

# REPORT ON WATER TUBE BOILERS.

No. 6091

23 MAR 1944

Received at London Office.

Date of writing Report 27th Jan., 1944 When handed in at Local Office 27th Jan., 1944 Port of Vancouver, B. C.  
 No. in Survey held at Vancouver, B. C. Date, First Survey 17th Sept., 1943 Last Survey 26th Jan., 1944  
 Reg. Bk. on the Steel Single Screw Steamer "GREEN HILL PARK" (Number of Visits 36) { Gross 7167.75  
 Tons { Net 4247.38  
 Built at Vancouver, B. C. By whom built Burrard Dry Dock Co. Ltd. When built 1944  
 Engines made at Toronto, Ont. By whom made John Inglis Co. Ltd. When made 1944  
 Boilers made at Vancouver, B. C. By whom made Vancouver Iron Works, Ltd. When made 1944  
 Nominal Horse Power 643 628 Owners Minister of Munitions & Supply of Canada. Port belonging to Montreal, P.Q.

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 or Type of Boilers 2 Sinuous Header Watertube Working Pressure 250 lbs (Spt. 230 lb.) Tested by Hydraulic Pressure to 425 lbs Date of Test 24-9-43 & 25-9-43  
 Nos. of Certificate Nos. 579 & 580 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 --  
 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. ex Spt. 23.9 with Spt. at 450°  
 as fitted 25.14 " " + 1.76 Spt valve Pressure to which they 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 -- Height of boiler 16'-5-5/8"  
 Smallest distance between boilers or uptakes and bunkers or woodwork 23"

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 Yes

Are 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 60,000 - 70,000 lbs.

Are welded or flanged Solid drawn If fusion welded, state name of welding firm Certs received 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 --  
 Diameter of tube holes in drum 4-1/32" Pitch of tube holes 7"

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 -- 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 --  
 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 Yes  
 Are 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. 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 tubes 22 off 2" OD 10BWG .134 wall.  
 Tested by Hydraulic Pressure to 425 lbs. Date of Test 24-9-43 & 25-9-43 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 American Bureau Inspection.

The foregoing is a correct description, VANCOUVER IRON WORKS LTD Manufacturer.  
 Is the approved plan of boiler forwarded herewith No Plans in U.K. No

Dates of Survey { During progress of work in shops Sept. 17, 20, 21, 22, 23, 24, 25, 27.  
 while building { During erection on board vessel 1943. Dec. 6, 9, 10, 13, 15, 18, 20, 21, 22, 24, 29, 30, 31.  
Jan. 3, 5, 8, 11, 13, 14, 18, 19, 20, 21, 22, 23, 24, 25, 26.

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, 25th Jan., 1944

Survey Fee \$150.00 When applied for, 25th Jan., 1944  
 Travelling Expenses (if any) \$15.00 When received, 19

Committee's Minute FRI. 14 APR 1944  
 Assigned see minute on 16 Rpt.

