PD CEN/TR 13737-2:2014

BSI Standards Publication

Gas infrastructure — Implementation Guide for Functional Standards prepared by CEN/TC 234

Part 2: National Pages related to CEN/TC 234 standards

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National foreword

This Published Document is the UK implementation of CEN/TR 13737-2:2014. Together with PD CEN/TR 13737-1:2012, it supersedes PD CR 13737:2000 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee GSE/33, Gas supply.

A list of organizations represented on this committee can be obtained on request to its secretary.

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

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Compliance with a British Standard cannot confer immunity from legal obligations.

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Infrastructure de gaz - Uide d'implémentation des normes fonctionnelles élaborées par CEN/TC 234 Gas infrastructure - Partie 2: Pages nationales relatives aux normes de CEN/TC 234

Gasinfrastruktur - Leitfaden zur Implementierung von Funktionalnormen erarbeitet vom CEN/TC 234 Gasinfrastruktur - Teil 2: Nationale Seiten bezüglich der CEN/TC 234 Normen

This Technical Report was approved by CEN on 23 September 2014. It has been drawn up by the Technical Committee CEN/TC 234.

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

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

Ref. No. CEN/TR 13737-2:2014 E

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Foreword

This document (CEN/TR 13737-2:2014) has been prepared by Technical Committee CEN/TC 234 “Gas Infrastructure”, the secretariat of which is held by DIN.

This document supersedes CEN/TR 13737:2001.

CEN/TR 13737:2001 has been split into two parts:

— Part 1 "General" containing a description how to use functional standards, specifically CEN/TC 234 standards, in relation to existing legislation/regulation and more detailed codes of practices/technical rules.

— Part 2 "National pages related to CEN/TC 234 standards" containing information about the existing national legislation/regulation, codes of practice and technical rules in relation to the CEN/TC 234 standards..

Since 2001 some new CEN/TC 234 standards have been published. The extent of this CEN Technical Report has been adapted accordingly.

Introduction

At the start of the elaboration of functional standards a way had to be found to ensure compliance with the CEN internal regulations. For this purpose CEN/TC 234 prepared a "Position Paper - Acceptance of CEN/TC 234 Standards" (CEN/TC 234 Doc N 432:1997) which was endorsed by CEN/BT Resolution C14/1997. This Position Paper is incorporated in CEN/TR 13737-1.

The general relation between EN Standards and national standards and/or regulations is defined by CEN Internal regulations, as well as the application of European standards not implemented one-to-one. Both parts of this CEN technical report support the specific implementation of the CEN/TC 234 standards in the CEN member countries.

In its functional standards, CEN/TC 234 establishes common safety principles to design, construct, operate and maintain safe and reliable gas infrastructure systems. The detail to comply with these principles is left to recognised national documents in support of national legislation. In the event of conflicts in terms of more restrictive requirements in the national legislation/regulation with the requirements of CEN/TC 234 standards the national legislation/regulation take precedence as illustrated in this part of CEN/TR 13737.

NOTE 1 The level of details of the CEN/TC 234 reflects the currently possible consensus.

In this CEN Technical Report national legislation/regulations in CEN Member countries are listed. CEN members established so-called national pages for each CEN/TC 234 standard. The list of CEN/TC 234 standards with titles is given in Clause 2.

The responsibility for availability and content of the national pages is assumed by the individual CEN member.

Although the CEN/TC 234 standards refer to CR 13737:2000 (or later editions) it should be emphasised that the latest available versions of CEN/TR 13737 parts 1 and 2 are valid.

NOTE 2 This CEN Technical Report gives the current situation at the date of publication. Considering that national legislation/regulations may have changed in the countries involved since that date it is up to individuals to check whether the information is still accurate.

The listing of legislation/regulations comprises all CEN/TC 234 standards. The structure of the document is following the numeric order of the reference numbers of the given standards.

The following table shows the cross-references between the CEN/TC 234 standards to facilitate the use of this document.

Table 1 — Structure of CEN/TC 234-Standards (horizontal relevance)

Procedure/ infrastructure element	EN 12732	EN 12327	EN 16348	**TS 15399**	**TR 16395**	**TR 16388**
EN 1594	**X**	**X**	**X**		**X**	**X**
EN 1775					**X**	**X**
EN 1776	**X**	**X**	**X**	**X**	**X**	**X**
EN 12007-1	**(X)**	**X**		**X**	**X**	**X**
EN 12007-2		**X**		**X**	**X**	**X**
EN 12007-3	**X**	**X**		**X**	**X**	**X**
EN 12007-4		**X**		**X**	**X**	**X**
EN 12007-5	**X**	**X**		**X**	**X**	**X**
EN 12186	**X**	**X**	**X**	**X**	**X**	**X**
EN 12279	**X**	**X**		**X**	**X**	**X**
EN 12583	**X**	**X**	**X**		**X**	**X**
EN 15001-1	**X**	**X**			**X**	**X**
EN 15001-2		**X**			**X**	**X**
EN 1918-1						**X**
EN 1918-2						**X**
EN 1918-3						**X**
EN 1918-4						**X**
EN 1918-5	**(L)**	**(L)**				**X**

NOTE 3 Due to the informative character, CEN/TR 16395 and CEN/TR 16388 are not subject to this CEN Technical Report.

1 Scope

This Technical Report contains, for each country affected, a national page where the relevant national legislation/regulations for the field of gas infrastructure are listed. The national page can further contain the relevant national standards and/or codes of practice and national bodies which can act as further sources of information, if an interested party needs further guidance.

The national page can, if necessary, indicate any requirements in the national legislation/regulations that are more stringent than those in the European Standards prepared by CEN/TC 234. This is done however without giving any details.

This does not apply to requirements contained in clauses that are harmonized to any new approach directive.

This Technical Report is intended to be a guideline for the national implementation of the functional European Standards elaborated by CEN/TC 234 "Gas infrastructure".

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 1594:2013, *Gas infrastructure - Pipelines for maximum operating pressure over 16 bar - Functional requirements*

EN 1775:2007, *Gas supply - Gas pipework for buildings - Maximum operating pressure less than or equal to 5 bar - Functional recommendations*

EN 1776:1998, *Gas supply systems - Natural gas measuring stations - Functional requirements*

EN 1918-1:1998, *Gas supply systems - Underground gas storage - Part 1: Functional recommendations for storage in aquifers*

EN 1918-2:1998, *Gas supply systems - Underground gas storage - Part 2: Functional recommendations for storage in oil and gas fields*

EN 1918-3:1998, *Gas supply systems - Underground gas storage - Part 3: Functional recommendations for storage in solution-mined salt cavities*

EN 1918-4:1998, *Gas supply systems - Underground gas storage - Part 4: Functional recommendations for storage in rock caverns*

EN 1918-5:1998, *Gas supply systems - Underground gas storage - Part 5: Functional recommendations for surface facilities*

EN 12007-1:2012, *Gas infrastructure - Pipelines for maximum operating pressure up to and including 16 bar - Part 1: General functional requirements*

EN 12007-2:2012, *Gas infrastructure - Pipelines for maximum operating pressure up to and including 16 bar - Part 2: Specific functional requirements for polyethylene (MOP up to and including 10 bar)*

EN 12007-3:2000, *Gas supply systems - Pipelines for maximum operating pressure up to and including 16 bar - Part 3: Specific functional recommendations for steel*

EN 12007-4:2012, *Gas infrastructure - Pipelines for maximum operating pressure up to and including 16 bar - Part 4: Specific functional requirements for renovation*

EN 12007-5:2014, *Gas infrastructure - Pipelines for maximum operating pressure up to and including 16 bar - Part 5: Service lines - Specific functional requirements*

EN 12186:2000/A1:2005, *Gas supply systems - Gas pressure regulating stations for transmission and distribution - Functional requirements*

EN 12186:2000, *Gas supply systems - Gas pressure regulating stations for transmission and distribution - Functional requirements*

EN 12279:2000/A1:2005, *Gas supply systems - Gas pressure regulating installations on service lines - Functional requirements*

EN 12279:2000, *Gas supply systems - Gas pressure regulating installations on service lines - Functional requirements*

EN 12327:2012, *Gas infrastructure - Pressure testing, commissioning and decommissioning procedures - Functional requirements*

EN 12583:2014, *Gas Infrastructure - Compressor stations - Functional requirements*

EN 12732:2013, *Gas infrastructure - Welding steel pipework - Functional requirements*

EN 15001-1:2009, *Gas Infrastructure - Gas installation pipework with an operating pressure greater than 0,5 bar for industrial installations and greater than 5 bar for industrial and non-industrial installations - Part 1: Detailed functional requirements for design, materials, construction, inspection and testing*

EN 15001-2:2008, *Gas infrastructure - Gas installation pipework with an operating pressure greater than 0,5 bar for industrial installations and greater than 5 bar for industrial and non-industrial installations - Part 2: Detailed functional requirements for commissioning, operation and maintenance*

EN 16348:2013, *Gas infrastructure - Safety Management System (SMS) for gas transmission infrastructure and Pipeline Integrity Management System (PIMS) for gas transmission pipelines - Functional requirements*

CEN/TR 13737-1:2012, *Implementation Guide for functional standards prepared by CEN/TC 234 Gas infrastructure - Part 1: General*

CEN/TS 15399:2007, *Gas Supply Systems - Guidelines for Management systems for Gas Distribution Network*

CEN/TR 16395:2012, *Gas Infrastructure - CEN/TC 234 Pressure Definitions - Guideline Document*

3 Relevant national legislation/ regulation and standards for gas pipelines with a maximum operating pressure greater (MOP) greater than 16 bar to which EN 1594 is applicable

3.1 Page for Austria (EN 1594)

3.1.1 Relevant Austrian legislation/regulations for gas pipelines with a maximum operating pressure greater than 16 bar (gas transmission) to which EN 1594:2013 is applicable

3.1.1.1 National law/ Federal law

— BGBl. I Nr. 107/2011 Gaswirtschaftsgesetz (National gas law);

— BGBl. II Nr.171/2012 Gas-Marktmodell-Verordnung 2012 (Natural gas market regulation);

— BGBl. II Nr. 172/2012 Gasnetzdienstleistungsqualitäts-Verordnung (Gasgrid service quality regulation);

— BGBl. II Nr. 309/2012 Gas-Systemnutzungsentgelte-Verordnung 2013 (Gas system usage fee regulation);

— BGBl. II Nr. 439/2011 Sonstige Transporte-Gas-Systemnutzungstarife Verordnung Novelle 2012 (Additional transport gas system usage regulation amendment 2012).

Source of supply:

Rechtsinformationssystem des Bundes (RIS): www.ris.bka.gv.at

Energie-Control Austria, Rudolfsplatz 13a, A-1010 Wien: http://www.e-control.at/de/recht/bundesrecht/gas

3.1.1.2 National Functional Standards (NSB)

None.

3.1.1.3 Technical rules – (Detailed) Code of practice

— ÖVGW G E100: Erdgasleitungen (Natural gas pipelines);

— ÖVGW G E101: Druckprüfung von Erdgasleitungen (Pressure Testing of natural gas pipelines);

— ÖVGW G E120: Erdgasleitungen aus Stahl (Natural gas pipelines made of steel);

— ÖVGW G E130: Grabenlose Verfahren (Trenchless piping techniques);

— ÖVGW G B111: In- und Außerbetriebnahme von Erdgasleitungen und Erdgasanlagen (Commissioning and decommissioning of natural gas pipelines and stations);

— ÖVGW G B140: Organisation und Behandlung von Störfällen (Organization and handling of disturbances);

— ÖVGW G B300: Instandhaltung von Erdgasleitungsanlagen (Maintenance of natural gas pipeline facilities);

— ÖVGW G B310: Instandhaltung von Erdgasleitungen: (Maintenance of natural gas pipelines);

— ÖVGW G B430: Abstände von Erdgasleitungsanlagen zu elektrischen Anlagen (Distances between natural gas pipeline facilities and electric installations);

— ÖVGW G O310: Personalqualifikation, Aus- und Weiterbildung (Personnel qualification, training and further education);

— ÖVGW G 20: Kathodischer Korrosionsschutz - Planung und Errichtung (Cathodic corrosion protection – Planning and construction);

— ÖVGW G 21: Kathodischer Korrosionsschutz Inbetriebnahme und Überwachung (Cathodic corrosion protection Commissioning and surveillance);

— ÖVGW G 24: Elektrische Trennstellen (Electric insulation spots);

— ÖVGW G 25: Passiver Korrosionsschutz (Passive protection against corrosion);

— ÖVGW GW 10: Maßnahmen zum Schutz von Versorgungsanlagen bei Bauarbeiten (Measures for the protection of supplying units during construction works).

Source of supply:
Österreichische Vereinigung für das Gas- und Wasserfach
Schubertring 14
1010 Wien
Austria
www.ovgw.at

3.1.2 More restrictive requirements in Austrian legislation/regulations

3.1.2.1 General

More detailed requirements are specified in the above mentioned technical rules.

3.1.2.2 Clauses to note regarding EN 1594

None.

3.2 Page of Finland (EN 1594)

3.2.1 Relevant Finnish legislation/regulations for gas pipelines with a maximum operating pressure greater than 16 bar to which EN 1594 is applicable

3.2.1.1 National law/ Federal law

— Laki vaarallisten kemikaalien ja räjähteiden käsittelyn turvallisuudesta 390/2005 (Act on the Safe Handling and Storage of Dangerous Chemicals and Explosives (390/2005));

— Valtioneuvoston asetus maakaasun käsittelyn turvallisuudesta 551/2009 (Government Decree on Natural Gas Safety).

3.2.1.2 NSB National Functional Standards

— SFS 2897 Maakaasuputkisto. Painekoe (Natural gas pipeline - Pressure test, 1987-05-18);

— SFS 5717 Maakaasun siirtoputkiston sijoittaminensuurjännitejohdon tai -kytkinlaitoksen läheisyyteen (Placing of the natural gas transmission pipeline close to a high-voltage line or substation, 1992-01-28).

3.2.1.3 Technical rules – (Detailed) Code of practice

— Maakaasukäsikirja, Suomen Kaasuyhdistys, Marraskuu 2010 (Natural gas - Codes of practise, Finnish Gas Association, November 2010).

3.2.2 More restrictive requirements in Finnish legislation/regulations

3.2.2.1 General

As a result of circumstances in Finland there is some restrictive legislation concerning the gas infrastructure. These regulations are stated in annex 1 and annex 2 to *Valtioneuvoston asetus maakaasun käsittelyn turvallisuudesta 551/2009* (Government Decree on Natural Gas Safety).

3.2.2.2 Clauses to note regarding EN 1594

Annex 1 in Valtioneuvoston asetus maakaasun käsittelyn turvallisuudesta 551/2009 (Government Decree on Natural Gas Safety).

3.3 Page for France (EN 1594)

3.3.1 Relevant French legislation/regulations for gas pipelines with a maximum operating pressure greater than 16 bar to which EN 1594 (Canalisations pour pression maximale de service supérieur à 16 bar - Prescriptions fonctionnelles) is applicable

3.3.1.1 National law

— **Arrêté du 28 janvier 1981** relatif à la teneur en soufre et composés sulfurés des gaz naturels transportés par canalisations de transport;

— **Décret n° 2012-615 du 2 mai 2012** relatif à la sécurité, l'autorisation et la déclaration d'utilité publique des canalisations de transport de gaz , d'hydrocarbures et de produits chimiques , modifié par le décret n° 2013-1272 du 27 décembre 2013 .

  — depending of the size of the project, obligation to submit a safety study of the pipeline for consultation to the public concerned by the project (Décret n°2012-615 modifié);

  — depending of the size of the pipeline, obligation to produce to the authorities a intervention safety-plan at the start-up of the pipeline (Décret n°2012-615 modifié);

  — sizing of the pipeline linked to the environment (Arrêté du 5 mars 2014);

  — the ratio between the yield strength and the rupture strength shall not exceed 0.85 in certain cases (Arrêté du 5 mars 2014);

  — obligation to produce a safety study for all existing pipelines and to update these studies at least every 5 years according GESIP code of partice Rapport n° 2008/01 (Arrêté du 5 mars 2014).

