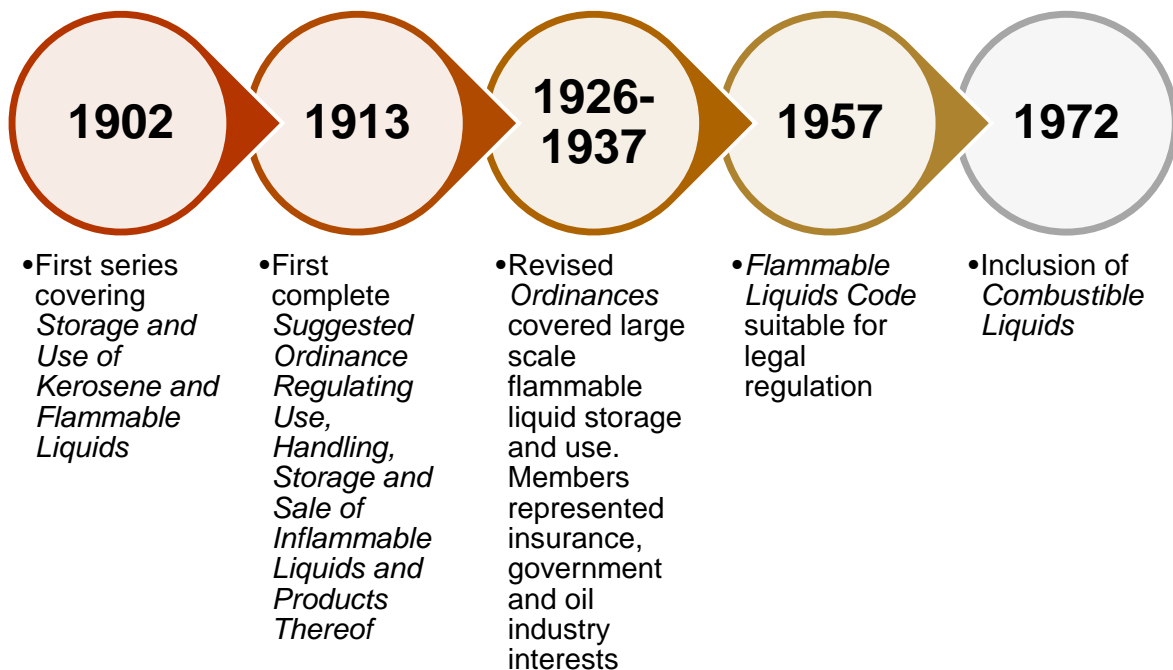


# API and NFPA Integration

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## History of the Relationship between API and NFPA

The National Fire Protection Association was founded in 1896, and the American Petroleum Institute was founded in 1919. There has been a long history of cooperation and coordination between NFPA and API dating back to the initial development of the Flammable and Combustible Liquids Fire Code.



## API Publications Referenced in NFPA Codes

API Specification 6D, Specification for Pipeline and Piping Valves

API Specification 6FA, Specification for Fire Test for Valves

API Specification 6FB, Specification for Fire Test for End Connections

API Specification 6FD, Specification for Fire Test for Check Valves

API Specification 12B, Bolted Tanks for Storage of Production Liquids

API Specification 12D, Field Welded Tanks for Storage of Production Liquids

API Specification 12F, Shop Welded Tanks for Storage of Production Liquids

API Specification 12K, Specification for Indirect Type Oilfield Heaters

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API RP 12R1, Recommended Practice for Setting, Maintenance, Inspection, Operation, and Repair of Tanks in Production Service

API RP 14F, Recommended Practice for Design, Installation, and Maintenance of Electrical Systems for Fixed and Floating Offshore Petroleum Facilities for Unclassified and Class I, Division 1, and Division 2 Locations

API RP 51, Onshore Oil and Gas Production Practices for Protection of the Environment

API RP 70, Security for Offshore Oil and Natural Gas Operations

API RP 70I, Security for Worldwide Offshore Oil and Natural Gas Operations

API RP 500, Recommended Practice for Classification of Locations for Electrical Installations at Petroleum Facilities Classified as Class I, Division 1 and Division 2

API RP 505, Recommended Practice for Classification of Locations for Electrical Installations at Petroleum Facilities Classified as Class I, Zone 0, Zone 1, and Zone 2

API RP 520, Recommended Practice for the Design and Construction of Pressure-Relieving Systems in Refineries

API Standard 521, Pressure-relieving and Depressuring Systems

API Standard 527, Seat Tightness of Pressure Relief Valves

API Standard 537, Flare Details for Petroleum, Petrochemical, and Natural Gas Industries

