

REPORT ON WATER TUBE BOILERS.

No. 6331

Received at London Office

Date of writing Report **26th Sept. 1944** When handed in at Local Office **26th Sept. 1944** Port of **Vancouver, B. C.**

No. in Survey held at **Vancouver, B. C.** Date, First Survey **27th April, 1944** Last Survey **14th September 1944**

Boiler on the **Steel Single Screw Steamer "FORT EDMONTON"** (Number of Visits **16**) Gross Tons **7201.82** Net Tons **4007.16**

Boiler built at **Vancouver, B. C.** By whom built **Burrard Dry Dock Co. Ltd.** When built **1944**

Engines made at **Lachine, P.Q.** By whom made **Canadian Allis-Chalmers Co. Ltd.** When made **1944**

Boilers made at **Vancouver, B. C.** By whom made **Vancouver Iron Works, Ltd.** When made **1944**

Indicated 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** Number and Description of Type **2 Simuous Header Watertube** Working Pressure **250 lbs. (Spt. 230 lb.)** Tested by Hydraulic Pressure to **425 lbs.** Date of Test **4-5-44**

No. of Certificate **695 - 696** Can each boiler be worked separately **Yes** Total Heating Surface of Boilers **9704 sq.ft. (2 Blrs)**

Is forced draught fitted **Yes** Area of fire grate (coal) in each Boiler **- -**

Make and type of burners (oil) in each boiler **4 Todd "Hex - Press" Burners** No. and description of safety valves on boiler

per 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 1.76 sq. in. as fitted 25.14 " " + 1.76**

Are they 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'-5-5/8"**

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 flanged **Welded**

If fusion welded, state name of welding firm **Vancouver Iron Works, 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 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 **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 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"**

Readers or Sections:—Number **22** Material **Steel** Thickness **9/16"** Tested by Hydraulic Pressure to **500 lbs.**

Boilers:—Diameter **2" & 4"** Thickness **10 & 6 BWG (:203"** Number **602-2" 44-4"**

Steam Dome or Collector:—Description of longitudinal joint **- -** Thickness of shell plates **- -**

Range of tensile strength **- -** 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 **- -**

Thickness of straps **- -** Percentage strength of long. joint **- -** Plate **- -** Rivet **- -**

Bottom 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 flanged **Forged**

If fusion welded, state name of welding firm **- -** Have all the requirements of the rules 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.** Thickness **- -** 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 tube **22 of 2" OD 10BWG .134 wall.**

Tested by Hydraulic Pressure to **425 lbs.** Date of Test **4-5-44 5-5-44** 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 Survey During progress of work in shops **1944 April 27 & 28 May 1, 2, 3, 4, 5 & 8** Is the approved plan of boiler forwarded herewith **No**

During erection on board vessel **1944 May 16 Aug. 26, 29 & 30 Sept. 5, 12, 13 & 14** Total No. of visits **16** Plans in U.K. **- -**

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. **14th Sept. 1944**

Survey Fee **\$150.00** When applied for **19**

Travelling Expenses (if any) **\$ 15.00** When received **19**

Committee's Minute **see minute on FERpt.** 8 DEC 1944

Engineer Surveyor to Lloyd's Register of Shipping. **R. Knowlton & W.D. Baillie**

Lloyd's Register Foundation