

**CODES AND STANDARDS FOR
DESIGN, SUPPLY AND CONSTRUCTION OF NATURAL GAS PIPELINE**

Description	Standard	Title
Mainline Valve	API 5L	Specification for Line Pipe
	API 6D	Specification for Pipeline Valves
	ASME B31.8	Gas Transmission and Distribution Piping Systems
	ASME Section V	Boiler and Pressure Vessel Code -- Non-Destructive Examination
	ASME Section VIII	Boiler and Pressure Vessel Code -- Pressure Vessels
	ASME Section IX	Boiler and Pressure Vessel Code -- Qualification Standard for Welding and Brazing Qualifications
	ASNT-TC-1A	Personnel Qualification and Certification in Non-Destructive Testing
	ASTM A370	Standard Methods and Definitions for Mechanical Testing of Steel Forgings
	ASTM A388	Ultrasonic Examination of Heavy Steel Forgings
	ASTM E165	Practice for Liquid Penetrant Inspection Method
	ASTM E446	Reference Radiographs for Steel Castings up to 2" in Thickness
	ASTM E709	Practice for Magnetic Particle Inspection
	EN 10204	Metallic Products -- Types and Inspection Documents
	ISO 8501-1	Preparation of Steel Substrates Before Application of Paint and Related Products -- Visual Assessment of Surface Cleanliness

Description	Standard	Title
Mainline Valve	MSS SP-53	Quality Standard for Steel Castings and Forgings for Valves, Flanges, Fittings and Other Piping Components -- Magnetic Particle Inspection Method
	MSS SP-54	Quality Standard for Steel Castings for Valves, Flanges, Fittings and Other Piping Components -- Radiographic Inspection Method
	NAS 1638	Cleanliness Requirements of Parts Used in Hydraulic Systems
Gate, Plug, Ball and Check Valves	ANSI B 16.34	Valves -- Flanged and Butt Welding End
	ANSI B 16.5	Pipe Flanges and Flanged Fittings
	ANSI/ASME B31.8	Gas Transmission and Distribution Piping Systems
	API 5L	Specification for Line Pipe
	API 6 D	Specification for Pipeline Valves
	ASME Section V	Boiler and Pressure Vessel Code -- Pressure Vessels
	ASNT-TC-1A	Personnel Qualification and Certification in Non-Destructive Testing
	ASTM A370	Standard Test Methods and Definitions for Mechanical Testing of Steel Products
	ASTM A388	Ultrasonic Examination of Heavy Steel Forgings
Onshore Pipeline	API STD 1104	Welding of Pipeline and Related Facilities
	ASME B31.8	Gas Transmission and Distribution Piping Systems
	ASME Section V	Boiler and Pressure Vessel Code -- Non-Destructive Testing
	ASME Section IX	Boiler and Pressure Vessel Code -- Welding and Brazing Qualifications

Description	Standard	Title
Onshore Pipeline	ASNT-TC 1A	Personnel Qualification and Certification in Non-Destructive Testing
	ASTM-G-14	Test Method for Impact Resistance of Pipeline Coatings
	AWS	American Welding Society
	SSPC SP10	Near White Blast Cleaning
Offshore Pipeline	API RP 5LW	Recommended Practice for Transportation of Line Pipe on Barges and Marine Vessels
	API STD 1104	Welding of Pipelines and Related Facilities.
	ASME B31.8	Gas Transmission and Distribution Piping Systems
	DnV-1981	Rules for Submarine Pipeline and Riser Systems
	DnV RP B401	Cathodic Protection Design
	DnV RP E305	On-Bottom Stability Design of Submarine Pipelines
Line Pipe (High Frequency Electric Resistance Welded)	API 5L	Specification for Line Pipe
	API BUL 5T1	Bulletin on Non-Destructive Testing/Terminology
	API RP 5L1	Recommended Practice for Railroad Transportation of Line Pipe
	API RP 5LW	Recommended Practice for Transportation of Line Pipe on Barges and Marine Vessels
	ASME Section V	Boiler and Pressure Vessel Code -- Non-Destructive Examination
	ASME Section VIII	Boiler and Pressure Vessel Code -- Pressure Vessels
	ASME Section IX	Boiler and Pressure Vessel Code -- Welding and Brazing Qualifications
	ASNT-TC- 1A	Personnel Qualification and Certification in Non-Destructive Testing

