

Rpt. 5c.

## REPORT ON WATER TUBE BOILERS.

No. 6045

1 August.

Received at London Office 11 FEB 1944

Date of writing Report 1st Dec. 1943. When handed in at Local Office 1st Dec. 1943 Port of Vancouver, B.C.  
No. in Survey held at Vancouver, B.C. Date, First Survey 18th Aug. 1943 Last Survey 27th Nov. 1943  
Reg. Bk. on the Steel Single Screw Steamer, "DUNDURN PARK" (Number of Visits 14) (Gross 7158.87 Tons) (Net 4243.75 Tons)  
Built at North Vancouver, B.C. By whom built North Van Ship Repairs Ltd. When built 1943  
Engines made at Lachine, Quebec By whom made Canadian Allis Chalmers Ltd. When made 1943  
Boilers made at Vancouver, B.C. By whom made Vancouver Iron Works Ltd. When made 1943  
Nominal Horse Power 643 628 Owners (Mngrs. Park Steamship Co. Ltd. Montreal) 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  
Type of Boilers 2 Sinuous Header Watertube Working Pressure 250 lbs. Tested by Hydraulic Pressure to 425 lbs. Date of Test 25-8-43  
No. of Certificate 562 and 563 Can each boiler be worked separately Yes Total Heating Surface of Boilers 9,704 sq. ft. (2 Boilers)  
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

Each boiler One Twin 4" Consolidated Area of each set of valves per boiler { per rule 22.9 Sq. in. as fitted 25.14 Sq. in. No. and description of safety valves on each boiler One Twin 4" Consolidated Area of each set of valves per boiler { per rule 22.9 Sq. in. as fitted 25.14 Sq. in. 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 the donkey boiler --- Smallest distance between boilers or uptakes and bunkers or woodwork 23" Height of boiler 47-3/8"

Width and Length 14'-7 3/4" 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, Limited 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 54 sq. in. 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 --- If fusion welded, state name of welding firm --- Diameter of rivet holes --- Plate --- Rivet ---

Have all the requirements of the rules for Class I vessels been complied with --- Description of longitudinal joint --- 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 & 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 10 BWG .134 wall Tested by Hydraulic Pressure to 425 lbs. Date of Test 24-8-43 and 25-8-43 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 square 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.

Dates of Survey while building } During progress of work in shops - - Aug- 18,19,20,21,23,24,25,26 } Is the approved plan of boiler forwarded herewith No: Plans in U.K. } During erection on board vessel - - Nov.- 14,16,17,19,20,27. } Total No. of visits 14

Is this boiler a duplicate of a previous case Yes If so, state vessel's name and report No. "FORT COLUMBIA" Vcr. Rpt. 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 30th Nov. 43 } Travelling Expenses (if any) £ 15.00 : } When received, 19 }

Committee's Minute Assigned

TUES. 22 FEB 1944

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