API Standard 541, Form-wound Squirrel Cage Induction Motors-375 kW (500 Horsepower) and Larger

API RP 545, Recommended Practice for Lightning Protection of Aboveground Storage Tanks for Flammable or Combustible Liquids

API Standard 546, Brushless Synchronous Machines - 500 kVA and Larger

API RP 552, Transmission Systems

API RP 553, Refinery Valves and Accessories for Control and Safety Instrumented Systems

API RP 554, Process Instrumentation and Control

API RP 556, Instrumentation, Control, and Protective Systems for Gas Fired Heaters

API Standard 560, Fired Heaters for General Refinery Service

API 570, Piping Inspection Code: In-service Inspection, Rating, Repair, and Alteration of Piping Systems

API RP 576, Inspection of Pressure-relieving Devices

API RP 580, Risk-Based Inspection

API RP 581, Risk-Based Inspection Methodology

API RP 583, Corrosion Under Insulation and Fireproofing

API Standard 598, Valve Inspection and Testing

API Standard 607, Fire Test for Quarter-turn Valves and Valves Equipped with Nonmetallic Seats

API Standard 610, Centrifugal Pumps for Petroleum, Petrochemical and Natural Gas Industries

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API Standard 611, General-purpose Steam Turbines for Petroleum, Chemical, and Gas Industry Services— Mechanical Equipment

API Standard 614, Lubrication, Shaft-sealing and Oil-control Systems and Auxiliaries

API Standard 616, Gas Turbines for Petroleum, Chemical, and Gas Industry Services

API Standard 617, Axial and Centrifugal Compressors and Expander-compressors

API Standard 618, Reciprocating Compressors for Petroleum, Chemical, and Gas Industry Services

API Standard 619, Rotary-Type Positive-Displacement Compressors for Petroleum, Petrochemical and Natural Gas Industries

API Standard 660, Shell-and-Tube Heat Exchangers

API Standard 661, Petroleum, Petrochemical, and Natural Gas Industries - Air-cooled Heat Exchangers

API Standard 662, Plate Heat Exchangers for General Refinery Services

API Standard 672, Packaged, Integrally Geared Centrifugal Air Compressors for Petroleum, Chemical, and Gas Industry Services

API Standard 673, Centrifugal Fans for Petroleum, Chemical, and Gas Industry Services

API Standard 674, Positive Displacement Pumps-Reciprocating

API Standard 675, Positive Displacement Pumps - Controlled Volume for Petroleum, Chemical, and Gas Industry Services

API Standard 676, Positive Displacement Pumps – Rotary

API RP 752, Management of Hazards Associated with Location of Process Plant Permanent Buildings

AI 753, How to Install and Validate Employee Selection Techniques

API 754, Validity Study Results for Jobs Relevant to the Petroleum Refining Industry

API RP 755, Fatigue Risk Management Systems for Personnel in the Refining and Petrochemical Industries

API Publication 770, Manager's Guide to Reducing Human Errors Improving Human Performance in the Process Industries

API Standard 682, Pumps - Shaft Sealing Systems for Centrifugal and Rotary Pumps

API Standard 620, Recommended Rules for the Design and Construction of Large, Welded, Low-Pressure Storage Tanks

API Standard 625, Tank Systems for Refrigerated Liquefied Gas Storage

API Standard 650, Welded Tanks for Oil Storage

API Standard 653, Tank Inspection, Repair, Alteration, and Reconstruction

API RP 752, Management of Hazards Associated with Location of Process Plant Buildings

API RP 753, Management of Hazards Associated with Location of Process Plant Portable Buildings

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API RP 1141, Guidelines for Confined Space Entry on Board Tank Ships In The Petroleum Industry

API Standard 1164, Pipeline SCADA Security

API 1501, Filtration and Dehydration of Aviation Fuels

API Standard 1529, Aviation Fueling Hose

API RP 1604, Closure of Underground Petroleum Storage Tanks

API RP 1615, Installation of Underground Petroleum Storage Systems

API RP 1621, Bulk Liquid Stock Control at Retail Outlets

API RP 1626, Storing and Handling Ethanol and Gasoline-ethanol Blends at Distribution Terminals and Filling Stations

API Publication 1628, A Guide to the Assessment and Remediation of Underground Petroleum Releases

API Publication 1629, Guide for Assessing and Remediating Petroleum Hydrocarbons in Soils

API RP 1631, Interior Lining of Underground Storage Tanks

API RP 1632, Cathodic Protection of Underground Petroleum Storage Tanks and Piping Systems

