

November 3, 1992

Information: Welding Requirements

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This responds to your memo of August 25, 1992, asking if Part 192 permits a gas pipeline to be uprated above 20% of SMYS when it was welded in accordance with Appendix C of Part 192. You also asked if a pipeline on which none of the girth welds was nondestructively tested may be uprated above 20% of SMYS.

Section 192.227 establishes Appendix C as an alternative method of welder qualification. Welders who qualify under Appendix C and not under API 1104 or the Boiler and Pressure Vessel Code may not weld on steel pipelines to be operated at 20% or more of SMYS. Hence, a low stress level steel pipeline whose welders were qualified only under Appendix C may not be operated at 20% or more of SMYS. Because of this limitation on operating pressure, it follows that such a pipeline may not be uprated to 20% or more of SMYS.

Section 192.241(b) provides that certain welds or percentages of welds on steel pipelines to be operated at 20% or more of SMYS must be nondestructively tested, unless the welds are visually inspected, approved by a qualified welding inspector, and the pipeline (1) is less than 6 inches in nominal diameter; or (2) is to be operated at less than 40% of SMYS and certain conditions are satisfied. Hence, a low stress level steel pipeline whose welds were subject to § 192.241 but were not nondestructively tested may not be operated at 20% or more of SMYS unless the welds were excepted from nondestructive testing under § 192.241(b). Furthermore, this limitation on operating pressure precludes uprating to 20% or more of SMYS unless the welds were excepted from nondestructive testing. If the welds were excepted but the pipeline is 6 inches or more in nominal diameter, operation and uprating would be limited to a pressure of less than 40 % of SMYS.

Because of § 192.553(d), the uprating of a steel pipeline whose welds were not subject to § 192.241 and were not nondestructively tested would still be affected by § 192.241(b). Section 192.553(d) limits uprating to the maximum pressure Part 192 would allow if the pipeline were new, unless the line is grandfathered under § 192.555(c). So, unless § 192.555(c) applies, a

pipeline whose welds were not nondestructively tested may not be uprated above the operating pressure limitations of § 192.241(b), because these limits apply to the uprating of new pipelines. If § 192.555(c) applies, the lack of nondestructive testing would not affect uprating to the level permitted by § 192.555(c).