— **Arrêté du 13 juillet 2000** modifié portant règlement de sécurité de la distribution de gaz combustible par canalisations modifié par l'arrêté du 29 janvier 2008;

— **Décret n° 2004-555 du 15 juin 2004** relatif aux prescriptions techniques applicables aux canalisations et raccordements des installations de transport, de distribution et de stockage de gaz;

— **Arrêté du 5 mars 2014** portant règlement de sécurité des canalisations de transport de gaz combustibles, d'hydrocarbures liquides ou liquéfiés et de produits chimiques

— **Arrêté du 15 février 2012** modifié relatif à l'exécution de travaux à proximité des réseaux.

Source of supply:

Direction des Journaux Officiels,
26 rue Desaix,
F - 75727 PARIS Cedex 15.

3.3.1.2 Detailed codes of practice

Recommended codes of practice **concerning safety** are the following:

— Guide GESIP n°2006/02: Mise en œuvre d'un Systéme d'Information Géographique;

— Guide GESIP n°2007/01: Méthodologie pour la réalisation d'un plan de surveillance et d'intervention sur une canalisation de transport;

— Guide GESIP n°2008/01: Guide méthodologique pour la réalisation d'une étude de sécurité concernant une canalisation de transport.

Some of these GESIP codes are currently under revision.

Recommended codes of practice **concerning design and construction** are the following:

— Guide GESIP n°2007/02: Conditions de pose du dispositif avertisseur et mesures de substitution applicables;

— Guide GESIP n°2006/04: Pose de canalisation à l'air libre;

— Guide GESIP n°2006/05: Profondeurs d'enfouissement et les modalites particulieres de pose et de protection de canalisation a retenir en cas de difficultes techniques;

— Guide GESIP n°2007/06: Epreuve initiale avant mise en service;

— Guide GESIP n°20007/07: Accessoires non standards hors du champ du décret n°1046 d'application de la directive 97/23/ec;

— Guide GESIP n°2008/02: Canalisations de transport: dispositions compensatoires;

— Guide GESIP n°2010/01: Canalisations de surface projetée au sol ne dépassant pas 500 m2.

Recommended codes of practice **concerning maintenance** are the following:

— Guides GESIP n° 2007/04 (méthodologie) et 2007/05 (modes opératoires): Surveillance, maintenance et réparations des canalisations de transport;

— Guide GESIP n°2006/03: Dispositions techniques relatives à l'arrêt temporaire ou définitif d'exploitation ou au transfert d'usage d''une canalisation de gaz.

Recommended codes of practice **concerning normative references** are the following:

— Document GESIP rapport n° 2007/09: Normes canalisations.

Source of supply:

GESIP: 22, rue du Pont Neuf, BP 2722, 75027 Paris cedex 01 France.

3.3.2 More restrictive requirements in French legislation/regulations

3.3.2.1 General

There is no contradiction between French regulation and the standard EN 1594:2013.

The new French ordinance (Arrêté du 4 août 2006 replaced by arrête du 5 mars 2014) refers to EN 1594 for natural gas supply systems and to EN 14161 for oil and chemicals products pipelines (EN 14161 "Petroleum and natural gas industries - Pipeline transportation systems (ISO 13623:2009 modified)".

This order refers also to GESIP codes of practice listed above. Most of these codes are still in a draft version; they have to be approved by the French administration and they should be published before the end of 2014. These codes complete the EN 1594.

The main restrictive requirements of the French legislation are the following:

— depending of the size of the project, obligation to submit a safety study of the pipeline for consultation to the public concerned by the project (Décret n°85-1108 modifié);

— depending of the size of the pipeline, obligation to produce to the authorities a intervention safety-plan at the start-up of the pipeline (Décret n°85-1108 modifié);

— sizing of the pipeline linked to the environment (Arrêté du 4 août 2006);

— the ratio between the yield strength and the rupture strength shall not exceed 0.85 in certain cases (Arrêté du 4 août 2006);

— obligation to produce a safety study for all existing pipelines before September 2009 according GESIP code of partice Rapport n° 2008/01 (Arrêté du 4 août 2006).

3.3.2.2 Clauses to note regarding EN 1594

Nothing to report.

3.4 Page for Germany (EN 1594)

3.4.1 Relevant German legislation/regulations for gas pipelines with a maximum operating pressure greater than 16 bar to which EN 1594:2013 is applicable

3.4.1.1 National law/ Federal law

— Gesetz über die Elektrizitäts- und Gasversorgung (Energiewirtschaftsgesetz - EnWG) vom 07. Juli 2005 (BGBl. I, S. 1970 (3621)), zuletzt geändert durch Art. 2 G v. (16. Januar 2012 (BGBI. I S. 74) (Energy Industry Act);

— Verordnung über Gashochdruckleitungen (Gashochdruckleitungsverordnung - GasHDrLtgV) 18.05.2011 (BGBl. I S. 928) (Ordinance on high pressure gas pipelines (High pressure gas pipeline ordinance - GasHDrLtgV);

— Arbeitsschutzgesetz ASG (Occupational health and safety act);

— Verordnung zum Schutz vor Gefarrstoffen (Gefahrstoffverordnung – GefStoffV) (Ordinance to protect against hazardous materials – Hazardous materials ordinance);

— Verordnung über Sicherheit und Gesundheitsschutz bei der Bereitstellung von Arbeitsmitteln und deren Benutzung bei der Arbeit, über Sicherheit beim Betrieb überwachungsbedürftiger Anlagen und über die

Organisation des betrieblichen Arbeitsschutzes (Betriebssicherheitsverordnung – Ordinance concerning the protection of safety and health in the provision of work equipment and its use at work, concerning safety when operating installations suject to monitoring and concerning the organisation of industrial safety and health at work (Ordinance on Industrial Safety and Health – BetrSichV);

— Vorschrift der Berufsgenossenschaft, BGV A 1 Allgemeine Vorschriften" (Regulations of professional association for occupational health and safety BGV A1, "General regulations");

— Vorschrift der Berufsgenossenschaft, BGV C 22 "Bauarbeiten" (Regulations of professional association for occupational health and safety, BGV C 22 "Construction works");

— Vorschrift der Berufsgenossenschaft, BGV D 6 "Krane" (Regulations of professional association for occupational health and safety, BGV D 6 "Cranes");

— Vorschrift der Berufsgenossenschaft, BGV D 8 "Winden, Hub- und Zuggeräte" (Regulations of professional association for occupational health and safety, BGV D 8 "Winding-, pulling- and dragging devices");

— Vorschrift der Berufsgenossenschaft, BGV D 29 "Fahrzeuge" (Regulations of professional association for occupational health and safety, BGV D 29 "Vehicles").

Source of supply:
Bundesanzeiger Verlagsges. mbH Bonn,
Bundesgesetzblatt,
Postfach 13 20,
53003 Bonn,
Germany

3.4.1.2 NSB National Functional Standards

There are no national functional standards in addition to EN 1594.

In Germany, there exists an agreement between DVGW and DIN. Whilst the DIN is responsible for national product standards, the DVGW is responsible for the setting of national functional technical rules.

All European standards, including functional standards, are published as DIN EN standards. DVGW technical rules are aligned to DIN/DIN EN standards, where applicable.

The DIN standards related to gas are taken into account by DVGW and are part of the so called DVGW Set of Codes of practice.

3.4.1.3 Technical rules – (Detailed) Code of practice

— DVGW G 463 "Gasleitungen aus Stahlrohren für einen Betriebsdruck > 16 bar – Errichtung" (Gas steel pipelines with an operating pressure > 16 bar – construction);

— DVGW G 466-1 "Gasleitungen aus Stahlrohren mit einem Betriebsdruck größer als 5 bar - Instandhaltung" (Steel gas pipework rated for more than 5 bar - maintenance).

Source of supply:

Wirtschafts- und Verlagsgesellschaft Gas und Wasser mbh,
Postfach 14 01 51,
53056 Bonn,
Germany
Website:
www.wvgw.de

— Berufsgenossenschaftliche Regeln für Sicherheit und Gesundheit bei der Arbeit BGR 500/Teil 2 Kapitel 2.31 "Arbeiten an Gasleitungen" (Rules of professional association for occupational health and safety at work, Part 2, clause 2.31, "Working on Gas pipeworks");

— TRBS 1112 Teil 1 "Explosionsgefährdungen bei und durch Instandhaltungsarbeiten - Beurteilungen und Schutzmaßnahmen".

Source of supply:

Carl Heymanns Verlag KG,
Luxemburger Straße 449,
50939 Köln,
Germany

3.4.2 More restrictive requirements in German legislation/regulations

3.4.2.1 General

More detailed requirements are specified in Federal Law and the above mentioned codes of practice.

3.4.2.2 Clauses to note regarding EN 1594

More detailed requirements are specified in Federal Law and the above mentioned codes of practice.

3.5 Page for Greece (EN 1595)

3.5.1 Relevant Greek legislation/regulations for gas pipelines with a maximum operating pressure greater than 16 bar to which EN 1594 is applicable

3.5.1.1 National law/ Federal law

— Ministerial Decision “Technical code for natural gas transmission systems with MOP over 16 bar” Governmental Gazette 603B/05.03.2012. “Τεχνικός Κανονισμός «Συστήματα μεταφοράς Φυσικού Αερίου με Μέγιστη Πίεση Λειτουργίας άνω των 16 bar”;

— Ministerial Decision “Modifications on Technical code for natural gas transmission systems with MOP over 16 bar” Governmental Gazette 2101B/2012. “Τροποποίηση του 3/Α/οικ.4303/22-02-2012 Τεχνικού Κανονισμού «Συστήματα μεταφοράς Φυσικού Αερίου με Μέγιστη Πίεση Λειτουργίας άνω των 16 bar»”.

3.6 Page for Hungary (EN 1594)

3.6.1 Relevant Hungarian legislation/regulations for gas pipelines with a maximum operating pressure greater than 16 bar to which EN 1594 is applicable

3.6.1.1 National law/ Federal law

— **Law XL of 2008**: Natural Gas Supply (Gas Act);

— **Government Law Decree 19/2009 (I. 30.)**: On the implementation of provisions of Law XL of 2008;

— **GKM (Ministry of Economy and Transport) Decree 79/2005. (X. 11.)**: Safety requirements for hydrocarbon transportation pipelines and publishing the safety regulations for hydrocarbon transportation pipelines;

— **Government Law Decree 53/2012. (III. 28.)**: Regulations on statutory procedures for specific buildings that belong to the scope of competence of the mining authority.

3.6.1.2 NSB National Functional Standards

The National Standardization Body of Hungary (MSZT) has adopted EN 1594 standard without any alterations.

3.6.1.3 Technical rules – (Detailed) Code of practice

None.

3.6.2 More restrictive requirements in Hungarian legislation/regulations

None.

3.6.2.1 General

None.

3.6.2.2 Clauses to note regarding EN 1594

None.

3.7 Page for Ireland (EN 1594)

3.7.1 Relevant Irish legislation/regulations for gas pipelines with a maximum operating pressure greater than 16 bar (gas transmission) to which EN 1594 is applicable

3.7.1.1 National law

3.7.1.1.1 Energy

— Energy (Miscellaneous Provisions) Act 2006;

— Gas Act 1976 (No. 30 of 1976);

— S.I. No. 283 of 1987. (Gas [amendment] act, [section 2 order 1987]);

— S.I. No. 196 of 2003. (Gas (Amendment) Act 1987 (Section 2) (Distribution) Order 2003.

Source of supply:

Irish Statute Book (http://www.irishstatutebook.ie /)

3.7.1.1.2 Health and safety

Safety, Health and Welfare at work Act 2005 (No.10 of 2005), as amended.

Source of supply:

Irish Statute Book (http://www.irishstatutebook.ie /)

3.7.1.2 NSB National Standards

I.S. 328, Code of practice for gas transmission pipelines and pipeline installations

3.7.2 More restrictive requirements in Irish legislation/regulations

3.7.2.1 General

None.

3.7.2.2 Clauses to note regarding EN 1594

None.

3.8 Page for Italy (EN 1594)

3.8.1 Relevant Italian legislation/regulations for gas pipelines with a maximum operating pressure greater than 16 bar to which EN 1594 is applicable

3.8.1.1 National law/ Federal law

— **Decreto Ministeriale 17/04/08**, Regola tecnica per la progettazione, costruzione, collaudo, esercizio e sorveglianza delle opere e degli impianti di trasporto del gas naturale con densità non superiore a 0,8. (Ministry Decree 17/04/08 – Technical regulations for design, construction, testing, operation and surveillance of natural gas transport networks);

— **Decreto Legislativo 9 aprile 2008** , n. 81, Attuazione dell'articolo 1 della legge 3 agosto 2007, n. 123, in materia di tutela della salute e della sicurezza nei luoghi di lavoro. (Legislative Decree 9 April 2008 no. 81, Implementation of Article 1 of the Law of 3 August 2007, n. 123, concerning the protection of health and safety in the workplace.);

— **Decreto Ministeriale 01/12 2004, n. 329**, Regolamento recante norme per la messa in servizio ed utilizzazione delle attrezzature a pressione e degli insiemi di cui all'articolo 19 del decreto legislativo 25 febbraio 2000, n. 93. (Ministerial Decree 01/12 2004, n. 329 Regulations for commissioning and use of pressure equipment and assemblies referred to in Article 19 of Legislative Decree 25 February 2000, n. 93;

— **Autorità per l'energia elettrica e il gas e il sistema idrico (AEEGSI) - Deliberazione 602/2013/R/gas regolazione della qualità del servizio di trasporto del gas naturale per il periodo di regolazione 2014-2017 –** Parte I del testo unico della regolazione della qualità e delle tariffe per i servizi di trasporto e dispacciamento del gas naturale per il periodo di regolazione 2014-2017 (Regulatory Authority for Electricity, Gas and Water (AEEGSI) – Directive n. 602/2013 Adjusting the quality of the transportation service of natural gas for the period of adjustment 2014-2017) - Part I Consolidated regulation of the quality and pricing of transport services and dispatching of natural gas for the regulatory period 2014-2017.

3.8.1.2 NSB National Functional Standards

UNI 9571-1 Impianti di ricezione, prima riduzione e misura del gas naturale - Parte 1: Sorveglianza (Initial pressure reduction plants for natural gas – Part 1: Surveillance)

UNI 9167 Impianti di ricezione, prima riduzione e misura del gas naturale – Progettazione, costruzione e collaudo ((Initial pressure reduction plants for natural gas - Design, construction and testing)

UNI/TR 11228 Opere di protezione per tubazioni gas interrate per interferenze con ferrovie, tranvie, strade, altri servizi interrati e fabbricati (Protecting structures for buried gas pipes for interferences with railways, tramways, roads, other buried utilities and buildings)

3.8.1.3 Technical rules – (Detailed) Code of practice

The technical rules when issued by ministerial decree are compulsory. The directives issued by Regulatory Authority for Electricity, Gas and Water (AEEGSI) are compulsory. The guidelines issued by CIG (Italian Gas Committee) support some requirements given in the AEEGSI Directives.

CIG guidelines:

Linee guida riguardanti la protezione contro le esplosioni nelle attività di installazione e/o sorveglianza di apparecchi utilizzati negli impianti di regolazione della pressione e di odorizzazione nelle reti di trasporto e distribuzione del gas combustibile (Guidelines on protection against explosions in the appliances installation and surveillance activity for pressure regulation and odorization installations in trasmission and distribution network
Le forniture di emergenza di gas naturale mediante carro bombolaio e/o veicolo cisterna (Gas transport - Emergency gas supplies by vehicles)
La gestione delle emergenze di servizio nei sistemi di trasporto del gas naturale (Gas emergency management in transport networks)

3.8.2 More restrictive requirements in Italian legislation/regulations

3.8.2.1 General

For design, construction, testing, operation and surveillance of natural gas transport networks reference shall be made to the Ministry Decree 17/04/08 containing technical regulations. The decree implementation is based on CEN/TC 234 standards.

