

HYDROGEN



TECHNICAL COMMITTEES RELATED TO HYDROGEN TECHNOLOGIES STANDARDIZATION

- International level -

ISO/TC 197 – Hydrogen technologies

Scope

ISO/TC 197 is responsible for the standardization in the field of systems and devices for the production, storage, transport, measurement and use of hydrogen.

IEC/TC 105 – Fuel cell technologies

Scope

IEC/TC 105 addresses standardization needs in the field of Fuel Cell (FC) technologies for all FC types and various associated applications such as stationary FC power systems for distributed power generators and combined heat and power systems, FCs for transportation such as propulsion systems.

- European level -

CEN/CLC/JTC 6 – Hydrogen in energy systems

Scope

CEN/CLC/JTC 6 is dedicated to standardization in the field of systems, devices and connections for the production, storage, transport and distribution, measurement and use of hydrogen from renewable energy sources and other sources, in the context of the European strategy for the development and acceptance of the hydrogen market.

CEN/TC 234 – Gas infrastructure

Scope

CEN/TC 234 addresses standardization needs in the field of gas pipeline infrastructure for gaseous energy carriers (such as hydrogen, hydrogen rich, and methane rich gases) and blends thereof from the input into the on-shore transmission network up to the inlet connection of gas appliances.

CEN/TC 23 – Transportable gas cylinders

Scope

Standardization of transportable gas cylinders, their fittings, and requirements relating to their design, testing and operation.

RELEVANT PUBLISHED STANDARDS ON HYDROGEN TECHNOLOGIES

ISO/TC 197 – Hydrogen technologies

<i>ISO 22734-1:2025</i>	Hydrogen generators using water electrolysis Part 1: Safety— Product specification
<i>ISO 22734:2019</i>	Hydrogen generators using water electrolysis — Industrial, commercial, and residential applications
<i>ISO 19881:2025</i>	Gaseous hydrogen — Land vehicle fuel containers
<i>ISO 13984:1999</i>	Liquid hydrogen — Land vehicle fueling system interface
<i>ISO 19885-1:2024</i>	Gaseous hydrogen — Fuelling protocols for hydrogen-fuelled vehicles Part 1: Design and development process for fuelling protocols
<i>ISO/TR 15916:2015</i>	Basic considerations for the safety of hydrogen systems
<i>ISO 19882:2018</i>	Gaseous hydrogen — Thermally activated pressure relief devices for compressed hydrogen vehicle fuel containers
<i>ISO 13985:2006</i>	Liquid hydrogen — Land vehicle fuel tanks
<i>ISO 19880 series</i>	Gaseous hydrogen — Fueling stations —
	• Part 1:2020 General requirements
	• Part 2:2025 Dispensers and dispensing systems
	• Part 3:2018 Valves
	• Part 5:2019 Dispenser hoses and hose assemblies
	• Part 7:2025 Rubber O-rings
	• Part 8:2024 Fuel quality controls

IEC/TC 105 – Fuel cell technologies

<i>IEC 62282 series</i>	Fuel cell technologies —
	• Part 2:2020 Fuel cell modules — Safety
	• Part 3:2025 Stationary fuel cell power systems —Safety
	• Part 4:2022 Fuel cell power systems for electrically powered industrial trucks — Safety
	• Part 5:2018 Portable fuel cell power systems — Safety
	• Part 6:2024 Micro fuel cell power systems — Safety

CEN/TC 234 – Gas infrastructure

<i>CEN/TS 17977:2023</i>	Gas infrastructure — Quality of gas — Hydrogen used in rededicated gas systems
<i>EN 1594:2024</i>	Gas infrastructure — Pipelines for maximum operating pressure over 16 bar — Functional requirements
<i>EN 17649:2022</i>	Gas infrastructure — Safety Management System (SMS) and Pipeline Integrity Management System (PIMS) — Functional requirements
<i>EN 17928-1:2024</i>	Gas infrastructure — Injection stations — Part 1: General requirements
<i>EN 1918 series</i>	Gas infrastructure - Underground gas storage –
	• Part 1:2016 Functional recommendations for storage in aquifers
	• Part 2:2016 Functional recommendations for storage in oil and gas fields
	• Part 3:2016 Functional recommendations for storage in solution-mined salt caverns
	• Part 4:2016 Functional recommendations for storage in rock caverns
	• Part 5:2016 Functional recommendations for surface facilities

CEN/TC 23 – Transportable gas cylinders

<i>EN 17339:2024</i>	Transportable gas cylinders – Hoop wrapped and fully wrapped carbon composite cylinders and tubes for hydrogen
<i>EN 17533:2025</i>	Gaseous hydrogen — Cylinders and tubes for stationary storage
<i>EN ISO 11114-4:2017</i>	Transportable gas cylinders — Compatibility of cylinder and valve materials with gas contents — Part 4: Test methods for selecting steels resistant to hydrogen embrittlement