

Requirements for Safe Entry and Cleaning of Petroleum Storage Tanks

ANSI/API STANDARD 2015—2001
SIXTH EDITION, AUGUST 2001



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FOREWORD

ANSI/API Standard 2015, *Requirements for Safe Entry and Cleaning of Petroleum Storage Tanks*, was prepared under the auspices of the API Safety and Fire Protection Subcommittee. It is intended for use by API member companies and others to develop safe practices for planning, managing, and conducting tank cleaning work in atmospheric and low pressure storage tanks. A companion document, ANSI/API Recommended Practice 2016, *Guidelines and Procedures for Entering and Cleaning Petroleum Storage Tanks*, provides supplemental information applicable to the requirements and components of this standard.

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Suggested revisions are invited and should be submitted to the Standardization Manager, American Petroleum Institute, 1220 L Street, N.W., Washington, D.C. 20005.

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Requirements for Safe Entry and Cleaning of Petroleum Storage Tanks

1 General

1.1 SCOPE AND APPLICABILITY

This standard is applicable to cleaning stationary atmospheric and low-pressure (up to and including 15 psig) above-ground petroleum storage tanks used in all sectors of the petroleum and petrochemical industry, including crude oil and gas production, refineries, petrochemical plants, bulk plants and terminals. This standard provides requirements for safely planning, coordinating and conducting tank cleaning operations from decommissioning (removal from service) through recommissioning (return to service) tanks that have contained flammable or combustible liquids or petroleum related toxic materials. This standard does not and cannot cover every possible unique hazard or situation that may arise during tank cleaning operations. These site specific, product specific and tank specific hazards and situations must be addressed by employers (owner/operators or contractors) using the appropriate principles and considerations provided for by this standard. The ANSI/API Recommended Practice 2016, *Guidelines and Procedures for Entering and Cleaning Petroleum Storage Tanks*, provides supplemental information applicable to the requirements of this standard.

1.2 NON-APPLICABILITY AND OTHER TANK CLEANING APPLICATIONS

This standard does not apply to the following types of tanks or vessels:

- Pressure vessels and pressurized tanks exceeding 15 psig.
- Cryogenic or refrigerated vessels or pressure tanks.
- Vessels and tanks maintained under a vacuum.
- Process vessels.
- Underground storage tanks.

Although ANSI/API Standard 2015 is not intended to cover non-atmospheric and non-low pressure tanks and vessels, many of the safe tank cleaning and entry principles and requirements in this standard would be applicable. Using the information provided in ANSI/API Standard 2015 and in ANSI/API Recommended Practice 2016, together with appropriate government regulations, industry standards, and other applicable requirements, employers (owners/operators and contractors) shall develop site and tank, potential hazard and project specific guidelines and procedures to ensure that the tanks and vessels not covered by this standard are safely decommissioned, cleaned, and re-commissioned.

1.3 ANSI/API RECOMMENDED PRACTICE 2016

ANSI/API Recommended Practice 2016, *Guidelines and Procedures for Entering and Cleaning Petroleum Storage Tanks*, provides guidance and additional information on specific aspects of tank cleaning preparation, hazard awareness, decommissioning, emptying, isolating, vapor and gas freeing, degassing, ventilating, atmospheric testing, inspecting, cleaning, entry, safe (cold) work, hot work, and recommissioning operations.

ANSI/API Recommended Practice 2016 contains the following sections:

1. Petroleum Storage Tank Hazards
2. Vapor and Gas Freeing, Degassing, and Ventilating Tanks
3. Removing Sludge and Residue from Tanks
4. Unique Tanks
5. Specific Hazardous Substances
6. Control of Ignition Sources
7. Tank Cleaning Checklist
8. Oxygen, Combustible Gas and Toxic Substance Instruments
9. Floating Roof Hazards Associated with Tank Cleaning

1.4 REGULATORY REQUIREMENTS

In addition to the requirements contained in this standard, employers (owners/operators and contractors) shall refer to applicable federal, state and local government regulations pertinent to specific tank cleaning activities, including regulations of governments other than those of the United States, when appropriate. This standard is intended to be consistent with Title 29 of the *U.S. Code of Federal Regulations, Occupational Safety and Health Administration Standards*, Part 1910, "General Industry," and Part 1926, "Construction." This standard is intended to be consistent with appropriate National Fire Protection Association Codes and Standards applicable to the entry and cleaning of aboveground petroleum storage tanks. If any provision of this standard conflicts with statutory or regulatory requirements, said statutes and regulations shall govern. This standard is not intended to function as a substitute for applicable regulations, codes, standards or employer (owner/operator and contractor) safe (cold) work and hot work practices and procedures, all of which must be reviewed in their entirety to determine their applicability to the facility, its location, the tanks involved and the proposed work.