3.8.2.2 Clauses to note regarding EN 1594

a) Clause 6.1 Pressure levels

For Italian legislation the relation among MOP, OP, TOP and MIP is as given in Table 2:

Table 2 — Relation among MOP, OP, TOP and MIP according to Italian legislation

Maximum operating pressure MOP	Operating pressure OP	Temporary operating pressure TOP	Minimum incidental pressure MIP
MOP > 24 bar	OP ≤ 1,025 MOP	TOP ≤ 1,05 MOP	MIP ≤ 1,10 MOP
24 bar ≥ MOP > 5 bar	OP ≤ 1,025 MOP	TOP ≤ 1,10 MOP	MIP ≤ 1,15 MOP
5 bar ≥ MOP > 0,04 bar	OP ≤ 1,075 MOP	TOP ≤ 1,10 MOP	MIP ≤ 1,15 MOP
MOP ≤ 0,04 bar	OP ≤ 1,075 MOP	TOP = MIP ≤ 1,20 MOP	

3.9 Page for the Netherlands (EN 1594)

3.9.1 Relevant Dutch legislation/regulations for gas pipelines with a maximum operating pressure greater than 16 bar to which EN 1594 is applicable

3.9.1.1 National law/ Federal law

— **Besluit van 28 november 2006**, houdende regels met betrekking tot de registratie van gegevens externe veiligheid inrichtingen, transportroutes en buisleidingen (Registratiebesluit externe veiligheid);

— **Besluit van 27 mei 2004**, houdende milieukwaliteitseisen voor externe veiligheid van inrichtingen milieubeheer (Besluit externe veiligheid inrichtingen);

— **Besluit van 24 juli 2010**, houdende milieukwaliteitseisen externe veiligheid voor het vervoer van gevaarlijke stoffen door buisleidingen (Besluit externe veiligheid buisleidingen);

— **Wet milieubeheer**;

— **Wet Informatie-uitwisseling Ondergrondse** Netten (WION; document uitgegeven door de Rijksoverheid, Den Haag;

— **Besluit van 6 december 2002**, houdende regels ter uitvoering van de Mijnbouwwet (Mijnbouwbesluit);

— **GASWET, WET van 22 juni 2000**, houdende regels omtrent het transport en de levering van gas (Gas Act 2000 (Management on quality aspects of gas distribution systems));

— **Wet van 3 juli 1986**, houdende regelen inzake bescherming van de bodem (Wet bodembescherming);

— **Wet van 6 november 2008**, houdende regels inzake een vergunningstelsel met betrekking tot activiteiten die van invloed zijn op de fysieke leefomgeving en inzake handhaving van regelingen op het gebied van de fysieke leefomgeving (Wet algemene bepalingen omgevingsrecht).

3.9.1.2 NSB National Functional standards

— NEN 3650-1:2012, Eisen voor buisleidingsystemen - Deel 1:Algemene eisen (Requirements for pipeline systems - Part 1:General requirements);

— NEN 3650-2:2012, Eisen voor buisleidingsystemen - Deel 2:Aanvullende eisen voor leidingen van staal (Requirements for pipeline systems - Part 2:Additional specifications for steel pipelines);

— NEN 3650-3:2012, Eisen voor buisleidingsystemen - Deel 3:Aanvullende eisen voor leidingen van kunststof (Requirements for pipeline systems - Part 3:Additional specifications for plastic pipelines);

— NEN 3650-4:2012, Eisen voor buisleidingsystemen - Deel 4:Aanvullende eisen voor leidingen van beton (Requirements for pipeline systems - Part 4:Additional specifications for concrete pipelines);

— NEN 3650-5:2012, Eisen voor buisleidingsystemen - Deel 5:Aanvullende eisen voor leidingen van gietijzer (Requirements for pipeline systems - Part 5:Additional specifications for cast iron pipelines);

— NEN 3651:2012, Aanvullende eisen voor buisleidingen in of nabij belangrijke waterstaatswerken (Additional requirements for pipelines in or nearby important public works);

— NEN 3653:2009, Methoden voor de vaststelling van acceptatiecriteria voor defecten in rondlassen van pijpleidingen (Methods for the determination of NDE acceptance criteria for defects in pipeline girth welds).

3.9.1.3 Technical rules – (Detailed) Code of practice

— NTA 8000:2009, Specificatie voor een risicomanagementsysteem (RMS) voor risico's van buisleidingsystemen voor het transport van gevaarlijke stoffen in de beheerfase (Specification of a Risk Management System (RMS) for pipeline systems for the transport of hazardous substances during operations);

— NTA 8120:2014, Assetmanagement - Eisen aan een veiligheids-, kwaliteits- en capaciteitsmanagementsysteem voor het elektriciteits- en gasnetbeheer (Asset management - Requirements for a safety, quality and capacity management system for electricity and gas network operations);

— NPR 3659:1996/A1:2003/C1:2006, Ondergrondse pijpleidingen - Grondslagen voor de sterkteberekening (Underground pipelines - Basic principles for strength calculation).

3.9.2 More restrictive requirements in Dutch legislation/regulations

3.9.2.1 General

No detailed specifications needed.

3.10 Page for România (EN 1594)

3.10.1 Relevant Românian legislation/regulations for gas pipelines with a maximum operating pressure greater than 16 bar to which EN 1594 is applicable

3.10.1.1 National law/ Federal law

3.10.1.1.1 NSB National Functional Standards - ASRO

— SR EN 1594:2009**,** Sisteme de alimentare cu gaz. Conducte de transport pentru presiune maximă de operare mai mare de 16 bar. Cerinţe funcţionale

3.10.1.1.2 Technical rules – (Detailed) Code of practice

— Norme tehnice pentru proiectarea şi execuţia conductelor de transport gaze naturale (**Technical norms for desing and execution natural gas transmission system)**

3.10.2 More restrictive requirements in Romanian legislation/regulations

3.10.2.1 General

None.

3.10.2.2 Clauses to note regarding EN 1594

None.

4 Relevant national legislation/ regulation and standards for gas pipework in buildings with a maximum operating pressure less than or equal to 5 bar (gas installation) to which EN 1775 is applicable

4.1 General

NOTE For gas installations with maximum operating pressure over 5 bar and all industrial piping over 0,5 bar consult EN 15001-1 and EN 15001-2 (Clause 14).

4.2 Page for Austria (EN 1775)

4.2.1 Relevant Austrian legislations/regulations for gas installation in buildings to which EN 1775 is applicable

4.2.1.1 National law/Federal law

— Gas- (Sicherheits-) gesetze der Bundesländer (Gas (safety) laws of the federal states);

— Bauordnungen der Länder (Building regulations of the Austrian federal states).

Source of supply:

Rechtsinformationssystem des Bundes (RIS), www.ris.bka.gv.at

4.2.1.2 NSB National Functional standards

None.

4.2.1.3 Technical rules – (Detailed) Code of practice

— ÖVGW G 1: Technische Richtlinie für die Einrichtung und Änderung von Niederdruck-Gasanlagen (TR Gas) (Technical rules for construction and modification of low pressure gas installations);

— ÖVGW G 4: Aufstellung von Gasgeräten über 50 kW (Installation of gas appliances greater 50 kW);

— ÖVGW G 6: Gas-Inneninstallationen für Betriebsdrücke über 100 mbar bis einschließlich 5 bar (Gas installations inside buildings for operating pressures above 100 mbar up to 5 bar);

— ÖVGW G 10: Technische Richtlinie für Betrieb und Instandhaltung von Gasanlagen (Technical rules for operation and maintenance of gas installations);

— ÖVGW G 11: Rohrweitenberechnung (Calculation of tube dimensions);

— ÖVGW G 12: Messverfahren für die Verbrennungsluftzuführung (Measuring method for combustion air feeding);

— ÖVGW G 85: Gasanlagen in Laboratorien und Unterrichtsräumen (Gas installation in laboratories and instructional rooms);

— ÖVGW G E151: Hausanschlussleitungen (Gas service lines);

Source of supply:

Österreichische Vereinigung für das Gas- und Wasserfach, Schubertring 14, 1010 Wien, Austria: www.ovgw.at

4.2.2 More restrictive requirements in Austrian legislation/regulations

4.2.2.1 General

More detailed requirements are specified in the above mentioned technical rules.

4.2.2.2 Clauses to note regarding EN 1775

None.

4.3 Page for Belgium (EN 1775)

4.3.1 Relevant Belgian legislations/regulations for gas installation in buildings to which EN 1775 is applicable

— Royal Decree of 28 June 1971 « Arrêté royal déterminant les mesures de sécurité à prendre lors de l'établissement et dans l'exploitation des installations de distribution de gaz par canalisations. »;

— Arrêté Royal du 12 juillet 2012 modifiant l'arrêté royal du 7 juillet 1994 fixant les normes de base en matière de prévention contre l'incendie et l'explosion, auxquelles les bâtiments nouveaux doivent satisfaire.

4.3.1.1 NSB National Functional standards

— NBN D51-003 “Binnenleidingen voor aardgas van de verbruikstoestellen – Algemene bepalingen - Installations intérieures alimentées en gaz naturel et placement des appareils d'utilisation – Dispositions générales”;

— NBN D51-004 “Installaties voor brandbaar gas lichter dan lucht, verdeeld door leidingen – Bijzondere installaties - Installations alimentées en gaz combustible plus léger que l'air, distribué par canalisations – Installations particulières.”

4.3.1.2 Technical rules – (Detailed) Code of practice

None.

4.3.2 More restrictive requirements in Belgian legislation/regulations

4.3.2.1 General

For Belgium the application of EN 1775 annex A (RHT principle) procedure B is mandatory.

4.3.2.2 Clauses to note regarding EN 1775

Table 3 — Clauses to note regarding EN 1775

Clause of EN 1775 (2007)	Clause of national standard
4.4 and 5.2	NBN D51-003 § 4.5.1.2 Gas tightness achieved by metal to metal contact is required for alle types of joints and fittings used inside a building (threaded joints, press fittings, mechanical compression joints and unions).
5.2.3.1	NBN D51-003 § 4.5.1.3.2 Mechanical compression joints shall comply with some specific requirements regarding the locking ring and the cap nut
4.3	NBN D51-003 § 4.3.3 Mechanical compression joints may not be build in walls or floors

4.4 Page for Finland (EN 1775)

4.4.1 Relevant Finnish legislations/regulations for gas installation in buildings to which EN 1775 is applicable

4.4.1.1 National law/Federal law

— Laki vaarallisten kemikaalien ja räjähteiden käsittelyn turvallisuudesta 390/2005 (Act on the Safe Handling and Storage of Dangerous Chemicals and Explosives (390/2005));

— Valtioneuvoston asetus maakaasun käsittelyn turvallisuudesta 551/2009 (Government Decree on Natural Gas Safety);

— Valtioneuvoston asetus maakaasu-, nestekaasu- ja öljylämmityslaitteistojen asennus- ja huoltotoimintaa sekä maanalaisten öljysäiliöiden tarkastusta harjoittavien hyväksymisestä 558/2012 (Government Decree on approval of installation and maintenance companies).

4.4.1.2 NSB National Functional standards

— SFS 2897 Maakaasuputkisto. Painekoe (Natural gas pipeline - Pressure test, 1987-05-18).

4.4.1.3 Technical rules – (Detailed) Code of practice

— Maakaasukäsikirja, Suomen Kaasuyhdistys, Marraskuu 2010 (Natural gas - Codes of practise, Finnish Gas Association, November 2010).

These codes of practice include additional useful information.

4.4.2 More restrictive requirements in Finnish legislation/regulations

4.4.2.1 General

As a result of circumstances in Finland there is some restrictive legislation concerning the gas infrastructure. These regulations are stated in annex 1 and annex 2 in Valtioneuvoston asetus maakaasun käsittelyn turvallisuudesta 551/2009 (Government Decree on Natural Gas Safety).

4.4.2.2 Clauses to note regarding EN 1775

— Annex 2 in Valtioneuvoston asetus maakaasun käsittelyn turvallisuudesta 551/2009 (Government Decree on Natural Gas Safety)

4.5 Page for France (EN 1775)

4.5.1 Relevant French legislations/regulations for gas installation in buildings to which EN 1775 is applicable

4.5.1.1 National law

a) Residential buildings:

— Code de la Construction et de l'habitation;

— Décret no 62-608 du 23 mai 1962 fixant les règles techniques et de sécurité applicables aux installations de gaz combustible;

— Arrêté du 2 août 1977 modifié fixant les règles techniques et de sécurité applicables aux installations de gaz combustible et d'hydrocarbures liquéfiés situées à l'intérieur des bâtiments d'habitation ou de leurs dépendances;

— Arrêté du 23 juin 1978 relatif aux installations fixes destinées au chauffage et à l'alimentation en eau chaude sanitaire des bâtiments d'habitation, de bureaux ou recevant du public;

— Arrêté du 15 juillet 1980 modifié rendant obligatoires des spécifications techniques relatives à la réalisation et à la mise en œuvre des canalisations de gaz à l'intérieur des bâtiments d'habitation ou de leurs dépendances;

— Arrêté du 16 juillet 1980 modifié relatif à l'attribution de l'attestation d'aptitude concernant les installations de gaz situées à l'intérieur des bâtiments d'habitation ou de leurs dépendances;

— Arrêté du 31 janvier 1986 modifié relatif à la protection contre l'incendie des bâtiments d'habitation;

— Arrêté du 4 mars 1996 portant codification des règles de conformité des matériels à gaz aux normes les concernant lorsqu'ils sont situés à l'intérieur des bâtiments d'habitation et de leurs dépendances;

— Arrêté du 06 avril 2007 - Diagnostics gaz.

b) Public access buildings:

— Code de la Construction et de l'habitation;

— Code du travail;

— Décret no 62-608 du 23 mai 1962 fixant les règles techniques et de sécurité applicables aux installations de gaz combustible;

— Arrêté du 22 juin 1990 modifié portant règlement de sécurité contre l'incendie relatif aux établissements recevant du public (livre III);

— Arrêté du 25 juin 1980 modifié portant règlement de sécurité contre l'incendie relatif aux établissements recevant du public (livres I et II);

— Arrêté du 4 juillet 2007 portant approbation de diverses dispositions complétant et modifiant le règlement de sécurité contre les risques d'incendie et de panique dans les établissements recevant du public.

c) High rise buildings:

— Code de la Construction et de l'habitation;

— Décret no 62-608 du 23 mai 1962 fixant les règles techniques et de sécurité applicables aux installations de gaz combustible;

— Arrêté du 18 octobre 1977 modifié portant règlement de sécurité pour la construction des IGH et leur protection contre les risques d'incendie et de panique.

d) Industrial buildings:

— Code du travail;

— Arrêté du 15 janvier 1962 modifié relatif à la réglementation des canalisations d'usines;

— Décret no 62-608 du 23 mai 1962 fixant les règles techniques et de sécurité aplicables aux installations de gaz combustible;

— Loi no 76-663 du 19 juillet 1976 relative aux installations classées pour la protection de l'environnement.

Source of supply:

Direction des Journaux Officiels,
26 rue Desaix,
F - 75727 PARIS Cedex 15,
France

4.5.1.2 Detailed code of practice

— Reference document P 45 204NF DTU 61.1: 2006

— Document Technique Unifié no 61.1: Installations de gaz dans les locaux d'habitation

Source of supply:

AFNOR Association Française de Normalisation**,**

11 rue Francis de Pressensé,
F – 93571 La Plaine Saint-Denis Cedex,
France

4.5.2 More restrictive requirements in French legislation/regulations

4.5.2.1 General

No detailed specification needed.

4.5.2.2 Clauses to note regarding EN 1775:2007

No detailed specification needed.