Description	Standard	Title
Line Pipe (High Frequency Electric Resistance Welded)	ASTM A578	Standard Specification for Straight-Beam Ultrasonic Examination of Plain and Clad Steel Plates for Special Applications
	ASTM E 112	Method for Determining Average Grain Size
	EN 10204	Metallic Products -- Types of Inspection Documents
	ISO 8501-1	Preparation of Steel Substrates Before Application of Paints and Related Products -- Visual Assessment of Surface Cleanliness
Line Pipe (Seamless)	API 5L	Specification for Line Pipe
	API BUL 5T1	Bulletin on Non-Destructive Testing Terminology
	API RP 5L1	Recommended Practice for Railroad Transportation of Line Pipe
	API RP 5LW	Recommended Practice for Transportation of Line Pipe on Barges and Marine Vessels
	API STD 1104	Welding of Pipelines and Related Facilities
	ASME Sect. V	Boiler and Pressure Vessel Code -- Non-Destructive Examination
	ASME Sect. VIII	Boiler and Pressure Vessel Code -- Pressure Vessel
	ASNT-TC-1A	Personnel Qualification and Certification in Non-Destructive Testing
	ASTM A370	Mechanical Testing of Steel Products Annex II – Steel Tubular Products
	ASTM E 112	Method for Determining Average Grain Size
	DnV 1981	Rules for Submarine Pipeline Systems

Description	Standard	Title
Line Pipe (Seamless)	EN 10204	Metallic Products -- Types of Inspection Documents
	ISO 8501-1	Preparation of Steel Substrates Before Application of Paints and Related Products -- Visual Assessment of Surface Cleanliness
Meter Stations	AGA 3	Gas Measurement by Orifice Meters, Committee Gas Measurement Report #3
	AGA 7	Gas Measurement by Turbine Meters, Committee Gas Measurement Report #7
	AGA 8	Compressibility and Super-compressibility of Natural Gas and Other Hydrocarbon Gases, Committee Gas Measurement Report #8
	AGA-RN-7	Measurement of Gas by Turbine Meters Report No. 7
	ANSI B16.5	Pipe Flanges and Flanged Fittings
	ANSI B16.9	Factory-Made Wrought Steel Butt Welding Fittings
	ANSI B31.3	Gas Transmission and Distribution Piping System
	ANSI/API 2530	Orifice Metering of Natural Gas and Other Related Hydrocarbons
	API 2534	Measurement of Liquid Hydrocarbons by Turbine Meter Systems
	ISO 5167	Guidelines on Orifice Meters: Installation, Reading and calibrations
Offshore Platforms	API 1104	Welding of Pipeline and Related Facilities
	API RP 2A	Recommended Practice for Planning, Designing and Constructing Fixed Offshore Platforms

Description	Standard	Title
Offshore Platforms	API RP 2G	Recommended Practice for Production Facilities on Offshore Platforms
	API RP-14C	Recommended Practice for Analysis, Design, Installation and Testing of Basic Surface Systems for Offshore Production Platforms
	API RP-14E	Recommended Practices Design and Installation of Offshore Production Platform Piping Systems
	API RP-14H	Recommended Practices Surface Safety Valves and Underwater Safety Valves Offshore
	API RP-500	Recommended Practices Classification of Locations for Electrical Installations at Petroleum Facilities
Miscellaneous	ASNT-TC-1A	Personnel Qualification and Certification in Non-Destructive Testing
	ASTMA193	Alloy Steel and Stainless Steel Nuts for Bolts for High Pressure and High Temperature Service
	ASTMA194	Alloy Steel and Stainless Steel Nuts for Bolts for High Pressure and High Temperature Service
	AWS D1.1	Structural Welding
	IEC	International Electrotechnical Commission
	IEEE	Institute of Electrical and Electronics Engineers
	ISA	Instrument Society of America
	ISO 9000	Quality Management and Quality Assurance Standards
	SSPC-PA1	Paint Application Specification No. 1, Shop and Maintenance Painting
SSPC-PA2	Paint Application Specification No. 2, Measurement of Dry Paint Thickness with Magnetic Gauges	

