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NSAI Standards

Irish Standard
I.S. EN 1918-4:2016

# Gas infrastructure - Underground gas storage - Part 4: Functional recommendations for storage in rock caverns

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**I.S. EN 1918-4:2016**

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## National Foreword

I.S. EN 1918-4:2016 is the adopted Irish version of the European Document EN 1918-4:2016, Gas infrastructure - Underground gas storage - Part 4: Functional recommendations for storage in rock caverns

This document does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

# EN 1918-4

March 2016

ICS 75.200

Supersedes EN 1918-4:1998

English Version

# Gas infrastructure - Underground gas storage - Part 4: Functional recommendations for storage in rock caverns

Infrastructures gazières - Stockage souterrain de gaz - Partie 4: Recommandations fonctionnelles pour le stockage en cavités minées

Gasinfrastruktur - Untertagespeicherung von Gas - Teil 4: Funktionale Empfehlungen für die Speicherung in Felskavernen

This European Standard was approved by CEN on 9 January 2016.

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# European foreword

This document (EN 1918-4:2016) 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of an identical text or by endorsement, at the latest by September 2016 and conflicting national standards shall be withdrawn at the latest by September 2016.

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

This document supersedes EN 1918-4:1998.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association.

For a list of significant technical changes between this European Standard and EN 1918-4:1998, see Annex B.

This document is Part 4 of a European Standard on "Gas infrastructure - Underground gas storage" which includes the following five parts:

— *Part 1: Functional recommendations for storage in aquifers*;

— *Part 2: Functional recommendations for storage in oil and gas fields*;

— *Part 3: Functional recommendations for storage in solution-mined salt cavities*;

— *Part 4: Functional recommendations for storage in rock caverns*;

— *Part 5: Functional recommendations for surface facilities.*

Directive 2009/73/EC concerning common rules for the internal market in natural gas and the related Regulation (EC) No 715/2009 on conditions for access to the natural gas transmission networks also aim at technical safety including technical reliability of the European gas system. These aspects are also in the scope of CEN/TC 234 standardization. In this respect, CEN/TC 234 evaluated the indicated EU legislation and amended this technical standard accordingly, where required and appropriate.

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

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# 1 Scope

This European Standard covers the functional recommendations for design, construction, testing, commissioning, operation, maintenance and abandonment of underground gas storage (UGS) facilities in mined rock caverns up to and including the wellhead.

This European Standard does not cover the technology of lined rock.

NOTE 1 Even if not covered in this standard, the lined rock is an available technology.

This European Standard specifies practices which are safe and environmentally acceptable.

For necessary surface facilities for underground gas storage, EN 1918-5 applies.

In this context, "gas" is any hydrocarbon fuel:

— which is in a gaseous state at a temperature of 15 °C and under a pressure of 0,1 MPa (this includes natural gas, compressed natural gas (CNG) and liquefied petroleum gas (LPG). The stored product is also named fluid);

— which meets specific quality requirements in order to maintain underground storage integrity, performance, environmental compatibility and fulfils contractual requirements.

This European Standard specifies common basic principles for underground gas storage facilities. Users of this European Standard should be aware that more detailed standards and/or codes of practice exist. A non-exhaustive list of relevant standards can be found in Annex A.

This European Standard is intended to be applied in association with these national standards and/or codes of practice and does not replace them.

In the event of conflicts in terms of more restrictive requirements in the national legislation/regulation with the requirements of this European Standard, the national legislation/regulation takes precedence as illustrated in CEN/TR 13737 (all parts).

NOTE 2 CEN/TR 13737 (all parts) contains:

— clarification of relevant legislation/regulations applicable in a country;

— if appropriate, more restrictive national requirements;

— national contact point for the latest information.

This European Standard is not intended to be applied retrospectively to existing facilities.

# 2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 1918-5, *Gas infrastructure - Underground gas storage - Part 5: Functional recommendations for surface facilities*

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