API Standard 2000, Venting Atmospheric and Low-Pressure Storage Tanks

API RP 2001, Fire Protection in Refineries

API Standard 2003, Protection Against Ignition Arising Out of Static, Lightning, and Stray Currents

API RP 2009, Safe Welding, Cutting, and Hot Work Practices in the Petroleum and Petrochemical Industries

API Standard 2015, Cleaning Petroleum Storage Tanks

API RP 2016, Guidelines and Procedures for Entering and Cleaning Petroleum Storage Tanks

API RP 2027, Ignition Hazards and Safe Work Practices for Abrasive Blasting of Atmospheric Storage Tanks in Hydrocarbon Service

API RP 2030, Application of Fixed Water Spray Systems for Fire Protection in the Petroleum and Petrochemical Industries

API RP 2201, Safe Hot Tapping Practices in the Petroleum & Petrochemical Industries

API Publication 2202, Dismantling and Disposing of Steel from Aboveground Leaded Gasoline Storage Tanks

API RP 2207, Preparing Tank Bottoms for Hot Work

API Publication 2214, Spark Ignition Properties of Hand Tools

API RP 2217A, Guidelines for Work in Inert Confined Spaces in the Petroleum Industry

API RP 2218, Fireproofing Practices in Petroleum and Petrochemical Processing Plants

API RP 2219, Safe Operation of Vacuum Trucks Handling Flammable and Combustible Liquids in Petroleum Service

API Publication 2219, Safe Operating Guidelines for Vacuum Trucks in Petroleum Service

API, 5/31/2019

API Standard 2350, Overfill Protection for Storage Tanks in Petroleum Facilities

API Publication 2510A, Fire-Protection Considerations for the Design and Operation of Liquefied Petroleum Gas (LPG) Storage Facilities

API Standard 2610, Design, Construction, Operation, Maintenance, and Inspection of Terminal and Tank Facilities

API Publication 4589, Fugitive Hydrocarbon Emissions from Petroleum Production Operations

API Publication, "An Engineering Analysis of the Effects of Oxygenated Fuels on Marketing Vapor Recovery Equipment"

API Security Guidelines for the Petroleum Industry

API, An Engineering Analysis of the Effects of Oxygenated Fuels on Marketing Vapor Recovery Equipment

API/National Petrochemical and Refiners Association, Security Vulnerability Assessment Methodology<sup>1</sup>

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<sup>1</sup> <https://www.nrc.gov/docs/ML0502/ML050260624.pdf>

## List of NFPA Codes and Referenced API Publications

### NFPA 1 Fire Code

In Code

Spec. 12B	Spec. 12D	Spec. 12F	Std. 607	Std. 620	Std. 650
Std. 653	Std. 1529	RP 2000	Std. 2350		

In Annex

RP 12RI	RP 500	RP 505	Std. 620	Std. 650	Std. 653
API 1501	RP 1615	RP 1621	RP 1632	Std. 2003	Std. 2015
RP 2016	Pub. 2214	Std. 2350	Std. 2610	An Engineering Analysis of the Effects of Oxygenated Fuels on Marketing Vapor Recovery Equipment	

### NFPA 11 Standard for Low-, Medium-, and High-Expansion Foam

In Code

Std. 607	Std. 650
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### NFPA 22 Standard for Water Tanks for Private Fire Protection

In Code

RP 51
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### NFPA 30 Flammable and Combustible Liquids Code

In Code

Spec. 12B	Spec. 12D	Spec. 12F	Std. 620	Std. 650	Std. 653
Std. 2000	Std. 2350				

In Annex

RP 70	RP 70I	Spec. 12R1	RP 500	ANSI/RP 505	607	Std. 620	Std. 650
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Std. 653	RP 752	RP API 753	Std. 1164	API 1501	RP 1604	RP 1615	RP 1621
RP Std. 1631	RP 1632	Std. 2003	Std. 2015	RP 2016	Pub. 2214	Std. RP 2217A	Pub. RP 2218
Pub. RP 2219	Std. 2350	Security Guidelines for the Petroleum Industry	Std. 2610	Pub. "An Engineering Analysis of the Effects of Oxygenated Fuels on Marketing Vapor Recovery Equipment"	Pub. 4589	Security Vulnerability Assessment Methodology	

**NFPA 30A Code for Motor Fuel Dispensing Facilities and Repair Garages**

In Code

Std. 607
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In Annex

RP 1621	RP 1626	RP 1632
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**NFPA 52 Vehicular Natural Gas Fuel Systems Code**

In Annex

Std. 620
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In Annex

RP 520	Std. 2003
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**NFPA 59 Utility LP-Gas Plant Code**