Description	Standard	Title
Miscellaneous	SSPC GUIDE 3	Paint Application Guide No. 3, A Guide to Safety in Paint Applications
	SSPC VIS 1-89	Visual Standard for Abrasive Blast-Cleaned Steel
	SSPC-SP 1	Surface Preparation No. 1 - Solvent Cleaning
	SSPC-SP 2	Surface Preparation No. 2 - Hand Tool Cleaning
	SSPC-SP 3	Surface Preparation No. 3 - Power Tool Cleaning
	SSPC-SP 5	Surface Preparation No. 5 - White Metal Blast Cleaning
	SSPC-SP 6	Surface Preparation No. 6 - Commercial Blast Cleaning
	SSPC-SP 7	Surface Preparation No. 7 - Brush-Off Blast Cleaning
	SSPC-SP 10	Surface Preparation No. 10 - Near White Blast Cleaning
	SSPC-SP 11	Surface Preparation No. 11 - Power Tool Cleaning To Bare Metal
	ACI 305, R-77	Hot Weather Concreting
	ACI 318	Building Code Requirements for Reinforced Concreting
	ANSI B16.5	Pipe Flanges and Ranged Fittings
	ANSI B16.9	Factory-Made Wrought Steel Buttwelding Fittings
	ANSI B16.11	Forged Steel Fittings, Socket-Welding and Threaded
	ANSI B16.20	Ring-Joint Gaskets and Grooves for Steel Pipe Flanges
	ANSI B16.21	Non-metallic Gaskets for Pipe Flanges
	ANSI B16.34	Valves – Flanged, Threaded and Welding End

Description	Standard	Title
Miscellaneous	ANSI B31.3	Chemical Plant and Petroleum Refinery Piping
	ANSI B31.8	Gas Transmission and Distribution Piping Systems
	API 5L	Specification for Line Pipe
	API 6D	Specification for Pipeline Valves
	API 11P	Specification for Packaged Reciprocating Compressors for Oil & Gas Production Services
	API 12B	Bolted Tanks for Storage of Production Liquids
	API 12D	Field-Welded Tanks for Storage of Production Liquids
	API 12F	Shop-Welded Tanks for Storage of Production Liquids
	API 12GDU	Specification for Glycol-Type Gas Dehydration Units
	API 12P	Specification for Fiberglass-Reinforced Plastic Tanks
	API 12RI	Setting, Connecting Maintenance and Operation of Lease Tanks
	API 520	Sizing, Selection and Installation of Pressure-Relieving Devices in Refineries
	API 521	Guide for Pressure-Relieving and Depressurizing Systems
	API 601	Metallic Gaskets for Raised-Face Pipe Flanges and Hanged Connections
	API 610	Centrifugal Pumps for General Refinery Service
	API 616	Gas Turbines for Refinery Service
	API 618	Reciprocating Compressors for General Refinery Service
	API 620	Design And Construction For Large Welded, Low-Pressure Storage Tanks

Description	Standard	Title
Miscellaneous	API 650	Welded Steel Storage Tanks for Oil Storage
	API 652	Lining Of Above Ground Petroleum Storage Tanks Bottoms
	API 660	Shell and Tube Heat Exchangers for General Refinery Service
	API 661	Air Cooled Heat Exchangers for General Refinery Service
	API 674	Positive Displacement Pumps – Reciprocating
	API 675	Positive Displacement Pumps -- Controlled Volume
	API 676	Positive Displacement Pumps – Rotary
	API 677	General Purpose Gear Units for Refinery Service
	API 750	Management of Process Hazards
	API 2000	Venting Atmospheric And Low Pressure Storage Tanks
	API RP-500	Recommended Practices Classification of Locations for Electrical Installations at Petroleum Facilities
	ASME Section V	Boiler and Pressure Vessel Code -- Non-Destructive Examination
	ASME Section VIII	Boiler and Pressure Vessel Code— Pressure Vessels
	ASME Section IX	Boiler and Pressure Vessel Code -- Welding and Brazing Qualifications
	ASTM A36	Standard Specification for Structural Steel
	ASTM A120	Standard Specification for Pipe, Steel, Black and Hot-Dipped Zinc-Coated (Galvanized) Welded and Seamless, for Ordinary Uses
	ASTM A121	Standard Specification for Zinc Coated (Galvanized) Steel Barbed Wire

