Repairing Crude Oil, Liquefied Petroleum Gas, and Product Pipelines

API RECOMMENDED PRACTICE 2200
FOURTH EDITION, SEPTEMBER 2010

AMERICAN PETROLEUM INSTITUTE

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Downstream Segment

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Foreword

This recommended practice was prepared under the auspices of the API Operations Technical Group (Pipeline). It is intended for use by API member companies and others to develop safe practices for the repair of pipelines in crude oil, liquefied petroleum gas, and product service. The information presented represents a consensus on desirable approaches to repairs.

The use of this recommended practice is entirely voluntary and is intended to apply to repairing of piping used in the transmission of crude petroleum, liquefied petroleum gases, petroleum products and where applicable to other pipeline systems.

This recommended practice represents the combined efforts of many engineers who are responsible for the design, construction and operation of pipelines and the committee appreciatively acknowledges their whole hearted and valuable assistance.

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Suggested revisions are invited and should be submitted to the Standards Department, API, 1220 L Street, NW, Washington, DC 20005, standards@api.org.

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1 Scope

This recommended practice (RP) discusses guidelines to safe practices while repairing in-service pipelines for crude oil, liquefied petroleum gas, highly volatile liquids and product service. Although it is recognized that the conditions of a particular job will necessitate an on-the-job approach, the observance of the suggestions in this document should improve the probability that repairs will be completed without accidents or injuries.

2 Normative References

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

API Standard 1104, *Welding of Pipelines and Related Facilities*

API Recommended Practice 1117, *Movement of In-Service Pipelines*

API Standard 1160, *Managing System Integrity of Hazardous Liquid Pipelines*

API Publication 1161, *Guidance Document for the Qualification of Liquid Pipeline Personnel*

API Recommended Practice 1166, *Excavation Monitoring and Observation*

API Recommended Practice 2009, *Safe Welding, Cutting and Other Hot Work Practices in the Petroleum and Petrochemical Industries*

API Recommended Practice 2201, *Safe Hot Tapping Practices in the Petroleum and Petrochemical Industries*

ASME B31.4 [1], *Pipeline Transportation Systems for Liquid Hydrocarbons and Other Liquids*

ASME B31G, *Manual for Determining the Remaining Strength of Corroded Pipelines*

ASME B31Q, *Pipeline Personnel Qualification*

ASME PCC-2, *Repair of Pressure Equipment and Piping*

ASME Sec IX, *Boiler and Pressure Vessel Code*

ASNT SNT-TC-1A [2], *Personnel Qualification and Certification in Non-Destructive Testing*

DOT Regulations [3], *Title 49 Code of Federal Regulations Part 195: Transportation of Hazardous Liquids by Pipeline*

OSHA Regulations [4], *Title 29 Code of Federal Regulations Part 1910 and Part 1926*

PRCI PR-218-9307 [5], *Pipeline Repair Manual*

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1 ASME International (formerly American Society of Mechanical Engineers), 3 Park Avenue, New York, New York 10016-5990, www.asme.org.

2 American Society for Nondestructive Testing, 1711 Arlingate Lane, P.O. Box 28518, Columbus, Ohio 43228, www.asnt.org.

3 Department of Transportation. The *Code of Federal Regulations* is available from the U.S. Government Printing Office, Washington, D.C. 20402. www.gpoaccess.gov

4 U.S. Department of Labor, Occupational Safety and Health Administration, 200 Constitution Avenue, NW, Washington, DC 20210, www.osha.gov.