4.6 Page for Germany

4.6.1 Relevant German legislations/regulations for gas installation in buildings to which EN 1775 is applicable

4.6.1.1 National law/Federal law

— Gesetz über die Elektrizitäts- und Gasversorgung (Energiewirtschaftsgesetz – EnWG) (Energy Industry Act);

— Verordnung über die Allgemeinen Bedingungen für den Anschluss und dessen Nutzung für Gasversorgungen in Niederdruck (Niederdruckanschlussverordnung – NDAV) (Ordinance on general conditions for connection and use of gas supplies in low pressure (Low pressure connection decree);

— Arbeitsschutzgesetz - ASG (Occupational health and safety act);

— Vorschriften der Berufsgenossenschaft, BGV für Sicherheit und Gesundheit bei der Arbeit BGV A1, "Allgemeine Vorschriften" (Health and safety regulations of the professional association for occupational health and safety on safety and health at work, BGV A1, "General regulations").

Source of supply:

Bundesanzeiger Verlagsges. mbH Bonn,
Bundesgesetzblatt,
Postfach 13 20,
53003 Bonn,
Germany

4.6.1.2 Law of the Federal States

— Bauordnungen der Länder (Construction ordinances of the German federal states);

— Feuerungsverordnungen der Länder (Combustion plant ordninaces of the German federal states).

Source of supply:
Deutsches Institut für Bautechnik,
Kolonnenstraße 30,
10829 Berlin,
Germany

— Richtlinien über brandschutztechnische Anforderungen an Leitungsanlagen der Länder (Leitungsanlagen-Richtlinie – MLAR), (Regulation on fire protection requirements for installation pipework; to be implemented in the German federal states)

Source of supply for the model regulation:
Werner-Verlag GmbH,
Karl Rudolf-Straße 172,
40215 Düsseldorf,
Germany

4.6.1.3 NSB National Functional standards

There are no national functional standards in addition to EN 1775.

In Germany, there exists an agreement between DVGW and DIN. Whilst the DIN is responsible for national product standards, the DVGW is responsible for the setting of national functional technical rules.

All European standards, including functional standards, are published as DIN EN standards. DVGW technical rules are aligned to DIN/DIN EN standards, where applicable.

The DIN standards related to gas are taken into account by DVGW and are part of the so called DVGW Set of Codes of practice.

4.6.1.4 Technical rules – (Detailed) Code of practice

— DVGW G 600 “Technische Regel für Gasinstallationen; DVGW-TRGI 2008 (Technical specification for gas installations; DVGW-TRGI 2008);

— DVGW G 459-1 “Gas-Hausanschlüsse für Betriebsdrücke bis 4 (5) bar; Planung und Errichtung”(Gas service pipes for operating pressures up to 4 (5) bar – Design and construction);

— DVGW G 459-2 "Gas-Druckregelung mit Eingangsdrücken bis 5 bar in Anschlussleitungen“(Gas pressure regulating systems with inlet pressures up to and including 5 bar for gasinstallations);

— Technische Regeln Flüssiggas“ RF 2012 (Technical rules Liquefied Petroleum Gases).

Source of supply:

Wirtschafts- und Verlagsgesellschaft Gas und Wasser mbh
Postfach 140151
D – 53056 Bonn
Germany

Source of information for further guidance:

DVGW Deutsche Vereinigung des Gas- und Wasserfaches e.V.
Josef-Wirmer-Str. 1-3
D – 53123 Bonn
Germany

— Berufsgenossenschaftliche Regeln für Sicherheit und Gesundheit bei der Arbeit; BGR 500/Teil 2 Kapitel 2.31 "Arbeiten an Gasleitungen" (Regulations of professional association for occupational health and safety at work, Part 2, clause 2.31, "Working on Gas pipeworks")

Source of supply:Carl Heymanns Verlag KG

Luxemburger Straße 44

D – 50939 Köln
Germany

Source of information for further guidance:

DVGW Deutsche Vereinigung des Gas- und Wasserfaches e.V.
Josef-Wirmer-Str. 1-3
D – 53123 Bonn
Germany

4.6.2 More restrictive requirements in German legislation/regulations

4.6.2.1 General

Referring to the 1st and 2nd paragraph of the “Introduction” and 3rd up to 5th paragraph of the “Scope”, section 1.1 of EN 1775, the codes of practices mentioned above apply as necessary detailed and restrictive requirements.

4.6.2.2 Clauses to note regarding EN 1775

a) EN 1775, 1.2: For the installation pipework supplied from LPG storage vessels the code of practice TRF 2012 is applicable.

b) EN 1775, 4.4: The requirement of protection against explosion is fulfilled when there is no release of dangerous quantities of gas below 650 ˚C (ignition temperature in mixture natural gas/air) or within a time span of 30 minutes. This goal shall be met exclusively by the gas installation on its own and not by the forced intervention from the outside.

   It means: Isolating the pipework by means of a manual means of isolation cannot be accepted as a sole possibility.

   In case of metallic pipework inside buildings materials, components, joints shall be tight up to 650 ˚C in the sense of a limited leakage rate (e.g. soldered joints are not permitted, see EN 1775, 5.2.2).

   In case of non-metallic pipework inside buildings the goal mentioned above in the first paragraph shall be guaranteed by additional secondary safety devices like excess flow valves. Pipes including their fittings are to be tested and approved in the way that the rupture behaviour in case of full fire and smouldering fire triggers the sufficient signal in order to set off the safety devise so that no leakage of dangerous quantities of gas occurs in advance (see note, last paragraph in EN 1775, 4.6.3).

c) EN 1775, 5.2.1.1, 5.2.1.4: Threaded joints are exclusively permitted as taper/parallel joints with sealants conform to EN 751-2 class ARp) or to EN 751-3 (class FRp and GRp).

d) EN 1775 5.2.1.3: The threaded pipe fittings made of malleable cast iron are exclusively permitted as fittings according to EN 10242, design-symbol A.

e) EN 1775, 5.2.2, note 2: Soft soldering of copper pipes is not permitted.

f) EN 1775, 6.5.1, 6.5.3: The strength test is required. It is not permitted to use the “gas to be distributed” as test fluid.

g) With regard to EN 1775, 6.5.2 the strength test pressure is:

   — STP = 1 bar for MOP ≤ 0,1 bar

   — STP = 3 bar for 0,1 bar < MOP ≤ 1 bar

h) To prevent unauthorised interventions installation (tampering) of active safety measurements (gas excess flow valves) or passive safety measurements are required in domestiv installations.

i) EN 1775, Annex A, A.1 General, last paragraph. The test according to procedure B is valid.

4.7 Page of Greece (EN 1775)

4.7.1 Relevant Greek lislations/regulations for gas installation in buildings to which EN 1775 is applicable

4.7.1.1 National law/Federal law

— Technical Code for Internal Gas installations with OP less or equal than 500mbar. Governmental Gazzette 976B/28.03.2012 “ΤΕΧΝΙΚΟΣ ΚΑΝΟΝΙΣΜΟΣ ΕΣΩΤΕΡΙΚΩΝ ΕΓΚΑΤΑΣΤΑΣΕΩΝ ΦΑ ΜΕ ΠΙΕΣΗ ΛΕΙΤΟΥΡΓΙΑΣ ΕΩΣ ΚΑΙ 500ΜΒΑR”.

4.8 Page of Hungary (EN 1775)

4.8.1 Relevant Hungarian legislations/regulations for gas installation in buildings to which EN 1775 is applicable

4.8.1.1 National law/Federal law

— **Law XL of 2008**: Natural Gas Supply (Gas Act)

— **Government Law Decree 19/2009 (I. 30.)**: On the implementation of provisions of Law XL of 2008

— **11/2004. (II. 13.) GKM rendelet** a gáz csatlakozó vezetékekre és fogyasztói berendezésekre vonatkozó műszaki-biztonsági előírásokról (GKM (Ministry of Economy and Transport) Decree 11/2004))

4.8.1.2 NSB National Functional standards

The National Standardization Body of Hungary (MSZT) has adopted the above-mentioned EN standard without any alterations.

4.8.1.3 Technical rules – (Detailed) Code of practice

None.

4.8.2 More restrictive requirements in Hungarian legislation/regulations

4.8.2.1 General

None.

4.8.2.2 Clauses to note regarding EN 1775

None.

4.9 Page of Ireland (EN 1775)

4.9.1 Relevant Irish legislations/regulations for gas installation in buildings to which EN 1775 is applicable

— Building Control Act 1990 as amended;

— Gas Act 1976 (No. 30 of 1976);

— Energy (Miscellaneous Provisions) Act 2006;

— Electricity Regulation Act 1999 and the subsequent Regulations;

— S.I. No. 225 of 2009, Electricity regulation act 1999 (gas works) Regulations 2009;

— S.I. No. 299 of 2011, Electricity regulation act 1999 (liquefied petroleum gas works) regulations 2011;

— S.I. No. 497 of 1997. (Building regulations);

— S.I. No. 496 of 1997. (Building control regulations);

— S.I. No. 198 of 1992. (Construction products regulations);

— S.I. No. 283 of 1987. (Gas [amendment] act, [section 2 order 1987]);

— S.I. No. 196 of 2003. (Gas (Amendment) Act 1987 (Section 2) (Distribution) Order 2003.

Source of supply:

Irish Statute Book (http://www.irishstatutebook.ie/)

4.9.1.1 Health and safety

Safety, Health and Welfare at work Act 2005 (No.10 of 2005), as amended

Source of supply:

Irish Statute Book (http://www.irishstatutebook.ie/)

4.9.1.2 National law/Federal law

None.

4.9.1.3 NSB National standards

— I.S. 813:2002, Domestic gas installations;

— I.S. 820:2010, Non-domestic gas installations.

4.9.2 More restrictive requirements in Irish legislation/regulations

EN 1775:2007, 5.1 - Polyethylene pipe is a permitted installation material only when used outside buildings and in some other restricted circumstances.

4.9.2.1 Clauses to note regarding EN 1775

None.

4.10 Page of Italy (EN 1775)

4.10.1 Relevant Italian legislations/regulations for gas installation in buildings to which EN 1775 is applicable

4.10.1.1 National law/Federal law

— **Legge 6 dicembre 1971, n. 1083** Norme per la sicurezza dell'impiego del gas combustibile (Law 06/12/1971 n. 1083 "Safety in the use of combustible gases");

— **Decreto 12 aprile 1996** - Approvazione della regola tecnica di prevenzione incendi per la progettazione, la costruzione e l'esercizio degli impianti termici alimentati da combustibili gassosi (Decree of April 12, 1996 - Approval of technical rules of fire prevention for the design, construction and operation of thermal plants fuelled by gaseous fuels);

— **Decreto del Ministero dello sviluppo economico 22/01/2008, n. 37** "Regolamento concernente l'attuazione dell'art. 11-quaterdecies, comma 13, lettera a), della Legge n. 248 del 02/12/2005, recante riordino delle disposizioni in materia di attività di installazione degli impianti all'interno degli edifici. (Decree of the Ministry of Economic Development 22/01/2008, n. 37 "Regulation on the implementation of Article. 11-quaterdecies, paragraph 13, letter a) of Law no. 248 of 02/12/2005 laying down rules on reorganization of the activities of installation of the plants inside the building);

— **Decreto del Presidente della Repubblica 1° agosto 2011, n. 151**. Regolamento recante semplificazione della disciplina dei procedimenti relativi alla prevenzione degli incendi, a norma dell'articolo 49, comma 4 - quater , del decreto-legge 31 maggio 2010, n. 78, convertito, con modificazioni, dalla legge 30 luglio 2010, n. 122. (Decree of the President of Republic 1 August 2011, n. 151. Regulation laying down simplified application of the rules on procedures relating to the prevention of fires, in accordance with Article 49, paragraph 4-c of the Decree-Law of 31 May 2010, n. 78, converted, with amendments by law of 30 July 2010, n. 122).

— Lettera circolare n. 6181/2014 del Ministero dell'interno: "D.M. 12 aprile 1996 "Approvazione della regola tecnica di prevenzione incendi per la progettazione, la costruzione e l'esercizio degli impianti termici alimentati da combustibili gassosi"- Indicazioni applicative" (circular letter n. 6181/2014 of Ministry of Interior - Decree of April 12, 1996 - Approval of technical rules of fire prevention for the design, construction and operation of thermal plants fuelled by gaseous fuels – Application recommendations)

— Decreto Legislativo 4 luglio 2014, n. 102 Attuazione della direttiva 2012/27/UE sull'efficienza energetica, che modifica le direttive 2009/125/CE e 2010/30/UE e abroga le direttive 2004/8/CE e 2006/32/CE (Legislative Decree 4th July 2014 Implementation of energy efficiency Directive 2012/27/EU, which amends directives 2009/125/EC and 2010/30/EU and repeals directives 2004/8/EC and 2006/32/EC)

— Autorità per l'energia elettrica il gas e il sistema idrico (AEEGSI) - Delibera n. 40/2014/R/Gas – Disposizioni in materia di accertamenti della sicurezza degli impianti di utenza a gas (Regulatory Authority for Electricity Gas and Water (AEEGSI) – Directive n. 40/2014/R/Gas – Provisions for the activities of ascertainment of the safety of gas plants)

4.10.1.2 NSB National Functional standards

— UNI 7129-1, Impianti a gas per uso domestico e similari alimentati da rete di distribuzione – Progettazione e installazione – Parte 1: Impianto interno (Gas plants for domestic and similar uses supplied by network – Design and installation – Part 1: Internal plant);

— UNI 7129-2, Impianti a gas per uso domestico e similari alimentati da rete di distribuzione – Progettazione e installazione – Parte 2: Installazione degli apparecchi di utilizzazione, ventilazione e aerazione dei locali di installazione (Gas plants for domestic and similar uses supplied by network – Design and installation – Part 2: Installation of gas appliances, ventilation and aeration of the premises);

— UNI 7129-3, Impianti a gas per uso domestico e similari alimentati da rete di distribuzione – Progettazione e installazione – Parte 3: Sistemi di evacuazione dei prodotti della combustion (Gas plants for domestic and similar uses supplied by network – Design and installation – Part 3: Product of combustion flue systems);

— UNI 7129-4, Impianti a gas per uso domestico e similari alimentati da rete di distribuzione – Progettazione e installazione – Parte 4: Messa in servizio degli impianti/apparecchi (Gas plants for domestic and similar uses supplied by network – Design and installation – Part 4: Gas plants and their appliances: commissioning) UNI 7131 Impianti a GPL per uso domestico non alimentati da rete di distribuzione. Progettazione, installazione, esercizio e manutenzione + EC (LPG plants for domestic use not fed by a distribution network);

— UNI 8723, Impianti a gas per l'ospitalità professionale di comunità e similare - Prescrizioni di sicurezza (Gas plants for professional and groups coking appliances – Safety requirements);

— UNI 10641, Canne fumarie collettive e camini a tiraggio naturale per apparecchi a gas di tipo C con ventilatore nel circuito di combustione - Progettazione e verifica (Natural draught multiple appliance flue ducts and chimneys for type C fan assisted gas appliances. Design and checking). Note: This standard is used in conjunction with EN 13384 series;

— UNI 10738, Impianti alimentati a gas, per uso domestico, in esercizio - Linee guida per la verifica dell'idoneità al funzionamento in sicurezza (settembre 2012). (Existing Gas plants for domestic use - Guidelines for checking their suitability to safe operation);

— UNI 10845, Impianti a gas per uso domestico. Sistemi per l'evacuazione dei prodotti della combustione asserviti ad apparecchi alimentati a gas - Criteri di verifica, risanamento, intubamento (Gas plants for domestic use fed by distribution network – Systems for evacuation of combustion products, connected to gas appliances – Methods for efficiency test, renewal, renovation, lining);

— UNI 11071, Impianti a gas per uso domestico asserviti ad apparecchi a condensazione e affini – Criteri per la progettazione, l'installazione, la messa in servizio e la manutenzione (Gas plants for domestic use connected to condensing appliances and similar – Criteria for design, installation, operation and maintenance);

— UNI 11137, Impianti a gas per uso domestico e similare - Linee guida per la verifica e per il ripristino della tenuta di impianti interni - Prescrizioni generali e requisiti per i gas della II e III famiglia (Gas plants for domestic and similar uses - Guidelines for test and for the restoration of the tightness of inner plants - General prescriptions and requirements for the second and third family gases);

— UNI/TS 11147:2008, Impianti a gas per uso domestico – Impianti di adduzione gas per usi domestici e similari alimentati da rete di distribuzione, da bombole e serbatoi fissi di GPL, realizzati con sistemi di giunzione a raccordi a pressare per tubi metallici – Progettazione, installazione e manutenzione (Gas plants for domestic use supplied by distribution network, by LPG cylinders and LPG storage tanks, performer by press-fitting system for metallic pipes-Design, installation and maintenance);

NOTE This standard will be replaced by the new edition of UNI 7129-1

— UNI/TS 11340, Impianti a gas per uso domestico e similari - Impianti di adduzione gas realizzati con sistemi di tubi semirigidi corrugati di acciaio inossidabile rivestito (CSST) e loro componenti – Progettazione, installazione, collaudo e manutenzione (Gas plants for domestic use and similar uses. Corrugated stainless steel semi-rigid pipe and associated fittings (CSST) for gas pipework – Design, installation and maintenance);

NOTE This standard will be replaced by the new edition of UNI 7129-1

— UNI/TS 11343, Impianti a gas per uso domestico – Impianti di adduzione gas per usi domestici alimentati da rete di distribuzione, da bombole e serbatoi fissi di GPL, realizzati con sistemi di tubazioni multistrato

metallo-plastici – Progettazione, installazione e manutenzione (Gas plants for domestic uses supplied by distribution networks, by LPG cylinders and LPG storage tanks, performed with multilayer pipes – Design, installation and maintenance).

