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Elements; Stress Calculations; ASME B31.1 Code Stress; ASME B31.3 Code Stress; The Pipeline Codes-ASME B31.4 and B31.8; ASME B31.4-Liquid Transportation Pipelines Code; ASME B31.8-Gas Transmission and Distribution Pipeline Code; Flexibility and Stiffness of Piping; Stiffness and Large Piping; Flexibility Method of Piping Mechanics; Pipe Offsets and Loops; Pipe Restraints and Anchors; Criteria for Flexibility Analysis; Example Using the Empirical Flexibility Criterion
Suggested Criteria for Level of Piping Flexibility AnalysisClosure; 3 Fitness-for-Service Topics of Local Thin Areas, Plain Dents, Dents-Gouges, and Cracks for Piping; Useful RSF Equations Using API 579; Assessment Techniques and Acceptance Criteria; Remaining Life Assessment; Remediation; In-Service Monitoring; Documentation; Damage Mechanisms; Blisters and Laminations; Assessment of Local Thin Areas; General Metal Loss Assessment; Individual Point Readings; Thickness Profiles; Structural Discontinuities; Level 1 Part 4 Acceptance Criteria; Level 2 Assessments
Level 2 Part 4 Acceptance CriteriaLocal Metal Loss Assessment; Determining the LTA Boundary; Level 1 Part 5 Acceptance Criteria; Level 2 Part 5 Acceptance Criteria; Assessing Supplemental Loads; Level 3 Assessments; Elastic-Plastic Analysis of LTAs; Common Mistakes Made in Level 3 Assessments; Performing the Remaining Life Assessment; The MAWP Approach; The Thickness Approach; Material Property Data; Material Property Data Required for Assessment; Crack-like Flaws; Remediation of Crack Defects; Grooves, Plain Dents, and Dents with Gouges; Plain Dents; Dents and Gouge Combination Type Flaws
Example 3-1: API 579 Example 5.11.1 Revisited

Sommario/riassunto

Whether it's called "fixed equipment? (at ExxonMobil), "stationary equipment? (at Shell), or "static equipment? (in Europe), this type of equipment is the bread and butter of any process plant. Used in the petrochemical industry, pharmaceutical industry, food processing industry, paper industry, and the manufacturing process industries, stationary equipment must be kept operational and reliable for companies to maintain production and for employees to be safe from accidents. This series, the most comprehensive of its kind, uses real-life examples and time-tested rules of thumb to guide the mec