Interior Lining and Periodic Inspection of Underground Storage Tanks

API STANDARD 1631
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FOREWORD

API Standard 1631 provides recommendations for lining the interior of existing steel and fiberglass reinforced plastic underground petroleum storage tanks and periodic inspections of lined steel tanks. This standard was prepared under the auspices of the API Manufacturing, Distribution and Marketing Department and is based upon the experience of knowledgeable members of the petroleum industry and lining manufacturers. This standard is intended for use by API member companies and others to develop safe practices and procedures for lining and inspecting underground tanks storing petroleum products. A number of additional API standards and recommended practices as well as government and industry regulations and publications, noted in the reference section, provide supplemental information applicable to the requirements and components of this standard.

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Interior Lining and Periodic Inspection of Underground Storage Tanks

1 General

1.1 SCOPE

This standard provides minimum recommendations for the interior lining of existing steel and fiberglass reinforced plastic underground tanks and periodic inspection of steel underground tanks used for the storage of petroleum-based motor fuels and middle distillates. These recommendations include procedures to be followed and operating conditions to be maintained by contractors, workers and engineers preparing, inspecting, testing and lining the interiors of existing underground storage tanks. Requirements for vapor-freeing tanks, removing sediment and cleaning interior surfaces of steel and fiberglass tanks as well as guidelines to identify tanks that are suitable for lining, are also included. All work associated with the interior lining and periodic inspection of underground storage tanks shall be accomplished in accordance with applicable federal, state, and local regulations, including applicable environmental and safety requirements.

1.2 APPLICABILITY

The methods described in this standard are applicable to steel and fiberglass-reinforced plastic tanks used for the storage of petroleum-based motor fuels and middle distillates. The procedures are applicable to tanks installed in typical retail service station outlets but may also be used for tanks installed at other types of facilities.

1.3 EPA TECHNICAL STANDARDS

The U.S. Environmental Protection Agency (EPA) issued its Technical Standards and Corrective Action Requirements for Owners and Operators of Underground Storage Tanks (UST) (herein referred to as "Technical Standards") in 1988. These regulations can be found in the *Code of Federal Regulations* at 40 *CFR* Part 280. In addition, legislation and regulations on all aspects of underground storage tank management have been developed by state and local jurisdictions that may have requirements other than those specified in the EPA Technical Standards. Therefore, employers should consult the appropriate government agencies responsible for implementing an approved underground storage tank program within a geographic area of interest, and determine the applicable requirements before any action recommended or suggested by this standard is taken.

The EPA Technical Standards allow this standard to be used as a guide for compliance with EPA's requirements for interior lining and periodic inspection of underground storage tanks. In some respects, the requirements of this standard may be more stringent than the EPA Technical Standards. In addition, this standard is not intended to cover all of the subjects included in the EPA Technical Standards. While substantial effort has been made to ensure that none of this standard's requirements contradict those of the EPA Technical Standards, the API is not undertaking to interpret the EPA Technical Standards and cannot guarantee that the recommendations in this standard are completely in accord with them. Also, the API makes no representation that the requirements of this standard conform with any requirements imposed by state and local agencies.

2 References

2.1 GENERAL

The following government regulations and standards and industry and consensus standards, codes, and publications referenced herein* provide information related to safe entry, vapor freeing, ventilation, cleaning, lining and inspection of underground petroleum storage tanks. While this standard is intended to be consistent with applicable codes and standards in effect at the time of publication, the most recent edition of each regulation, code, standard or publication that is applicable, should be consulted, as appropriate, to assure compliance.

2.2 INDUSTRY AND CONSENSUS CODES, STANDARDS AND PUBLICATIONS

API

RP 651	*Cathodic Protection of Aboveground Storage Tanks*
RP 652	*Lining of Aboveground Petroleum Storage Tank Bottoms*
RP 1604	*Closure of Underground Petroleum Storage Tanks*
RP 1615	*Installation of Underground Petroleum Storage Systems**
RP 1632	*Cathodic Protection of Underground Petroleum Storage Tanks and Piping Systems**
RP 2003	*Protection Against Ignitions Arising out of Static, Lightning, and Stray Currents*
Std 2015	*Safe Entry and Cleaning of Petroleum Storage Tanks*
RP 2016	*Entering and Cleaning Petroleum Storage Tanks*
Publ 2027	*Ignition Hazards Involved in Abrasive Blasting of Atmospheric Storage Tanks in Hydrocarbon Service*
Publ 2217A	*Guidelines for Work in Inert Confined Spaces in the Petroleum Industry*
Publ 2219	*Safe Operating Guidelines for Vacuum Trucks in Petroleum Service*