pitch of rivets **--** Thickness of straps **--** Percentage strength of long. joint **--** Plate **--** Rivet **--**
 Crown or End Plates:—Range of tensile strength **--** Thickness **--** Radius or how stayed **--**

SUPERHEATER. Drums or Headers:—Number in each boiler **Two** Inside Diameter **6" square**
 Thickness **5/8"** Material **Steel** Range of tensile strength **60,000 to 70,000 lbs.** Are drum shell plates welded or flanged **Forged** If fusion welded, state name of welding firm **--** Have all the requirements of the rules for Class I vessels been complied with **--**
 Description of riveting:—Cir. seams **--** long. seams **--**
 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 **2-1/64"** Pitch of tube holes **3-3/4"** Percentage strength of drum shell in way of tubes **46%**
 Drum Heads or Ends: **Welded to inlet and outlet nozzles.** Range of tensile strength **--**
 Radius or how stayed **--** Size of manhole or handhole **4 1/2" x 5 1/2"** Number, diameter, and thickness of tubes **22 off 2" OD 10BWG .134 wall.**
 Tested by Hydraulic Pressure to **425 lbs.** Date of Test **9-2-44 & 10-2-44** Is a safety valve fitted to each section of the superheater which can be shut off from the boiler **Yes**
 No. and description of Safety Valves **One** Area of each set of valves **1.76 sq. inches** Pressure to which they are adjusted **230 lbs.** Is easing gear fitted **No**

Spare Gear. Has the spare gear required by the rules been supplied **Yes**
 Note:—**Headers, Superheater headers and mud drums manufactured by Combustion Engineering Co. Inc. at Chattanooga, Tennessee, under Mobile Surveyors inspection and certificate.**
 The foregoing is a correct description, **VANCOUVER IRON WORKS LTD.** Manufacturer.

Dates of Survey } During progress of work in shops - **1944. Feb. 2, 3, 4, 7, 8, 9, 10, 11.** Is the approved plan of boiler forwarded herewith **No**
 while building } During erection on board vessel - **1944. Mar. 21, 22, 24, 26, 27, 28, 29.** Plans in U.K.
 May. 1, 3, 4, 8, 10, 11, 12, 15, 19, 23, 25, 26, 27. Total No. of visits **28**

Is this boiler a duplicate of a previous case **Yes** If so, state vessel's name and report No. **"FORT COLUMBIA" (Ver. Report No. 5942)**

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) **These boilers have been built and fitted on board under Special Survey in accordance with the approved plans, New York letters and the Rules. The workmanship is good and the materials tested as per Rule. Satisfactorily tested under hydraulic pressure as above, examined under working conditions, safety valves adjusted to the W.P. and a satisfactory accumulation test carried out.**

Survey Fee **£150.00** When applied for, **29 May 1944.**
 Travelling Expenses (if any) **£15.00** When received, **19**

Committee's Minute **TIERS 21 AUG 45**
 Assigned **sec minute on J.E. Rpt**
 Engineer Surveyor to Lloyd's Register of Shipping. **R. Knox**
W.D. Baillie
 Lloyd's Register of Shipping
 014819-014826-0245