NOTE Note – This standard will be replaced by the new edition of UNI 7129-1

— UNI 11528 Impianti a gas di portata termica maggiore di 35 kW - Progettazione, installazione e messa in servizio (Gas plants over 35 kW - Design, installation and operation)

— UNI 7131 Impianti a GPL per uso domestico non alimentati da rete di distribuzione. Progettazione, installazione ed esercizio (LPG plants for domestic use not fed by a distribution network – Design, installation and operation)

— UNI 7140 Apparecchi a gas per uso domestico - Tubi flessibili non metallici per allacciamento di apparecchi a gas per uso domestico e similare (Gas appliances for domestic use – Non metallic flexible hoses for gas appliances for domestic use and similar)

4.10.1.3 Technical rules – (Detailed) Code of practice

The technical rules when issued by ministerial decree are compulsory.

4.10.2 More restrictive requirements in Italian legislation/regulations

4.10.2.1 General

Italian standards do not allow for pipework downstream the point of delivery (e.g. meter), to use plastic pipes (PE) above ground or inside the buildings.

4.10.2.2 Clauses to note regarding EN 1775

The installation of multilayer pipe systems inside buildings is subject to the requirements of UNI/TS 11343 (see 4.9.1.2).

4.11 Page for the Netherlands (EN 1775)

4.11.1 Relevant Dutch legislations/regulations for gas installation in buildings to which EN 1775 is applicable

4.11.1.1 National law/Federal Law

— Woningwet (Building law);

— Bouwbesluit 2012 (Building Directive);

— ARBO-wet (Safety use of Buildings);

— Besluit drukapparatuur (Staatsblad van het Koninkrijk der Nederlanden 311 Besluit van 5 juli 1999 tot vaststelling van een algemene maatregel van bestuur ter uitvoering van de Wet op de gevaarlijke werktuigen, de Brandweerwet 1985, de Mijnwet 1903, de Mijnwet continentaal plat, de Wet milieubeheer en de Stoomwet met betrekking tot drukapparatuur);

— Wet milieubeheer;

— Activiteitenbesluit milieubeheer (Besluit algemene regels voor inrichtingen milieubeheer);

— Activiteitenregeling milieubeheer (Regeling algemene regels voor inrichtingen milieubeheer).

4.11.1.2 NSB National Functional standards

— NEN 1078, Voorziening voor gas met een werkdruk tot en met 500 mbar - Prestatie-eisen – Nieuwbouw (Supply for gas with an operating pressure up to and including 500 mbar – Performance requirements - New estate);

— NEN 8078, Voorziening voor gas met een werkdruk tot en met 500 mbar - Prestatie-eisen - Bestaande bouw (Supply for gas with an operating pressure up to and including 500 mbar - Performance requirements - Existing estate);

— NEN 2078:1987, Voorschriften voor aardgasinstallaties GAVO (voor bestaande bouw, for existing estate);

— NEN 3028, Eisen voor verbrandingsinstallaties (Requirements for fuel combustion installations).

4.11.1.3 Technical rules – (Detailed) Code of practice

— NPR 3378-1:2013, Bepaling van de gasdichtheid van de gasinstallatie; Standaardmethode – Leidraad bij NEN 1078 en NEN 8078 — Correctieblad C1:2007 (Code of practice gasinstallations – Section gas pipe work – Part 1: Determination of gas tightness of the gas installation – Standard method – Guidelines for NEN 1078 and NEN 8078);

— NPR 3378-2:2006, Aanvullende methoden op de bepaling gasdichtheid van de gasinstallatie (Code of practice for gas installations – Section gas pipe work – Part 2: Supplementary methods on the determination of gas tightness of the gas installation);

— NPR 3378-3:2007, Dimensionering gasleiding voor aardgas met de grafiekmethode – Leidraad bij NEN 1078 en NEN 8078 (Code of practice gas installations – Section gas pipework – Part 3: Dimensioning of gas pipe work for natural gas by means of the graphic method – Guidelines for NEN 1078 and NEN 8078);

— NPR 3378-4:2007, Dimensionering gasleiding voor propaan met de grafiekmethode – Leidraad bij NEN 1078 en NEN 8078 (Code of practice gas installations – Section gas pipe work – Part 4: Dimensioning of gas pipe work for propane by means of the graphic method – Guidelines for NEN 1078 and NEN 8078);

— NPR 3378-5+A1:2013, Praktijkrichtlijn gasinstallaties – Sectie gasleidingen – Deel 5: Gasleidingen – Aanleg algemeen – Leidraad bij NEN 1078 en NEN 8078 (Guidelines for gas installations – Section gas pipework – Part 5: Gas pipework – Installation general – Guidelines for NEN 1078 and NEN 8078);

— NPR 3378-6+A1:2013 Praktijkrichtlijn gasinstallaties – Sectie gasleidingen – Deel 6: Bovengrondse gasleidingen – Leidraad bij NEN 1078 en NEN 8078 (Guidelines for gas installations – Section gas pipe work – Part 6: Gas pipe work above ground – Guidelines for NEN 1078 and NEN 8078);

— NPR 3378-7:2012, Praktijkrichtlijn gasinstallaties – Sectie gasleidingen – Deel 7: In de grond gelegde gasleidingen – Leidraad bij NEN 1078 en NEN 8078 (Guidelines for gas installations – Section gas pipe work – Part 7: Gas underground pipe work – Guidelines for NEN 1078 and NEN 8078);

— NPR 3378-8:2007, Doorvoeren van gasleidingen door wanden en vloeren – Leidraad bij NEN 1078 en NEN 8078 (Code of practice gas installations – Section gas pipe work – Part 8: Bushing of gas pipe work through walls and floors – Guidelines for NEN 1078 and NEN 8078);

— NPR 3378-9:2007, Ingebruikneming en buitengebruikstelling van gasleidingen (Code of practice gas installations – Section gas pipe work – Part 9: Commissioning and purging of gas pipe work);

— NPR 3378-11:2007, Aansluitleidingen en aansluitkranen (Code of practice gas installations – Section gas pipe work – Part 11: Connecting pipe work and taps);

— NPR 3378-12:2013, Praktijkrichtlijn gasinstallaties – Sectie gasleidingen - Deel 12: Lasverbindingen in gasleidingen van koolstofstaal voor gebouwgebonden-installaties en industriële-installaties met een werkdruk van maximaal 500 mbar - Leidraad bij NEN 1078 (Guidelines for gas installations – Section gas pipe works - Part 12: Welds in gas installation pipework of carbon steel for buildings and industrial installations with a maximum operating pressure up to 500 mbar – Guidelines for NEN 1078).

4.11.2 More restrictive requirements in Dutch legislation/regulations

4.11.2.1 General

No detailed specifications needed.

4.11.2.2 Clauses to note regarding EN 1775

No detailed specifications needed.

4.12 Page for România

4.12.1 Relevant România legislations/regulations for gas installation in buldings to which EN 1775 is applicable

4.12.1.1 National law/Federal law

— NTPEE-2008 Norme tehnice pentru proiectarea, executarea si exploatarea sistemelor de alimentare cu gaze naturale (Technical norms for desing, execution and exploitation natural gas supply systems)

4.12.1.2 NSB National Functional standards - ASRO

— SR EN 1775:2008, Alimentări cu gaze. Conducte de gaze pentru clădiri. Presiune maximă de serviciu mai mică de sau egală cu 5 bar.

4.12.1.3 Technical rules – (Detailed) Code of practice

None.

4.12.2 More restrictive requirements in România legislation/regulations

4.12.2.1 General

None.

4.12.2.2 Clauses to note regarding EN 1775

None.

4.13 Page for Sweden (EN 1775)

4.13.1 Relevant Swedish legislations/regulations for gas installation in buildings to which EN 1775 is applicable

4.13.1.1 National law/Federal law

— [Regulations on tanks and pipe work for flammable gases SÄIFS 2000:4] Föreskrifter om cisterner, gasklockor, bergrum och rörledningar för brandfarlig gas SÄIFS 2000:4, clauses 4.1.12, 4.1.3, 3.4.3, 3.4.1.

4.13.1.2 NSB National Functional standards

None.

4.13.1.3 Technical rules – (Detailed) Code of practice

The technical rules mentioned above are legislative requirements.

4.13.2 More restrictive requirements in Swedish legislation/regulations

a) 4.1.12: Spaces for the handling of flammable gases shall be ventilated. The ventilation shall be designed to extract gas from leaking valves, joints etc;

b) 4.1.3: Vents from pipework shall exit in a safe place. A safe place is outdoors where the gas can neither be ignited nor return back inside the building again;

c) 3.4.3: Pipeline shall be fire resistant. Pipework made of metal and buried pipeline made of PE (polyethylene) according to EGN 94 supposed to fulfil the requirement on fire resistance;

   3.4.1: Pipework is considered to offer satisfactory protection against fire and explosion if they fulfil the technical requirements and are controlled in a way that corresponds to the requirements issued by the Swedish Work Environment Authority for pressure equipment and pressure vessels. Flammable gas is not allowed for tightness test;

d) 3.4.1: Pipework with an opening pressure not exceeding 4 bar for natural gas, LPG and biogas that complies with the requirements of EGN is supposed to fulfil the requirements in this regulation. The test pressure shall at least be 1,5 MOP.

4.13.3 Clauses to note regarding EN 1775:2007

— 4.3.3

— 4.4

— 6.5.2

4.14 Page for Spain (EN 1775)

4.14.1 Relevant Spanish legislations/regulations for gas installation in buildings to EN 1775 is applicable

4.14.1.1 National law/Federal law

— Ley del Sector de Hidrocarburos (Ley 34/1998, de 7 de octubre) y sus modificaciones (Hydrocarbons Sector Law and its subsequent amendments). The Regulations below are applicable to the whole country. The regions (Comunidades Autónomas) may have additional requirements;

— Reglamento General del Servicio Público de Gases Combustibles (Decreto 2913/1973 de 26 de octubre); (Gaseous Fuels Public Supply Service General Regulations);

— Reglamento de la actividad de distribución de gases licuados del petróleo (Decreto 1085/1992); (LPG Distribution Regulations);

— Real Decreto por el que se regula el acceso de terceros a las instalaciones gasistas y se establece un sistema económico integrado del sector de gas natural (Real Decreto 949/2001, de 3 de agosto); (Regulations on third party access to gas installations and establishment of an integrated economic system for the natural gas sector);

— Real Decreto por el que se regulan las actividades de transporte, distribución, comercialización, suministro y procedimientos de autorización de instalaciones de gas natural (Real Decreto 1434/2002, de 27 de diciembre); (Regulations on Transmisión, Distribution, Trading, and Supply activities, as well as permit granting procedures of natural gas infrastructures);

— Reglamento Técnico de Distribución y Utilización de Combustibles Gaseosos y sus instrucciones técnicas complementarias ICG 01 a 11 (Real Decreto 919/2006, de 28 de julio) (Gas Distribution and Utilization Technical Regulations);

This “Reglamento” includes a number of applicable "Instrucciones Técnicas Complementarias" (Complementary Technical Instructions) or ITC:

ITC-ICG 07 Instalaciones receptoras de combustibles gaseosos (Gas receiving installations);

ITC-ICG 08 Aparatos de gas (Gas-fired appliances);

ITC-ICG 09 Instaladores y empresas instaladoras de gas (Gas installers and gas installation businesses);

ITC-ICG 10 Instalaciones de gases licuados del petróleo (GLP) de uso doméstico en caravanas y autocaravanas (LPG installations for domestic use in caravans and auto-caravans);

ITC-ICG 11 Relación de normas UNE de referencia (List of reference UNE standards).

4.14.1.2 NSB National Functional standards

The standards below are mandatory:

— UNE 60620 (different scope to EN 1775, but under gas installations in buildings scope), Instalaciones receptoras de gas natural suministradas a presiones superiores a 5 bar (Natural gas receiving installations with supply pressure over 5 bar).

  — Parte 1: Generalidades (General);

  — Parte 2: Acometidas interiores (Internal pipework up to the pressure reducing and metering station);

- Parte 3: Estaciones de regulación y medida (Pressure reducing and metering stations);
- Parte 4: Líneas de distribución interior (Internal pipework up to the appliance regulators);
- Parte 5: Grupos de regulación (Appliance regulators);
- Parte 6: Criterios técnicos básicos para el control periódico de las instalaciones receptoras en servicio (Criteria for the periodic control in receiving intallations);

— UNE 60670 Instalaciones receptoras de gas suministradas a una presión máxima de operación (MOP) inferior o igual a 5 bar (Gas receiving installations supplied at maximum operating pressure (MOP) not greather than 5 bar).

- Parte 1: Generalidades (General);
- Parte 2: Terminología (Terminology);
- Parte 3: Tuberías, elementos, accesorios y sus uniones (Piping, components, fittings and joints);
- Parte 4: Diseño y construcción (Design and construction);
- Parte 5: Recintos destinados a la instalación de contadores de gas (Spaces for gas meter installation);
- Parte 6: Requisitos de configuración, ventilación y evacuación de los productos de la combustión en los locales destinados a contener los aparatos a gas (Configuration, ventilation and evacuation of the combustión products reqirements for the premises for gas appliances);
- Parte 7: Requisitos de instalación y conexión de los aparatos a gas (Installation and connection of appliances);
- Parte 8: Pruebas de estanquidad para la entrega de la instalación receptora (Tightness tests);
- Parte 9: Pruebas previas al suministro y puesta en servicio (Previous tests of the supply and commissioning);
- Parte 10: Verificación del mantenimiento de las condiciones de seguridad de los aparatos en su instalación (Verifying of maintain of the safety conditions of the appliances in their installation);
- Parte 11: Operaciones en instalaciones receptoras en servicio (Work on operating installations);
- Parte 12. Criterios técnicos básicos para el control periódico de las instalaciones receptoras en servicio. (Technical criteria for periodical control of the operating installations);
- Parte 13. Criterios técnicos básicos para el control periódico de los aparatos a gas de las instalaciones receptoras en servicio. (Technical criteria for periodical control of the gas appliances in operating installations).

The standard below is not mandatory:

— UNE-EN 1775 Suministro de gas. Red de tuberías de gas para edificios. Presión máxima de operación inferior o igual a 5 bar. Recomendaciones funcionales (Gas supply. Gas pipework for buildings. Maximun operating pressure less than or equal to 5 bar. Functional recommendations).

