



Gas Storage



TECHNICAL STANDARDS FOR GAS STORAGE

Reference to CEN/CENELEC Technical Committees

June 2021

INTRODUCTION

MARCOGAZ actively collaborates with standardisation bodies such as CEN, and our members have been deeply involved in the standardisation work for decades.

Essentially, standards reflect the state of the art in terms of safe and sustainable operational gas supply activities. The standardisation process fosters the continuous improvement of assets' integrity and interoperability while ensuring the continuity of supply to the customers in the best conditions. The introduction of new gases is a major step in the gas value chain and technical standards are crucial to support the gas industry's contribution to decarbonisation.

Based on its technical work and experience, MARCOGAZ developed a [summary of technical standards applicable to the gas industry's](#) activities to guide representatives and players in the sector. Given the large number of existing standards, MARCOGAZ selected the most relevant for the gas mid and downstream sector. This list is subject to periodic updates, based on the evolving nature of the standardisation processes and industry needs.

Version: 14 / 06 / 2021

Technical standards for gas

CEN / CENELEC Technical Committee			Title	CEN / CENELEC reference
CEN/CLC/JTC 6	Hydrogen in energy systems	WG1	Hydrogen in energy systems - vocabulary	prEN ISO 24078
CEN/TC 219	Cathodic protection	WG1	General principles of cathodic protection of buried or immersed onshore metallic structures	EN 12954
CEN/TC 234	Gas infrastructure		Implementation Guide for functional standards prepared by CEN/TC 234 Gas infrastructure - Part 1: General	TR 13737-1
CEN/TC 234	Gas infrastructure		Gas infrastructure - Implementation Guide for Functional Standards prepared by CEN/TC 234 - Part 2: National Pages related to CEN/TC 234 standards	TR 13737-2
CEN/TC 234	Gas infrastructure	WG3	Gas infrastructure - Welding steel pipework - Functional requirements	FprEN 12732
CEN/TC 234	Gas infrastructure	WG4	Gas infrastructure - Underground gas storage - Part 1: Functional recommendations for storage in aquifers	EN 1918-1
CEN/TC 234	Gas infrastructure	WG4	Gas infrastructure - Underground gas storage - Part 2: Functional recommendations for storage in oil and gas fields	EN 1918-2
CEN/TC 234	Gas infrastructure	WG4	Gas infrastructure - Underground gas storage - Part 3: Functional recommendations for storage in solution-mined salt cavern	EN 1918-3
CEN/TC 234	Gas infrastructure	WG4	Gas infrastructure - Underground gas storage - Part 4: Functional recommendations for storage in rock caverns	EN 1918-4
CEN/TC 234	Gas infrastructure	WG4	Gas infrastructure - Underground gas storage - Part 5: Functional recommendations for surface facilities	EN 1918-5
CEN/TC 234	Gas infrastructure	WG5	Gas infrastructure - Gas measuring systems - Functional requirements	EN 1776
CEN/TC 234	Gas infrastructure	WG6	Gas Infrastructure - CEN/TC 234 Pressure Definitions - Guideline Document	TR 16395
CEN/TC 234	Gas infrastructure	WG7	Gas Infrastructure - Compressor stations - Functional requirements	prEN 12583
CEN/TC 234	Gas infrastructure	WG11	Gas infrastructure - Quality of gas - Group H	EN 16726
CEN/TC 234	Gas infrastructure	WG14	Assessment of methane emissions for gas transmission and distribution systems [Scope currently being extended to Underground Gas Storages and LNG Regasification Terminals]	prCEN/TR XXX
CEN/TC 237	Gas meters	WG2	Gas meters - Rotary displacement gas meters	EN 12480
CEN/TC 237	Gas meters	WG3	Gas meters - Turbine gas meters	prEN 12261
CEN/TC 237	Gas meters	WG4	Gas meters - Conversion devices - Part 1: Volume conversion	FprEN 12405-1
CEN/TC 237	Gas meters	WG4	Gas meters - Conversion devices - Part 2: Energy conversion	EN 12405-2
CEN/TC 237	Gas meters	WG4	Gas meters - Conversion devices - Part 3: Flow computer	EN 12405-3
CEN/TC 237	Gas meters	WG5	Gas meters - Smart Gas Meters	TR 16061
CEN/TC 237	Gas meters	WG5	Gas meters - Additional functionalities	EN 16314
CEN/TC 237	Gas meters	WG8	Gas meters - Diaphragm meters	EN 1359
CEN/TC 237	Gas meters	WG10	Gas meters - Thermal-mass flow-meter based gas meter	FprEN 17526
CEN/TC 238	Test gases, test pressures, appliance categories and gas appliance types		Natural gas - Standard reference conditions (ISO 13443:1996 including Corrigendum 1:1997)	EN ISO 13443
CEN/TC 238	Test gases, test pressures, appliance categories and gas appliance types		Natural gas - Vocabulary (ISO 14532:2014)	EN ISO 14532
CEN/TC 238	Test gases, test pressures, appliance categories and gas appliance types		Natural gas - Organic components used as odorants - Requirements and test methods	prEN ISO 13734 rev
CEN/TC 238	Test gases, test pressures, appliance categories and gas appliance types		Natural gas - Determination of sulfur compounds using gas chromatography (ISO 19739:2004/Cor 1:2009)	EN ISO 19739
CEN/TC 238	Test gases, test pressures, appliance categories and gas appliance types		Natural gas - Calculation of compression factor - Part 1: Introduction and guidelines (ISO 12213-1:2006)	EN ISO 12213-1
CEN/TC 238	Test gases, test pressures, appliance categories and gas appliance types		Natural gas - Calculation of compression factor - Part 2: Calculation using molar-composition analysis (ISO 12213-2:2006)	EN ISO 12213-2