Description	Standard	Title
Miscellaneous	ASTM A123	Zinc (Hot Dip Galvanized Coatings on Iron and Steel Products)
	ASTM A185	Steel-Welded Wire Fabric, Plain for Reinforced Concrete
	ASTM A193	Alloy Steel and Stainless Steel Nuts for Bolts for High Pressure and High Temperature Service
	ASTM A194	Carbon and Alloy Steel Nuts for Bolts for High Pressure and High Temperature Service
	ASTM A307	Carbon Steel Externally-Threaded Standard Fasteners
	ASTM A392	Standard Specification for Zinc-Coated Steel Chain-Link Fence Fabric
	ASTM A775	Standard Specification for Epoxy-Coated Reinforcing Steel Bars
	ASTM C33	Standard Specification for Concrete Aggregates
	ASTM C94	Ready Mixed Concrete
	ASTM C109	Standard Test Method for Compressive Strength of Hydraulic Cement Mortars (using 2-inch or 50 mm cube specimens)
	ASTM C150	Standard Specification for Portland Concrete
	ASTM C494	Specification for Chemical Admixtures for Concrete
	ASTM D422	Standard Method for Particle-Size Analysis of Soils
	ASTM D698	Standard Test Methods for Moisture-Density Relations of Soils and Soil-Aggregate Mixture Using 5.5 lb (2.49 kg) hammer and 12-inch (305 mm) Drop
	ASTM D1140	Standard Test Methods for Amount of Material in Soils Finer Than the No. 200 (0.075mm) Sieve

Description	Standard	Title
Miscellaneous	ASTM D1556	Standard Test Methods for Density of Soil in Place by the Sand-Cone Method
	ASTM D2167	Standard Test Methods for Density and Unit Weight of Soil in Place by the Rubber Balloon Method
	ASTM D2487	Standard Classification of Soils for Engineering Purposes
	ASTM D2922	Standard Test Methods for Density of Soil and Soil-Aggregate in Place by Nuclear Method (Shallow Depth)
	ASTM D3017	Standard Test Method for Moisture Content of Soil and Soil-Aggregate in Place by Nuclear Method (shallow depth)
	ASTM G164	Hot-Dipped Galvanizing of Irregularly-Shaped Objects
	IEC 34	Rotating Electrical Machines
	IEC 51	Recommendation For Indicating Electrical Measuring Instruments and Their Current Accessories
	IEC 59	Current Ratings
	IEC 60	Test Techniques
	IEC 79	Electrical Apparatus For Explosive Gas Atmospheres
	IEC 112	Method for Determining The Comparative and the Proof Tracking Indices of Solid Insulating Materials Under Moist Conditions
	IEC 144	Degrees of Protection of Enclosures for Low Voltage Switchgear and Control Gear
	IEC 146	Semiconductors Converters
	IEC 185	Current Transformers
	IEC 186	Voltage Transformers
	IEC 269	Low Voltage Fuses

Description	Standard	Title
Miscellaneous	IEC 277	Definitions for Low-Voltage Switchgear And Control Gear
	IEC 292	Low Voltage Motor Starters
	IEC 408	Low Voltage Air-Break Switches, Air-Break Disconnectors, Air-Break Switch Disconnectors and Fuse Combination Units
	IEC 414	Safety Requirement for Indicating and Recording Electrical Measuring Instruments and Their Accessories
	IEC 439	Factory Built Assemblies of Low-Voltage Switchgear and Control Gear
	IEC 445	Identification of Equipment Terminals and of Terminations of Certain Designated Conductors, Including General Rules of Alphanumeric Notation
	IEC 521	Class 0.5, 1 and 2 Alternating Watt/Hour Meters
	IEC 529	Classification of Degrees of Protection Provided By Enclosures
	IEC 801-3	Electromagnetic Compatibility For Industrial Process Measurement and Control Equipment; Part 3 -- Radiated Electromagnetic Field Requirements
	IEC 947	Low Voltage Switchgear And Control Gear
	ISO 9000	Quality Management and Quality Assurance Standards
	NFPA 10	Standard on Portable Fire Extinguishers
	NFPA 12	Standard on Carbon Dioxide Extinguishing Systems
	NFPA 15	Standard on Water Spray Fixed Systems for Fire Protection
NFPA 20	Standard on Installation of Centrifugal Fire Pump	

Description	Standard	Title
Miscellaneous	NFPA 22	Standard on Water Tanks for Private Fire Protection
	NFPA 37	Standard for the Installation and Use of Stationary Combustion Engines and Gas Turbines
	NFPA 2000	Standard on Clean Agent Fire Extinguishing Systems
	UBC	Uniform Building Code