4.14.1.3 Technical rules – (Detailed) Code of practice

SEDIGAS recommendations (of the national gas sector):

— RS-D-03 Actuación en avisos de presencia de gas en recintos cerrados (Performance when gas presence in indoor places is notified);

— RS-D-06 Ejecución de polietileno de tramos enterrados y conexión a conjuntos de regulación y medida de instalaciones receptoras (Performance with PE in buried sections and connection to groups of regulation and measure in gas receiving installations);

— RS-S-01 Operativa de seguridad en recintos confinados (Safety performance in indoor places).

4.14.2 More restrictive requirements in Spanish legislation/regulations

The European standards that cover the technical requirements for gas receiving installations are EN 1775 and EN 15001.

The Spanish relevant standards are UNE 60620 (installations supplied at over 5 bar) and UNE 60670 (installations supplied at less than or equal to 5 bar).

UNE 60670 applies to industrial and non-industrial installations supplied at less than or equal to 5 bar.

EN 1775 applies to domestic, collective or commercial premises supplied at less than or equal to 5 bar.

EN 15001 applies to industrial installations supplied at over 0,05 bar and to industrial and non-industrial installations supplied at over 5 bar.

It means that UNE 60670's scope overlaps with EN 1775 and EN 15001 and different requirements shall be taken into account.

4.15 Page for UK

The UK gas safety legislation does not lend itself to the detailed breakdown given by other countries. If any interested party needs to understand the UK safety system the references given supply the latest information from the source of authority.

The United Kingdom Safety Regulator for Industry and Commerce is the: *Health and Safety Executive.* The principle UK Health and Safety Legislation is the *Health and Safety at Work Act 1974, as amended*. This Act has many branches with detailed regulations for the various sectors of Industry and Commerce.

http://www.hse.gov.uk/legislation/hswa.htm

The various Licenses issued by OFGEM for UK Gas Transport, Storage and Gas Supply etc. have a clause to ensure that the Licensee operates safely and securely. The HSE has a special website for *Gas* and a section for *Gas Supply.* This site describes the principle regulations governing gas supply and provides the related *Regulations* and the *Advisory Codes of Practice*:-

http://www.hse.gov.uk/gas/supply/legislation.htm

The UK safety legislation is *goal setting* and the *HSE* has worked for many years with the UK gas industry through the *Institution of Gas Engineers and Managers* to develop more detailed technical standards for the various elements of the gas infrastructure. These cover a range of topics, e.g.:

— Pipelines Safety Regulations;

— Pressure Systems Safety Regulations;

— Gas Safety (Management) Regulations;

— Gas Safety (Installation and Use) Regulations;

— Dangerous Substances and Explosive Atmospheres Regulations;

— Reporting of Injuries, Diseases and Dangerous Occurrences Regulations;

— Building Regulations;

— Health and Safety at Work etc. Act;

— Management of Health and Safety at Work Regulations;

— Pressure Equipment Regulations;

— Electricity at Work Regulations.

The Full List of current IGEM standards and prices for January 2013 are at:

http://www.igem.org.uk/media/227989/igem%20standards%20list%20january%202013.pdf

When the CEN TC 234 ENs were published first in 2000, IGEM brought its Standards into line with these ENs, e.g. as regards pressure range and the 16 bar limit for EN 1594 and EN 12007 series.

Under the UK Safety Legislation, Licensed gas transporters, distributors and storage operators etc. are subject to a *Safety Case Regime,* which requires specific approval of the detail in the *Safety Case* by the HSE before operations can commence. This detail includes technical requirements for the design, construction, testing commissioning and operation under both normal and emergency conditions. The *Safety Case* document also covers quality management processes to ensure safety and security of gas supply according to the approved Safety Case. For this purpose, many Licensed Operators of gas infrastructure have their own complete technical and safety management details documented fully as part of their *Safety Case*. This detail describes how their business intends to operate under its License in order to ensure safety of the public and of the workforce.

5 Relevant national legislation/ regulation for gas metering to which EN 1776 is applicable

5.1 Page for Austria (EN 1776)

5.1.1 Relevant Austrian legislation/regulations for gas metering to which EN 1776 is applicable

5.1.1.1 National law/ Federal law

— BGBl. I Nr. 107/2011 Gaswirtschaftsgesetz (National gas law);

— BGBl. I Nr. 38/1999 Mineralrohstoffgesetz (Mineral resource law);

— BGBl. II Nr.171/2012 Gas-Marktmodell-Verordnung 2012 (Natural gas market Regulation);

— BGBl. II Nr. 172/2012 Gasnetzdienstleistungsqualitäts-Verordnung (Gasgrid service quality regulation);

— BGBl. II Nr. 309/2012 Gas-Systemnutzungsentgelte-Verordnung 2013 (Gas system usage fee regulation);

— BGBl. II Nr. 439/2011 Sonstige Transporte-Gas-Systemnutzungstarife Verordnung Novelle 2012 (Additional transport gas system usage regulation amendment 2012);

— Lastprofilverordnung Novelle 2008 (Load profile regulation 2008).

Source of supply:
Rechtsinformationssystem des Bundes (RIS)

www.ris.bka.gv.at

Energie-Control Austria

Rudolfsplatz 13a

A-1010 Wien

http://www.e-control.at/de/recht/bundesrecht/gas

5.1.1.2 NSB National Functional standards

None.

5.1.1.3 Technical rules – (Detailed) Code of practice

— ÖVGW G 76: Berechnung von Gasmengen in Normvolumeneinheiten (Calculation of gas quantities in units of norm volume);

— ÖVGW G E521: Gasmengenmessanlagen (Gas flow measuring systems).

Source of supply:

Österreichische Vereinigung für das Gas- und Wasserfach
Schubertring 14
1010 Wien
Austria
www.ovgw.at

5.1.2 More restrictive requirements in Austrian legislation/regulations

5.1.2.1 General

More detailed requirements are specified in the above mentioned technical rules.

5.1.2.2 Clauses to note regarding EN 1776

None.

5.2 Page for Belgium (EN 1776)

5.2.1 Relevant Belgian legislation/regulations for gas metering to which EN 1776 is applicable

5.2.1.1 National law/ Federal law

— Wet van 16 juni 1970 betreffende de meeteenheden, de meetstandaarden en de meetwerktuigen.

— Loi du 16 juin 1970 sur les unités, étalons et instruments de mesure.

— Koninklijk besluit van 16 oktober 2009 betreffende de gebruiksvergunningen voor niet-geijkte meetsystemen. Arrêté royal du 16 octobre 2009 relatif aux autorisations d'emploi de systèmes de mesure non vérifiés.

5.3 Page for France (EN 1776)

5.3.1 Relevant national legislation/regulation for gas measuring to which EN 1776 is applicable

— Arrêté du 4 août 2006 portant règlement de la sécurité des ouvrages de transport de gaz combustible, d'hydrocarbures liquides ou liquéfiés et de produits chimiques;

— Arrêté ministériel du 13 juillet 2000 modifié portant règlement de sécurité de la distribution de gaz combustibles par Canalisations, et le cahier des charges « Odorisation du gaz distribué » associé;

— Décret n° 2002-1553 du 24 décembre 2002 modifié relatif aux dispositions concernant la prévention des explosions applicables aux lieux de travail et modifiant le chapitre II du titre III du livre II du code du travail;

— Décret n° 99-1046 du 13 décembre 1999 relatif aux équipements sous pression transposant en France la Directive Européenne Equipements Sous Pression 97/23/CE du 29 mai 1997 (DESP ou PED : Pressure Equipment Directive);

— Arrêté du 21 décembre 1999 relatif à la classification et à l'évaluation de la conformité des équipements sous pression;

— Décret n° 2002-1554 du 24 décembre 2002 relatif aux dispositions concernant la prévention des explosions que doivent observer les maîtres d'ouvrage lors de la construction des lieux de travail et modifiant le chapitre V du titre III du livre II du code du travail;

— Arrêté ministériel du 15 mars 2000 modifié relatif à l'exploitation des équipements sous pression;

— Décret n° 85-1108 du 15 octobre 1985, modifié notamment par le décret n°2003-944 du 3 octobre 2003, relatif au régime des transports de gaz combustibles par canalisations;

— Décret n°70-492 du 11 juin 1970 modifié portant règlement d'administration publique pour l'application de l'article 35 modifié de la loi du 08 avril 1946 concernant la procédure de déclaration d'utilité publique des travaux d'électricité et de gaz qui ne nécessitent que l'établissement de servitudes ainsi que les conditions d'établissement desdites servitudes";

— Décret n° 96-1010 du 19 novembre 1996 relatif aux appareils et aux systèmes de protection destinés à être utilisés en atmosphères explosibles transposant en France la Directive Européenne 94/4/CE du 29 mai 1997 (ATEX);

— Règles de sécurité électriques induites par le décret n° 65-48 du 8 janvier 1965.

Regulations applicable to metering:

— Décret n° 2001-387 du 3 mai 2001 relatif au contrôle des instruments de mesure;

— Arrêté du 31 décembre 2001 fixant les modalités d'application de certaines dispositions du décret N°2001-387 du 3 mai 2001 relatif au contrôle des instruments de mesure;

— Arrêté du 11 juillet 2003 fixant certaines modalités du contrôle métrologique des ensembles de conversion de volume de gaz et des voludéprimomètres (et des PCSmètres);

— Décret n°2006-447 du 12 avril 2006 relatif à la mise sur le marché et à la mise en service de certains instruments de mesure;

— Arrêté du 28 avril 2006 fixant les modalités d'application du décret 2006-447 ci dessus;

— Arrêté du 21 octobre 2010 relatif aux compteurs de gaz combustible.

Source of supply:
Direction des Journaux Officiels
26 rue Desaix
F - 75727 PARIS Cedex 15.

5.3.2 More restrictive requirements in French legislation/regulations

5.3.2.1 General

No detailed specification needed.

5.3.2.2 Clauses to note regarding EN 1776

No detailed specification needed.

5.4 Page for Germany (EN 1776)

5.4.1 Relevant German legislation/regulations for gas metering to which EN 1776 is applicable

5.4.1.1 National law/ Federal law

— Gesetz über die Elektrizitäts- und Gasversorgung (Energiewirtschaftsgesetz – EnWG) vom 7. Juli 2005 (BGBI. I S. 1970) (Energy Industry Act);

— Eichgesetz EichG (Wheights and measures act);

— Eichordnung EO (Calibration regulations);

— Verordnung über Gashochdruckleitungen (Gashochdruckleitungsverordnung - GasHDrLtgV) 18.05.2011 (BGBl. I S. 928) (Ordinance on high pressure gas pipelines (High pressure gas pipeline ordinance - GasHDrLtgV);

— Verordnung über Allgemeine Bedingungen für den Netzanschluss und dessen Nutzung für die Gasversorgung in Niederdruck (Niederdruckanschlussverordnung - NDAV);

— Verordnung über Rahmenbedingungen für den Messstellenbetrieb und die Messung im Bereich der leitungsgebundenen Elektrizitäts- und Gasversorgung (Messzugangsverordnung - MessZV);

— Erste Verordnung zur Durchführung des Bundes-Immissionsschutzgesetzes (Verordnung über Kleinfeuerungsanlagen – 1. BImschV) vom 15.07.1988 (BGBI. I S 1059) (First Decree for the implementation of the Federal Law on air pollution control);

— Arbeitsschutzgesetz ASG (Occupational health and safety law);

— Arbeitsstättenverordnung ArbStättV (Workplaces Ordinance);

— Lärm-Vibrations-Arbeitsschutzverordnung LärmVibrationsArbSchV (Ordinance on noise and vibrations related to ccupational health and safety, free translation);

— Vorschriften der Berufsgenossenschaft, BGV für Sicherheit und Gesundheit bei der Arbeit (Health and safety regulations of the professional association for occupational health and safety on safety and health at work):

  — BGV A1, "Allgemeine Vorschriften" (, BGV A1, "General regulations");

  — BGV A 3 "Elektrische Anlagen und Betriebsmittel" (Electrical appliances/ stations and means of production);

  — BGV A 8 "Sicherheits- und Gesundheitsschutzkennzeichnung am Arbeitsplatz" (Markings concerning safety- amd health protection at work);

  — BGV B3 "Lärm" (Noise),

  — BGV C 6 "Anlagen für Gase der öffentlichen Gasversorgung" (Gas stations for the public gas supply);

  — BGV C 22 "Bauarbeiten" (Construction works);

  — BGV D 1 "Schweißen, Schneiden und verwandte Arbeitsverfahren" (Welding, Cutting and related procedures);

  — BGV D 2 "Arbeiten an Gasleitungen" (Working on gas pipeworks in service).

Source of supply:

Bundesanzeiger Verlagsges. mbH Bonn
Bundesgesetzblatt
Postfach 13 20
53003 Bonn, Germany

5.4.1.2 NSB National Functional standards

There are no national functional standards in addition to EN 1776.

In Germany, there exists an agreement between DVGW and DIN. Whilst the DIN is responsible for national product standards, the DVGW is responsible for the setting of functional technical rules.

All European standards, including functional standards, are published as DIN EN standards. DVGW technical rules are aligned to DIN/DIN EN standards, where applicable.

The DIN standards related to gas are taken into account by DVGW and are part of the so called DVGW Set of Codes of practice.

5.4.1.3 Technical rules – (Detailed) Code of practice

— DVGW-Arbeitsblatt G 687 "Technische Mindestanforderungen an die Gasmessung" (Technical minimum requirements on gas metering);

— DVGW G 689 "Technische Mindestanforderungen an den Messstellenbetrieb Gas" (Technical minimum requirements on the metering point operation gas);

— DVGW G 685 "Gasabrechung" (Gas billing);

— DVGW G 685-B1 "1. Beiblatt zum DVGW-Arbeitsblatt G 685 Gasabrechnung - Marktrollenübergreifende Anwendung der Vorgaben des DVGW-Arbeitsblattes G 685 für die Prozesse der GeLi Gas bei SLP-Zählpunkten";

— DVGW G 685-B2 "2. Beiblatt zum DVGW-Arbeitsblatt G 685 Gasabrechnung - Abrechnung von RLM-Zählpunkten";

— DVGW G 600 "Technische Regel für Gasinstallationen; DVGW-TRGI" (Technical rules for gas installations (DVGW TRGI));

— DVGW G 440 "Explosionsschutzdokument für Anlagen zur leitungsgebundenen Versorgung der Allgemeinheit mit Gas" (Gas pressure regulation with inlet pressures up to and including 4 bar for gas installations);

— DVGW G 485 "Digitale Schnittstelle für Gasmeßgeräte (DSfG)" (Digital interfaces with gas measuring appliances);

— DVGW G 486 "Realgasfaktoren und Kompressibilitätszahlen von Erdgasen – Berechnung und Anwendung";

— DVGW G 488 "Anlagen für die Gasbeschaffenheitsmessung - Planung, Errichtung, Betrieb" (Gas quality measurement stations - Design, Construction, Operation);

— DVGW G 492 "Gas-Messanlagen für einen Betriebsdruck bis einschließlich 100 bar; Planung, Fertigung, Errichtung, Prüfung, Inbetriebnahme, Betrieb und Instandhaltung" (Gas measuring stations for operating pressures up to and including 100 bar; Planning, production, setting-up, testing, commissioning, operation and maintenance);

— DVGW G 495 “Gasanlagen - Instandhaltung” (Gas installations - Maintenance);

Source of supply:
Wirtschafts- und Verlagsgesellschaft Gas und Wasser mbh
Postfach 14 01 51
D – 53056 Bonn
Germany

— ASR A1.3 "Sicherheits- und Gesundheitsschutzkennzeichnung";

— Berufsgenossenschaftliche Regeln für Sicherheit und Gesundheit bei der Arbeit (Health and safety rules of the professional association for occupational health and safety):

  — BGR 500/Teil 2 Kapitel 2.31 "Arbeiten an Gasleitungen" (BGR 500/ Part 2, clause 2.31, "Working on Gas pipeworks");

  — BGR 104, "Regeln für die Sicherheit und Gesundheitsschutz bei der Arbeit – Explosionsschutzregeln (EX-RL)" (Occupational safety and health regulations – explosion protection regulations);

  — BGR 132, "Richtlinien zur Vermeidung von Zündverfahren infolge elektrostatischer Aufladung" (Richtlinien "Statische Elektrizität") (Guidelines "Static Electricity").

