

**TR NUMBER:** 2020-18

**PRIMARY:** G-192-9A

**PURPOSE:** Update Appendices G-9A Section 3.4 with new Spike Testing Requirements (Amdt 192-125)

**Origin/Rationale:** Address TR 19-49 Approval with comment from Dewitt Burdeaux. See also TR 19-48.

**Responsible Group:** Design Task Group

*Note: Revisions are shown in yellow highlight and red font.*

**Section 192.506**

**1 APPLICABILITY**

- (a) Spike hydrostatic testing is referenced in §192.710(c)(3), 192.921(a)(3), and 192.937(c)(3), but no section of Part 192 requires that a spike hydrostatic test be performed for new or existing pipelines. It is an appropriate integrity assessment method for time-dependent threats such as the following.
  - (1) Stress corrosion cracking.
  - (2) Selective seam weld corrosion.
  - (3) Manufacturing and related defects, including defective pipe and pipe seams.
  - (4) Other forms of defect or damage involving cracks or crack-like defects.
- (b) A spike hydrostatic pressure test typically either removes existing cracks that are detrimental by causing failure or proves the absence of crack defects that could affect the serviceability of a pipeline. The spike portion of the pressure test is designed to cause such marginal crack defects to fail during the early spike phase of the pressure test.
- (c) See Guide Material Appendix G-192-9A, Section 3.4.

**2 RECORDS**

See guide material under §192.517.

**GMA G-192-9A**

**GUIDE MATERIAL APPENDIX G-192-9A**

(See guide material under §§192.503, 192.505, 192.506, 192.507, 192.513, 192.517, 192.619, 192.921, and Guide Material Appendix G-192-9)

**PRESSURE TESTING GUIDELINES FOR TRANSMISSION INTEGRITY ASSESSMENTS**

**1 GENERAL**

**2 PRESSURE TESTING ADVANTAGES AND DISADVANTAGES**

**3 PRESSURE TESTING OF STEEL TRANSMISSION PIPELINES**

3.1 ...

3.2 ...

3.3 ...

3.4 *Spike test.*

- (a) A spike test, which is an increase in the test pressure to a higher pre-determined level for a brief duration, is an accepted assessment method ~~in addition to~~ in conjunction with the

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Subpart J test to provide greater assurance of the pipe integrity for the segment being tested. It is useful in mitigating both manufacturing and construction flaws in the test segment and the occurrence of a subsequent pressure reversal (see 3.2(d) above). The duration of the spike test must be conducted in accordance with the requirements of §192.506. ~~should be determined by the operator and normally ranges from five minutes to four hours. A spike test is not a recognized testing method under Subpart J. If used as the only assessment method without a corresponding Subpart J test, then the spike test should be considered "other technology" and requires a 180-day notice to regulatory agencies (see §192.921(a)(2) and (4)).~~

(b) See guide material under §192.517 for guidance on records.

- 4 **PRESSURE TESTING PLASTIC TRANSMISSION PIPELINES**
- 5 **SAFETY**
- 6 **REFERENCES**