CEN/TC 238	Test gases, test pressures, appliance categories and gas appliance types		Natural gas - Calculation of compression factor - Part 3: Calculation using physical properties (ISO 12213-3:2006)	EN ISO 12213-3
CEN/TC 264	Air quality		Stationary source emissions - Predictive Emission Monitoring Systems (PEMS) - Applicability, execution and quality assurance	TS 17198
CEN/TC 264	Air quality		Stationary source emissions - Automatic method for the determination of the methane concentration using flame ionisation detection (FID) (ISO 25140:2010)	EN ISO 25140
CEN/TC 408	Natural gas and biomethane for use in transport and biomethane for injection in the natural gas grid		Natural gas and biomethane for use in transport and biomethane for injection in the natural gas network - Part 1: Specifications for biomethane for injection in the natural gas network	EN 16723-1
CEN/TC 408	Natural gas and biomethane for use in transport and biomethane for injection in the natural gas grid		Proposed limit values for contaminants in biomethane based on health assessment criteria	TR 17238
CLC/TC 31	Electrical apparatus for potentially explosive atmospheres		Explosive atmospheres – Part 0: Equipment – General requirements	EN 60079-0
CLC/TC 31	Electrical apparatus for potentially explosive atmospheres		Explosive atmospheres - Part 10-1: Classification of areas - Explosive gas atmospheres	EN IEC 60079-10
CLC/TC 31	Electrical apparatus for potentially explosive atmospheres		Explosive atmospheres - Part 14: Electrical installations design, selection and erection	EN IEC 60079-14
ISO Technical Committee			Title	ISO reference
ISO/TC193	Natural gas		Natural gas - Odorization	ISO/TR 16922
ISO/TC 207	Environmental management		Greenhouse gases — Part 1: Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals	ISO 14064-1
ISO/TC 207	Environmental management		Greenhouse gases — Part 2: Specification with guidance at the project level for quantification, monitoring and reporting of greenhouse gas emission reductions or removal enhancements	ISO 14064-2