— ZH 1-8 "Sicherheitsregeln für Anforderungen an Eigenschaften ortsfester Gaswarneinrichtungen für den Explosionsschutz" (Requirements for fixed gas alarm systems for explosion protection – Safety regulations);

— ZH 1-8.1 "Grundsätze für die Prüfung der Funktionsfähigkeit ortsfester Gaswarneinrichtungen für den Explosionsschutz" (Function check of fixed gas alarm systems for explosion protection – principles);

— TRBS 1112 Teil 1 "Explosionsgefährdungen bei und durch Instandhaltungsarbeiten - Beurteilungen und Schutzmaßnahmen";

— TRBS 2152 (TRGS 720) „Gefährliche explosionsfähige Atmosphäre – Allgemeines“;

— TRBS 2152 Teil 1 (TRGS 721) "Gefährliche explosionsfähige Atmosphäre - Beurteilung der Explosionsgefährdung";

— TRBS 2152 Teil 2 (TRGS 722) "Vermeidung oder Einschränkung gefährlicher explosionsfähiger Atmosphäre";

— TRBS 2152 Teil 3 "Gefährliche explosionsfähige Atmosphäre - Vermeidung der Entzündung gefährlicher explosionsfähiger Atmosphäre".

5.4.2 More restrictive requirements in German legislation/regulations

5.4.2.1 General

None.

5.4.2.2 Clauses to note regarding EN 1776

None.

5.5 Page for Greece (EN 1776)

5.5.1 Relevant Greek legislation/regulations for gas metering to which EN 1776 is applicable

5.5.1.1 National law/ Federal law

— Ministerial Decision “Technical code for service lines and gas meters with OP 4 bar” Governmental Gazette 1810B/12.12.2006. “Κανονισμός εγκατάστασης παροχετευτικών αγωγών και μετρητών φυσικού αερίου με πίεση λειτουργίας έως και 4 bar”.

5.6 Page for Hungary (EN 1776)

5.6.1 Relevant Hungarian legislation/regulations for gas metering to which EN 1776 is applicable

5.6.1.1 National law/ Federal law

— 1991. évi XLV. törvény a mérésügyről (Metrological Act)

5.6.1.2 NSB National Functional standards

None.

5.6.1.3 Technical rules – (Detailed) Code of practice

— A magyar földgázrendszer Üzemi és Kereskedelmi Szabályzata (The Business and Commercial Code of the Hungarian natural gas system)

5.6.2 More restrictive requirements in Hungarian legislation/regulations

5.6.2.1 General

No detailed specification needed.

5.6.2.2 Clauses to note regarding EN 1776

No detailed specification needed.

5.7 Page for Ireland (EN 1776)

5.7.1 Relevant Irish legislation/regulations for gas metering to which EN 1776 is applicable

5.7.1.1 National law

5.7.1.1.1 Energy

— Energy (Miscellaneous Provisions) Act 2006

— Gas Act 1976 (No. 30 of 1976)

— S.I. No. 283 of 1987. (Gas [amendment] act, [section 2 order 1987])

— S.I. No. 196 of 2003. (Gas (Amendment) Act 1987 (Section 2) (Distribution) Order 2003

Source of supply:
Irish Statute Book (http://www.irishstatutebook.ie/)

5.7.1.1.2 Health and safety

Safety, Health and Welfare at work Act 2005 (No.10 of 2005), as amended

Source of supply:
Irish Statute Book (http://www.irishstatutebook.ie/)

5.7.1.2 NSB National standards

None.

5.7.1.3 Technical rules – (Detailed) Code of practice

Commission for Energy Regulation – Gas safety framework

www.cer.ie

5.7.2 More restrictive requirements in Irish legislation/regulations

5.7.2.1 General

5.7.2.1.1 Clauses to note regarding EN 1776

None.

5.8 age for Italy (EN 1776)

5.8.1 Relevant Italian legislation/regulations for gas metering to which EN 1776 is applicable

5.8.1.1 National law/ Federal law

— **Decreto Ministeriale 16/04/08**, Regola tecnica per la progettazione, costruzione, collaudo, esercizio e sorveglianza delle opere e dei sistemi di distribuzione e di linee dirette del gas naturale con densità non superiore a 0,8. (Ministry Decree 16/04/08 – Technical regulations for design , construction, ,testing, operation and surveillance of natural gas distribution networks);

— **Decreto Ministeriale 01/12 2004**, n. 329, Regolamento recante norme per la messa in servizio ed utilizzazione delle attrezzature a pressione e degli insiemi di cui all'articolo 19 del decreto legislativo 25 febbraio 2000, n. 93. (Ministerial Decree 01/12 2004, n. 329 Regulations for commissioning and use of pressure equipment and assemblies referred to in Article 19 of Legislative Decree 25 February 2000, n. 93);

— **Decreto Legislativo 9 aprile 2008**, n. 81, Attuazione dell'articolo 1 della legge 3 agosto 2007, n. 123, in materia di tutela della salute e della sicurezza nei luoghi di lavoro. (Legislative Decree 9 April 2008 no. 81, Implementation of Article 1 of the Law of 3 August 2007, n. 123, concerning the protection of health and safety in the workplace.);

— **Decreto 16 aprile 2012, n. 75**, Regolamento concernente i criteri per l'esecuzione dei controlli metrologici successivi sui contatori del Gas e i dispositivi di conversione del volume, ai sensi del decreto legislativo 2 febbraio 2007, n. 22, attuativo della direttiva 2004/22/CE (MID) (Decree 16 April 2012, n. 75 Regulation on the criteria for the execution of metrological control subsequent to gas meters and volume conversion devices, pursuant to Legislative Decree February 2, 2007, n. 22, implementing Directive 2004/22/EC (MID).

— **Autorità per l'energia elettrica il gas e il sistema idrico (AEEGSI)** - Deliberazione n. 631/2013/R/Gas modifiche e integrazioni agli obblighi di messa in servizio degli smart meter gas (Regulatory Authority for Electricity, Gas and Water (AEEGSI) – Directive n. 631/2013/R/Gas Modifications and integrations concerning the obligations for gas smart meters commissioning)

5.8.1.2 NSB National Functional standards

— UNI 9036 Gruppi di misura con contatori a pareti deformabili - Prescrizioni di installazione

— UNI 9167 Impianti di ricezione, prima riduzione e misura del gas naturale - Progettazione, costruzione e collaudo (Initial pressure reduction plants for natural gas - Design, construction and testing)

— UNI 9571-1 Impianti di ricezione, prima riduzione e misura del gas naturale – Parte 1:Sorveglianza (Initial pressure reduction plants for natural gas – Part 1:Surveillance)

— UNI 9463-1 Impianti di odorizzazione e depositi di odorizzanti per gas combustibili impiegati in usi domestici o similari - Parte 1: Termini e definizioni (Ottobre 2012) (Odorisation plants and odorant storages for combustible gases employed in domestic of similar uses Part 1: Term and definitions)

— UNI 9463-2, Impianti di odorizzazione e depositi di odorizzanti per gas combustibili impiegati in usi domestici o similari - Parte 2: Impianti di odorizzazione - Progettazione, costruzione, collaudo e sorveglianza (Odorisation plants and odorant storages for combustible gases employed in domestic of similar uses - Part 2: Odorisation plants - Design, construction, testing and surveillance)

— UNI 9463-3, Impianti di odorizzazione e depositi di odorizzanti per gas combustibili impiegati in usi domestici o similari - Parte 3: Depositi di odorizzanti - Progettazione, costruzione ed esercizio (Odorisation plants and odorant storages for combustible gases employed in domestic of similar uses - Part 3: Odorant storages - Design, construction and operating criteria)

— UNI 9463-4, Impianti di odorizzazione e depositi di odorizzanti per gas combustibili impiegati in usi domestici o similari - Parte 4: Modalità di fornitura di odorizzanti (Odorisation plants and odorant storages for combustible gases employed in domestic of similar uses Part 4: Odorant supply conditions)

— UNI 10619-3 Sistemi di controllo della pressione e/o impianti di misurazione del gas naturale funzionanti con pressione a monte massima di 12 bar per utilizzo industriale e civile - Parte 3: Progettazione, costruzione e collaudo - Impianti di misurazione del gas (Gas pressure control systems and/or gas measurements installations for inlet max pressure up to 12 bar for industrial and domestic use – Part 3: Design, construction and testing – Gas measurements installations).

5.8.1.3 Technical rules – (Detailed) Code of practice

The technical rules when issued by ministerial decree are compulsory.

5.8.2 More restrictive requirements in Italian legislation/regulations

5.8.2.1 General

No detailed specification needed.

5.8.2.2 Clauses to note regarding EN 1776

None.

5.9 Page for the Netherlands (EN 1776)

5.9.1 Relevant Dutch legislation/regulations for gas metering to which EN 1776 is applicable

5.9.1.1 National law/ Federal law

— Metrologiewet (Metrology Act), 2006

5.9.1.2 NSB National Functional standards

— NEN 1059:2010 Nederlandse editie op basis van NEN-EN 12186 en NEN-EN 12279 – Gasvoorzieningsystemen – Gasdrukregel- en meetstations voor transport en distributie (Dutch edition basied on NEN-EN 12186 and NEN-EN 12279 – Gas supply systems – Gas pressure regulating stations for transmission and distribution)

5.9.1.3 Technical rules – (Detailed) Code of practice

No additional information.

5.9.2 More restrictive requirements in Dutch legislation/regulations

5.9.2.1 General

No detailed specifications needed.

5.9.2.2 Clauses to note regarding EN 1776

No detailed specifications needed.

5.10 Page for România (EN 1776)

5.10.1 Relevant Românian legislation/regulation for gas metering to which EN 1776 is applicable

5.10.1.1 National law/ Federal law

— Regulamentul de măsurare a cantităţilor de gaze naturale tranzacţionate în România, aprobat prin Ordinul ANRE Nr. 62/24.06.2008

— Rules for measuring the quantities of natural gas traded in Romania, approved by Order ANRE No. 62/24.06.2008

5.10.1.2 NSB National Functional standards - ASRO

— SR EN 1776:2002**,** Alimentare cu gaz. Staţii de măsurare gaze naturale. Prescripţii funcţionale

5.10.1.3 Technical rules – (Detailed) Code of practice

— Cerinţe tehnice pentru staţiile de măsurare a gazului pentru Petrom E&P (Technical requirements for gas metering station for Petrom E&P

5.10.2 More restrictive requirements in Romanian legislation/regulations

5.10.2.1 General

None

5.10.2.2 Clauses to note regarding to EN 1776

None.

5.11 Page for Spain (EN 1776)

5.11.1 Relevant Spanish legislation/regulations for gas metering to which EN 1776 is applicable

5.11.1.1 National law/ Federal law

— Ley del Sector de Hidrocarburos (Ley 34/1998, de 7 de octubre) y sus modificaciones (Hydrocarbons Sector Law and its subsequent amendments)

The Regulations below are applicable to the whole country. The regions (Comunidades Autónomas) may have additional requirements:

— Reglamento General del Servicio Público de Gases Combustibles (Decreto 2913/1973 de 26 de octubre) (Gaseous Fuels Public Supply Service General Regulations)

— Reglamento de Redes y Acometidas de Combustibles Gaseosos (Órdenes de 18 de Noviembre de 1974, 26 de Octubre de 1983 y 9 de Marzo de 1994) (Gaseous Fuels Mains and Services Regulations)

— Reglamento Técnico de Distribución y Utilización de Combustibles Gaseosos y sus instrucciones técnicas complementarias ICG 01 a 11 (Real Decreto 919/2006, de 28 de julio) (Gas Distribution and Utilization Technical Regulations)

This “Reglamento” includes a number of applicable "Instrucciones Técnicas Complementarias" (Complementary Technical Instructions) or ITC:

  - ITC-ICG 01 Instalaciones de distribución de combustibles gaseosos por canalización (Gas Distribution Installations)

  - ITC-ICG 07 Instalaciones receptoras de combustibles gaseosos. (Gas receiving installations)

  - ITC-ICG 11 Relación de normas UNE de referencia (List of reference UNE standards)

- Normas de gestión técnica del sistema gasista (BOE 15/10/2005) (Orden ITC/3126/2005, de 5 de octubre) (Spanish Network Code)

- Protocolos de detalle de las Normas de Gestión Técnica del Sistema Gasista (BOE 4.4.2006) (RESOLUCIÓN de 13 de marzo de 2006, de la Dirección General de Política Energética y Minas) (Detailed procedures for the Spanish Network Code)

- REAL DECRETO 942/2005, de 29 de julio, por el que se modifican determinadas disposiciones en materia de hidrocarburos.(BOE 03-08-05) (Royal Decree for which some disposals related to hydrocarnons are modified)

5.11.1.2 NSB National Functional standards

The standards listed below are mandatory.

- UNE 60620, Instalaciones receptoras de gas natural suministradas a presiones superiores a 5 bar. (Natural gas receiving installations with supply pressure over 5 bar)

  - Parte 1: Generalidades (General)

  - Parte 3: Estaciones de regulación y medida (Pressure reducing and metering stations)

- UNE 60670, Instalaciones receptoras de gas suministradas a una presión máxima de operación (MOP) inferior o igual a 5 bar. (Gas receiving installations supplied at maximum operating pressure (MOP) up to and including 5 bar)

  - Parte 1: Generalidades (General)

  - Parte 5: Recintos destinados a la instalación de contadores de gas (Spaces for gas meter installation)

The standards listed below are not mandatory.

- UNE 60510, Contadores de volumen de gas (Volume Gas Meters) [Note: partially replaced by UNE-EN 1359]

- UNE- EN 1359, Contadores de gas. Contadores de volumen de gas de membranas deformables (Gas meters. Diaphragm gas meters)

- UNE-EN 1776, Sistemas de suministro de gas. Estaciones de medición de gas natural. Requisitos funcionales (Gas Supply. Natural Gas Measuring Stations. Functional Requirements)

- UNE-EN 12480, Contadores de gas. Contadores de gas de desplazamiento rotativo (Gas meters . Rotary displacement gas meters)

- UNE-EN 12261, Contadores de gas. Contadores de gas turbine (Gas meters. Turbine gas meters)

— UNE-EN 12405-1, Contadores de gas. Dispositivos de conversion. Parte 1: Conversion de volumen (Gas meters - Conversion devices)

5.11.1.3 Technical rules – (Detailed) Code of practice

None.

5.11.2 More restrictive requirements in Spanish legislation/regulations

None.

5.11.3 General

5.11.3.1 Clauses to note regarding EN 1776

None.

5.12 Page for UK

The UK gas safety legislation does not lend itself to the detailed breakdown given by other countries. If any interested party needs to understand the UK safety system the references given supply the latest information from the source of authority.

