
Infrastruktura za plin - Postaje za injiciranje - 3. del: Posebne zahteve za injiciranje vodika

Gas infrastructure - Injection stations - Part 3: Specific requirements regarding the injection of hydrogen

Gasinfrastruktur - Einspeiseanlagen - Part 3: Spezifische Anforderungen für die Einspeisung von Wasserstoff

Infrastructures gazières - Stations d'injection - Partie 3 : Exigences spécifiques concernant l'injection d'hydrogène

Ta slovenski standard je istoveten z: EN 17928-3:2024

[SIST EN 17928-3:2025](#)

ICS:

27.190	Biološki viri in drugi alternativni viri energije	Biological sources and alternative sources of energy
75.180.01	Oprema za industrijo nafte in zemeljskega plina na splošno	Equipment for petroleum and natural gas industries in general
75.200	Oprema za skladiščenje nafte, naftnih proizvodov in zemeljskega plina	Petroleum products and natural gas handling equipment

SIST EN 17928-3:2025**en,fr,de**

EUROPEAN STANDARD

EN 17928-3

NORME EUROPÉENNE

EUROPÄISCHE NORM

October 2024

ICS 75.200

English Version

Gas infrastructure - Injection stations - Part 3: Specific requirements regarding the injection of hydrogen

Infrastructures gazières - Stations d'injection - Partie 3
: Exigences spécifiques concernant l'injection de gaz
combustible hydrogène

Gasinfrastruktur - Einspeiseanlagen - Part 3:
Spezifische Anforderungen für die Einspeisung von
Wasserstoff

This European Standard was approved by CEN on 7 July 2024.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and United Kingdom.

<https://standards.iteh.ai>
SIST EN 17928-3:2025

<https://standards.iteh.ai/catalog/standards/sist/6fd8f40e-9f45-4779-a63a-07013091ac36/sist-en-17928-3-2025>



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

Contents

Page

European foreword.....	3
1 Scope	4
2 Normative references	5
3 Terms and definitions	5
4 General requirements	6
4.1 Specific requirements for hydrogen injection stations.....	6
4.2 Coordination and definition of interfaces.....	6
4.3 Requirements on the properties of hydrogen	6
4.3.1 General.....	6
4.3.2 Injection of hydrogen into methane-based grids	6
4.3.3 Injection into dedicated hydrogen grids	6
4.4 Explosion protection.....	7
5 Operational functions.....	7
5.1 General.....	7
5.2 Mixing hydrogen with other gases.....	7
5.2.1 Homogeneity of the gas flow in the gas transmission or distribution system	7
5.2.2 Control of the hydrogen content.....	7
6 Overall safety requirements and protection against inadmissible operating modes.....	8
7 Specific requirements for systems and components	8
7.1 Key parameters for material selection	8
7.1.1 General.....	8
7.1.2 Hydrogen embrittlement (metallic materials)	8
7.1.3 Hydrogen permeation	8
7.2 Systems	8
7.2.1 Potentially hazardous atmosphere	8
7.2.2 Metrological requirements.....	8
7.3 Components - Requirements on buried pipelines	8
8 Testing and commissioning.....	9
8.1 General.....	9
8.2 Tightness tests.....	9
8.3 Commissioning.....	9
9 Operation	9
Bibliography.....	10

European foreword

This document (EN 17928-3:2024) has been prepared by Technical Committee CEN/TC 234 “Gas infrastructure”, the secretariat of which is held by DIN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by April 2025, and conflicting national standards shall be withdrawn at the latest by April 2025.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document is intended to be used in conjunction with EN 17928-1:2024.

This document is part of the EN 17928 series, *Gas infrastructure - Injection stations*:

- *Part 1: General requirements*
- *Part 2: Specific requirements regarding the injection of biomethane*
- *Part 3: Specific requirements regarding the injection of hydrogen fuel gas (this document)*

Any feedback and questions on this document should be directed to the users’ national standards body. A complete listing of these bodies can be found on the CEN website.

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.

<https://standards.iteh.ai/catalog/standards/sist/6fd8f40e-9f45-4779-a63a-07013091ac36/sist-en-17928-3-2025>

EN 17928-3:2024 (E)

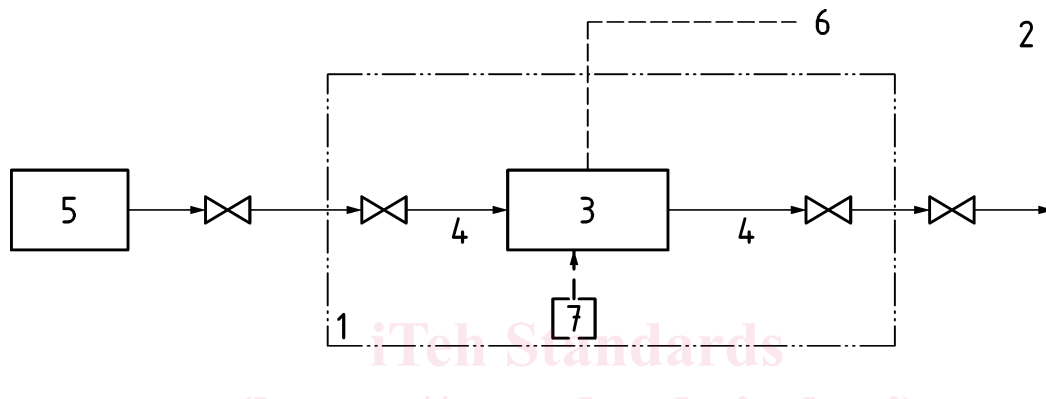
1 Scope

This document establishes specific functional requirements of stations for the injection of hydrogen into transmission and distribution systems for fuel gases (natural gas, biomethane, SNG, hydrogen, fuel gas mixtures, etc.; see Figure 1) in accordance with European technical rules that ensure the interoperability of systems in addition to the general functional requirements of EN 17928-1:2024.

This document complements EN 17928-1:2024 by specifying the technical safety requirements to be observed with respect to the chemical and physical properties of hydrogen.

It furthermore complements the requirements on pipelines specified in EN 12007-3 and EN 1594 by describing the specific requirements with respect to hydrogen.

Additionally, it explains how to handle hydrogen measurements during the course of injection.



- Key**
- 1 injection station – scope of this document
 - 2 gas transmission and distribution system
 - 3 measuring and control station – pressure control / compression / flow control / metering / analysing / gas-mixing (optional)
 - 4 hydrogen pipeline (optional mixed-gas pipeline)
 - 5 hydrogen production
 - 6 gas composition / flow information
 - 7 gas-feed for mixing (optional)

Figure 1 — Injection station for hydrogen

Dedicated requirements for the technical equipment of the gas transmission and distribution network for mixing hydrogen as an additive gas into the gas flow after the injection station are not covered by this document. However, requirements for the resulting gas mixture and the related coordination and interfaces between station and network operation are specified in this document.

This document represents the recommendations at the time of its preparation. This document does not apply to injection stations operating prior to the publication of this document.

This document specifies common basic principles for gas infrastructure. Users of this document are expected to be aware that more detailed national standards and/or codes of practice can exist in the CEN member countries. This document is intended to be applied in association with these national standards and/or codes of practice setting out the above-mentioned basic principles.

In the event of terms of additional requirements in national legislation/regulation than in this document, CEN/TR 13737 (all parts) illustrates these terms.

CEN/TR 13737 (all parts) gives: