

REPORT ON WATER TUBE BOILERS.

No. 6116

Received at London Office 17 APR 1944

Date of writing Report **22nd Feb. 1944** When handed in at Local Office **22nd Feb. 1944** Port of **Vancouver, B.C.**
 No. in Survey held at **Vancouver, B.C.** Date, First Survey **16th Nov. 1943** Last Survey **19th Feb. 1944**
 Reg. Bk. **7** on the **Steel Single Screw Steamer "FORT WALLACE"** (Number of Visits **28**)
 Tons { Gross **7160.62**
 Net **4244.65**
 Built at **North Vancouver, B.C.** By whom built **Burrard Dry Dock Co. Ltd.** When built **1944**
 Engines made at **Lachine, Que.** By whom made **Canadian Allis Chalmers 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, Tenn.

Date of Approval of plan **17-7-43** Working Pressure **250 lbs. (Spt. 230 lbs.)** Number and Description or Type **25-11-43**
 of Boilers **2 Simons Header Watertube** Tested by Hydraulic Pressure to **425 lbs.** Date of Test **26-11-43**
 No. of Certificate **618--620** Can each boiler be worked separately **Yes** Total Heating Surface of Boilers **9704 sq. ft. (2 Blrs)**
 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 **450°F**
 each boiler **One Twin 4" spring loaded** Area of each set of valves per boiler { per rule **22.9 sq. in.** ex Spt. **23.9** with Spt. at **450°F**
 as fitted **25.14 sq. in.** Pressure to which they **+ 1.76 Spt**
 are adjusted **250 lbs.** 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 **23"** Height of boiler **16'-5 3/8"**
 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
 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 1/2" sq.** Thickness of plates **3/4"** Range of tensile strength **60000 - 70000 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"**
 Leaders 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")** 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 **60000 to 70000 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:—Range of tensile strength **- - -** 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 10 BWG**
 Tested by Hydraulic Pressure to **425 lbs.** Date of Test **25-11-43 & 26-11-43** 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 Lloyd's Inspection
 and certificate. (Mobile Surveyors)

The foregoing is a correct description.

Vancouver Iron Works Ltd. Manufacturer.

Dates of Survey { During progress of work in shops **1943 Nov. 16, 19, 20, 21, 22, 25, 26, 27.** Is the approved plan of boiler forwarded herewith **No. Plans in U.K.**
 while { During erection on board vessel **1943 Dec. 23, 24, 1944 Jan. 19, 20, 21, 24, 25, 26, 27, 29, Feb. 3, 4, 7, 8, 9, 11, 14, 16, 17, 19.** 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 **21st Feb 1944**
 Travelling Expenses (if any) **\$ 15.00** When received **19**

Committee's Minute

Assigned

THURS 27 APR 1944

See fl. machy rpt.

R. H. Knox, Engineer Surveyor to Lloyd's Register of Shipping.
 W. B. Baillie, Engineer Surveyor to Lloyd's Register of Shipping.