



News on Hydrogen Standardization: Publication of CEN/TR 17924:2025!

CEN TC58 has released the second edition of CEN/TR 17924:2025. This new version is titled: **"Safety and Control Devices for Burners and Appliances Burning Gaseous and/or Liquid Fuels. Guidance on Hydrogen-Specific Aspects."**

Introduction and Background

Hydrogen as a renewable fuel, alongside biomethane, is increasingly seen as a promising alternative to natural gas. With the implementation of the relevant regulations and standards, the use of hydrogen in the heating and combustion industry is expected to become more frequent. Therefore, it is necessary to develop solutions based on standardized safety, construction, and performance requirements.

This report provides an important summary of safety and performance aspects for safety and control devices. In some areas, further research will be necessary to cover all aspects comprehensively.

Research and Evaluations

There are numerous research projects investigating the use of hydrogen mixtures with natural gas in various proportions. A notable example is the European **THyGA Project**, which studies fluctuations of up to 60% hydrogen in natural gas.

The report serves to prepare future revisions of CEN/TC 58 documents. It describes findings on potential changes, provides research backgrounds, and offers relevant literature sources. Different gases are evaluated, their properties and characteristics analyzed, and their impacts on risk assessments for gas appliances compared. These theoretical evaluations are complemented by laboratory measurements to provide a comprehensive picture.

Collaboration and Future Implementation

For the future implementation of hydrogen across the entire value chain, close collaboration with other **CEN/TCs** is essential. These include:

- **CEN/TC 234 "Gas Infrastructure"**
- **CEN/TC 109 "Central Heating Boilers Using Gaseous Fuels"**
- **CEN/TC 131 "Gas Burners Using Fans"**
- **CEN/TC 186 "Industrial Thermoprocessing — Safety"**



The report up to Annex A is based on the structure of EN 13611:2019. Only the sections of EN 13611:2019 that could be affected by the use of hydrogen or hydrogen mixtures as gaseous fuels are included in this document.

Scope of CEN/TR 17924

This report was prepared for the future revision of standards dealing with the general safety, design, construction, performance requirements, and testing of safety, control, or regulating devices (hereafter referred to as controls) for burners and appliances burning hydrogen or hydrogen mixtures.

The controls referenced in this report have a maximum inlet pressure of up to and including 500 kPa and nominal connection sizes up to and including DN 250.

Key Control Components Include:

- **Automatic Shut-Off Valves**
- **Automatic Burner Control Systems**
- **Flame Supervision Devices**
- **Gas/Air Ratio Controls**
- **Pressure Regulators**
- **Manual Taps**
- **Mechanical Thermostats**
- **Multifunctional Controls**
- **Pressure Sensing Devices**
- **Valve Proving Systems**
- **Automatic Vent Valves**