In Code

RP 510	RP 576	Spec. 6D	Std. 620	Std. 625	Std. 650
2RP 510					

In Annex

Spec. 6FA	Spec. 6FB	Spec. 6FD	Spec. 12D	Spec. 12F	Spec. 12K
RP 500	RP 520	Std. 521	Std. 527	Std. 537	Std. 541
Std. 546	5RP 51	RP 552	RP 553	RP 554	RP 556
Std. 560	RP 580	RP 581	RP 583	Std. 598	Std. 607
Std. 610	Std. 611	Std. 614	Std. 616	Std. 617	Std. 618

Std. 619	Std. 620	Std. 625	Std. 650	Std. 653	Std. 660
Std. 661	Std. 662	Std. 672	Std. 673	Std. 674	Std. 675
Std. 676	Std. 682	RP 752	API 753	API 754	API 755
Publ. 770	RP 2000	RP 2001	Std. 2003	RP 2030	RP 2218
2RP 510					

**NFPA 59A Standard for the Production, Storage, and Handling of Liquefied Natural Gas (LNG)**

In Code

Spec. 6D	RP 510	RP 576	Std. 620	Std. 625	Std. 650
2RP 510					

In Annex

Spec. 6FA	Spec. 6FB	Spec. 6FD	Spec. 12D	Spec. 12F	Spec. 12K
RP 500	RP 520	Std. 521	Std. 527	Std. 537	Std. 541
Std. 546	5RP 51	RP 552	RP 553	RP 554	RP 556
Std. 560	RP 580	RP 581	RP 583	Std. 598	Std. 607
Std. 610	Std. 611	Std. 614	Std. 616	Std. 617	Std. 618
Std. 619	Std. 620	Std. 625	Std. 650	Std. 653	Std. 660
Std. 661	Std. 662	Std. 672	Std. 673	Std. 674	Std. 675
Std. 676	Std. 682	RP 752	API 753	API 754	API 755
Publ. 770	RP 2000	RP 2001	Std. 2003	RP 2030	RP 2218
Publ. 2510A					

**NFPA 67 Guide on Explosion Protection for Gaseous Mixtures in Pipe Systems**

In Code

RP 2000
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**NFPA 68 Standard on Explosion Protection by Deflagration Venting**

In Code

Std. 650
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In Annex

RP 752
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In Annex



**NFPA 69 Standard on Explosion Prevention Systems**

In Code

RP 510
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In Annex

RP 2000	RP 2016
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In Annex

**NFPA 70 National Electrical Code®**

**In Annex**

RP 14F	RP 500	RP 510	RP 520PI	RP 520P2	API 570
Std. 2003					

**NFPA 77 Recommended Practice on Static Electricity**

In Code

Std. 2003
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In Annex

Std. 2003	RP 2219
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In Annex

**NFPA 86 Standard for Ovens and Furnaces**

In Code

Std. 560	RP 556	RP 2001
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In Annex

RP 510	RP 520	API 570
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**NFPA 306 Standard for the Control of Gas Hazards on Vessels**

In Annex

RP 1141
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**NFPA 326 Standard for the Safeguarding of Tanks and Containers for Entry, Cleaning, or Repair**

In Code

Std. 2015	RP 2016	RP 2217A
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In AnnexIn Annex

Std. 653	RP 1604	Std. 1631	Std. 2003	RP 2009	Std. 2015
RP 2016	RP 2027	RP 2201	RP 2207	RP 2217A	RP 2219

**NFPA 329 Recommended Practice for Handling Releases of Flammable and Combustible Liquids and Gases**

In Code

Publ. 1628	Publ. 1629
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In Annex

RP 1621	Publ. 1628
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**NFPA 350 Guide for Safe Confined Space Entry and Work**

In Code

Std. 653	RP 2009	Std. 2015	RP 2016	RP 2027	RP 2201
Publ. 2202	RP 2207	RP 2217A			

In Annex

RP 500	Std. 2003	Std. 2015	RP 2016	RP 2027	RP 2217A
RP 2219					

**NFPA 400 Hazardous Materials Code**

In Annex

RP 70	Security Vulnerability Assessment for the Petroleum & Petrochemical Industries	Security Guidance for the Petroleum & Petrochemical Industries
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**NFPA 407 Standard for Aircraft Fuel Servicing**

In Annex

Std. 607	1595	Std. 2003
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**NFPA 497 Recommended Practice for the Classification of Flammable Liquids, Gases, or Vapors and of Hazardous (Classified) Locations for Electrical Installations in Chemical Process Areas**

In Code

RP 500	RP 505
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API, 5/31/2019

**NFPA 780 Standard for the Installation of Lightning Protection Systems**

In Annex

RP 545	Std. 650
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