The United Kingdom Safety Regulator for Industry and Commerce is the: *Health and Safety Executive.* The principle UK Health and Safety Legislation is the *Health and Safety at Work Act 1974, as amended*. This Act has many branches with detailed regulations for the various sectors of Industry and Commerce.

http://www.hse.gov.uk/legislation/hswa.htm

The various Licenses issued by OFGEM for UK Gas Transport, Storage and Gas Supply etc. have a clause to ensure that the Licensee operates safely and securely. The HSE has a special website for *Gas* and a section for *Gas Supply*. This site describes the principle regulations governing gas supply and provides the related *Regulations* and the *Advisory Codes of Practice*:

http://www.hse.gov.uk/gas/supply/legislation.htm

The UK safety legislation is *goal setting* and the *HSE* has worked for many years with the UK gas industry through the *Institution of Gas Engineers and Managers* to develop more detailed technical standards for the various elements of the gas infrastructure. These cover a range of topics, e.g.:

— Pipelines Safety Regulations;

— Pressure Systems Safety Regulations;

— Gas Safety (Management) Regulations;

— Gas Safety (Installation and Use) Regulations;

— Dangerous Substances and Explosive Atmospheres Regulations;

— Reporting of Injuries, Diseases and Dangerous Occurrences Regulations;

— Building Regulations;

— Health and Safety at Work etc. Act;

— Management of Health and Safety at Work Regulations;

— Pressure Equipment Regulations,

— Electricity at Work Regulations

The Full List of current IGEM standards and prices for January 2013 are at:

http://www.igem.org.uk/media/227989/igem%20standards%20list%20january%202013.pdf

When the CEN TC 234 ENs were published first in 2000, IGEM brought its Standards into line with these ENs, e.g. as regards pressure range and the 16 bar limit for EN 1594 and EN 12007 series.

Under the UK Safety Legislation, Licensed gas transporters, distributors and storage operators etc. are subject to a *Safety Case Regime,* which requires specific approval of the detail in the *Safety Case* by the HSE before operations can commence. This detail includes technical requirements for the design, construction, testing commissioning and operation under both normal and emergency conditions. The *Safety Case* document also covers quality management processes to ensure safety and security of gas supply according to the approved Safety Case. For this purpose, many Licensed Operators of gas infrastructure have their own complete technical and safety management details documented fully as part of their *Safety Case*. This detail describes how their business intends to operate under its License in order to ensure safety of the public and of the workforce.

6 Relevant national legislation/ regulation for underground storage of gas to which EN 1918-1 to -5 is applicable

6.1 Page for Austria (EN 1918-1 to -5)

6.1.1 Relevant legislation/regulation for underground storage of gas to which EN 1918-1 to –5 are applicable

6.1.1.1 National law/ Federal law

— BGBl. I Nr. 107/2011 Gaswirtschaftsgesetz (National gas law);

— BGBl. I Nr. 38/1999 Mineralrohstoffgesetz (Mineral resource law);

— BGBl. II Nr.171/2012 Gas-Marktmodell-Verordnung 2012 (Natural gas market regulation);

— BGBl. II Nr. 172/2012 Gasnetzdienstleistungsqualitäts-Verordnung (Gasgrid service quality regulation);

— BGBl. II Nr. 309/2012 Gas-Systemnutzungsentgelte-Verordnung 2013 (Gas system usage fee regulation);

— BGBl. II Nr. 439/2011 Sonstige Transporte-Gas-Systemnutzungstarife Verordnung Novelle 2012 (Additional transport gas system usage regulation amendment 2012).

Source of supply:

Rechtsinformationssystem des Bundes (RIS)

www.ris.bka.gv.at

Energie-Control Austria

Rudolfsplatz 13a

A-1010 Wien

http://www.e-control.at/de/recht/bundesrecht/gas

6.1.2 More restrictive requirements in Austria legislation/regulations

6.1.2.1 General

None.

6.1.2.2 Clauses to note regarding EN 1918-1 to EN 1918-5

No detailed specification needed.

6.2 Page for Finland (EN 1918-1 to EN 1918-5)

6.2.1 Relevant Finnish legislation/regulation for underground storage of gas to which EN 1918-1 to – EN 1918-5 are applicable

6.2.1.1 National law/ Federal law

— **Laki vaarallisten kemikaalien ja räjähteiden käsittelyn turvallisuudesta 390/2005** (Act on the Safe Handling and Storage of Dangerous Chemicals and Explosives (390/2005))

— **Valtioneuvoston asetus maakaasun käsittelyn turvallisuudesta 551/2009** (Government Decree on Natural Gas Safety)

6.2.1.2 NSB National Functional standards

— SFS 2897 **Maakaasuputkisto. Painekoe** (Natural gas pipeline - Pressure test, 1987-05-18)

6.2.1.3 Technical rules – (Detailed) Code of practice

None.

6.2.2 More restrictive requirements in Finnish legislation/regulations

6.2.2.1 General

As a result of circumstances in Finland there is some restrictive legislation concerning the gas infrastructure. These regulations are stated in annex 1 and annex 2 in *Valtioneuvoston asetus maakaasun käsittelyn turvallisuudesta 551/2009* (Government Decree on Natural Gas Safety).

6.2.2.2 Clauses to note regarding EN 1918-1 to EN 1918-5

— Annex 1 and 2 in Valtioneuvoston asetus maakaasun käsittelyn turvallisuudesta 551/2009 (Government Decree on Natural Gas Safety)

6.3 Page for France (EN 1918-1 to EN 1918-5)

6.3.1 Relevant French legislation/regulation for underground storage of gas to which EN 1918-1 to – EN 1918-5 (Stockage souterrain de gaz) are applicable

6.3.1.1 National law

— Code de l'Environnement – Livre V – Titre 1er : Installations classées pour la Protection de l'Environnement (ICPE)

— Loi 2003-699 du 30 juillet 2003 relative à la prévention des risques technologiques

— Code Minier – Titre I – Livre Vbis : Du stockage souterrain introdui par la loi 2003-8 du 3 janvier 2003 relative aux marchés du gaz et de l'électricité et aux services publics de l'énergie

— Loi 2004-811 du 13 août 2004 relative à la modernisation de la sécurité civile

— Décret n°2005-82 du 1er février 2005 relatif à la création des CLIC (non strictement applicable)

— Décret n°2005-1130 du 7 septembre 2005 relatif aux plans de prévention des risques technologiques

— Décret n°2005-1170 modifiant le décret 77-1133 du 21 septembre 1977 relatif aux ICPE

— Décret n°2006-648 du 2 juin 2006 relatif aux titres miniers et aux titres de stockage souterrain.

— Décret n° 2006-649 du 2 juin 2006 relatif aux travaux miniers et aux travaux de stockage souterrain et à la police des mines et des stockages souterrains.

— Décret n° 2007-910 du 15 mai 2007 modifiant les décrets n° 2006-648 du 2 juin 2006 relatif aux titres miniers et aux titres de stockage souterrain et n 2006-649 du 2 juin 2006 relatif aux travaux miniers et aux travaux de stockage souterrain et à la police des mines et des stockages souterrains. Arrêté du 28 juillet 1995 fixant les modalités selon lesquelles sont établies les demandes portant sur les titres miniers. En attente arrêté modificatif en cours de validation.

— Règlement Général des Industries Extractives,en particulier:

  — Décret n° 2000-278 du 22 mars 2000 concernant le Titre Forages.

  — Arrêté du 22 mars 2000 relatif à la protection du personnel et aux équipements de forage et d'intervention lourde sur les puits.

  — Arrêté du 22 mars 2000 relatif aux cuvelages des sondages et des puits.

— Arrêté du 29 septembre 2005 relatif à l'évaluation et à la prise en compte de la probabilité d'occurrence, de la cinétique, de l'intensité des effets et de la gravité des conséquences des accidents potentiels dans les études de dangers des installations classées soumises à autorisation

— Arrêté du 29 septembre 2005 modifiant l'arrêté du 10 mai 2000 relatif à la prévention des accidents majeurs impliquant des substances dangereuses

— Arrêté du 28 janvier 1993 concernant la protection contre la foudre de certaines installations classées

— Circulaire du 29 septembre 2005 d'appréciation de la démarche de maîtrise des risques d'accidents susceptibles de survenir dans les établissements dits « SEVESO » visés par l'arrêté du 10 mai 2000 modifié.

— Circulaire du 28 décembre 2006 relative à l'élaboration et à la lecture des études de dangers.

Source of supply:

Direction des Journaux Officiels

26 rue Desaix

F - 75727 PARIS CEDEX 15

6.3.2 More restrictive requirements in French legislation/regulations

6.3.2.1 General

No more detailed specifications needed than these required by the documents quoted.

6.3.2.2 Clauses to note regarding EN 1918-1 to EN 1918-5

No more detailed functional recommendations.

6.4 Page for Germany (EN 1918-1 to EN 1918-5)

6.4.1 Relevant German legislation/regulation for underground storage of gas to which EN 1918-1 to EN 1918-5 are applicable

6.4.1.1 National law

— Bundesberggesetz (BBergG) vom 13. August 1980 (BGBl. I S. 1310) zuletzt geändert durch Art. 15 a G v. 31. Juli 2009 (BGBl. I S. 2585) (Federal Law on mining)

— Bergverordnung für alle bergbaulichen Bereiche (Allgemeine Bundesbergverordnung – ABBergV) vom 23. Oktober 1995 (BGBl. I S. 1466) zuletzt geändert durch Art. 5 des Gesetzes vom 24. Februar 2012 (BGBl. I S. 212) (General Decree on mining)

— Bundes-Immissionsschutzgesetz (BImSchG) vom 26. September 2002 (BGBl. I S. 3830) zuletzt geändert durch Art. 2 G vom 27. Juni 2012 (BGBl. I S. 1421) (Federal Law on air pollution control)

— Zwölfte Verordnung zur Durchführung des Bundes-Immissionsschutzgesetzes (Störfall-Verordnung – 12. BImSchV)) vom 26. April 2000 (BGBl. I S. 603), neu gefasst durch Artikel 5 Absatz 4 der Verordnung vom 26. November 2010 (BGBl. I S.1643) (Twelfth Decree for the implementation of the Federal Law on air pollution control - Decree on dealing with major hazard)

— Gesetz zur Ordnung des Wasserhaushalts (Wasserhaushaltsgesetz – WHG) vom 31. Juli 2009 (BGBl. I S.2585) zuletzt geändert durch Art. 5 Absatz 9 G v. 24. Februar 2012 (BGBl. I S. 212) (Legal Act for national water supply)

— Arbeitsschutzgesetz ASG (Occupational health and safety act)

— Verordnung zum Schutz vor Gefahrstoffen (Gefahrstoffverordnung – GefStoffV) (Ordinance to protect against hazardous materials – Hazardous materials ordinance)

— Verordnung über Sicherheit und Gesundheitsschutz bei der Bereitstellung von Arbeitsmitteln und deren Benutzung bei der Arbeit, über Sicherheit beim Betrieb überwachungsbedürftiger Anlagen und über die Organisation des betrieblichen Arbeitsschutzes (Betriebssicherheitsverordnung – Ordinance concerning the protection of safety and health in the provision of work equipment and its use at work, concerning safety when operating installations suject to monitoring and concerning the organisation of industrial safety and health at work (Ordinance on Industrial Safety and Health – BetrSichV).

— Health and safety regulations of the Berufsgenossenschaften (the professional association for occupational health and safety) on safety and health at work (Vorschriften der Berufsgenossenschaft, BGV):

  — BGV A 1 "Grundsätze der Prävention" (General regulations)

  — BGV A 3 "Elektrische Anlagen und Betriebsmittel" (Electrical appliances/stations and means of production)

  — BGV C 22 "Bauarbeiten" (Construction works)

  — BGV D 6 "Krane" (Cranes)

  — BGV D 8 "Winden, Hub- und Zuggeräte" (Winding-, pulling- and dragging devices)

  — BGV D 29 "Fahrzeuge" (Vehicles)

6.4.1.2 Law of the Federal States

— Bauordnungen der Länder (Construction ordinances of the German federal states)

— Tiefbohrverordnungen der Länder (Decrees of the German federal states on deep drilling)

Source of supply:

Bundesanzeiger Verlagsges. mbH Bonn

Bundesgesetzblatt

Postfach 13 20

D - 53003 Bonn, Germany

6.4.1.3 NSB National Functional standards

There are no national functional standards in addition to EN 1918-1 to EN 1918-5.

In Germany, there exists an agreement between DVGW and DIN. Whilst the DIN is responsible for national product standards, the DVGW is responsible for the setting of functional technical rules.

All European standards, including the functional standards, are published as DIN EN standards. DVGW technical rules are aligned to DIN/DIN EN standards, where applicable.

The DIN standards related to gas are taken into account by DVGW and are part of the so called DVGW Set of Codes of practice.

6.4.1.4 Technical rules – (Detailed) Code of practice

— DVGW-Arbeitsblatt G 463 "Gasleitungen aus Stahlrohren für einen Betriebsdruck > 16 bar - Errichtung" (Steel gas pipelines for an operating pressure over 16 bar – construction)

— DVGW-Arbeitsblatt G 466-1 "Gasleitungen aus Stahlrohren mit einem Betriebsdruck größer als 5 bar - Instandhaltung" (Steel gas pipework for an operating pressure over 5 bar – maintenance)

— DVGW-Arbeitsblatt G 497 "Verdichteranlagenen" (Compressor stations)

— DVGW-Arbeitsblatt GW 350 „Schweißverbindungen an Rohrleitungen aus Stahl in der Gas- und Wasserversorgung – Herstellung, Prüfung und Bewertung“ (Welding joints for steel pipework in gas and water supply- production, testing and assessment)

Source of supply:

Wirtschafts- und Verlagsgesellschaft Gas und Wasser mbH

Postfach 14 01 51

D - 53056 Bonn, Germany

6.4.1.5 Health and safety

6.4.1.5.1 General

— Berufsgenossenschaftliche Regeln für Sicherheit und Gesundheit bei der Arbeit (Health and safety rules of the professional association for occupational health and safety):

  — BGR 104 "Regeln für die Sicherheit und Gesundheitsschutz bei der Arbeit - Explosionsschutzregeln (EX-RL)" (Occupational safety and health regulations – explosion protection regulations)

  — BGR 117-1 "Richtlinien für Arbeiten in Behältern und engen Räumen" (Guidelines for working in tanks and confined spaces"

  — BGR 132 "Richtlinien zur Vermeidung von Zündgefahren infolge elektrostatischer Aufladung (Richtlinien "Statische Elektrizität") (Guidelines "Static electricity")

  — BGR 134 "Regeln für die Sicherheit und Gesundheitsschutz bei der Arbeit – Einsatz von Feuerlöschanlagen mit sauerstoffverdrängenden Gasen" (Occupational safety and health regulations – fire-fighting systems with oxygen displacing gases)

  — BGR 500, 2.26, "Schweißen, Schneiden und verwandte Verfahren" (Welding, cutting and related procedures)

  — BGR 500/Part 2, 2.31, "Arbeiten an Gasleitungen" (Regulations of professional association for occupational health and safety at work, Part 2, clause 2.31, "Working on Gas pipeworks")

  — BGR 500, 2.33, "Betreiben von Anlagen für den Umgang mit Gasen"

  — BGR 500 Abschnitt 2.39 "Anlagen für Gase der öffentlichen Gasversorgung" (Gas stations for the public gas supply)

  — BGI 518 "Gaswarneinrichtungen für den Explosionsschutz – Einsatz und Betrieb" (Gas alarm systems for explosion protection – use and operation)

6.4.1.5.2 Additional health and safety specifications regarding EN 1918-4:

— TRBS 1112 Teil 1 "Explosionsgefährdungen bei und durch Instandhaltungsarbeiten - Beurteilungen und Schutzmaßnahmen";

— TRBS 2152 Teil 2 (TRGS 722) "Vermeidung oder Einschränkung gefährlicher explosionsfähiger Atmosphäre".

6.4.1.5.3 Additional health and safety specifications regarding EN 1918-5:

— TRBS 1201 "Prüfungen von Arbeitsmitteln und überwachungsbedürftigen Anlagen";

— TRBS 1201 Teil 1 "Prüfung von Anlagen in explosionsgefährdeten Bereichen und Überprüfung von Arbeitsplätzen in explosionsgefährdeten Bereichen".

Source of supply:

Carl Heymanns Verlag KG

Luxemburger Straße 449

D - 50939 Köln, Germany

6.4.2 More restrictive requirements in German legislation/regulations

6.4.2.1 General

The more restrictive requirements are specified in Federal Law and in the Law of the Federal States.

6.4.2.2 Clauses to note regarding EN 1918-1 to EN 1918-5

The more restrictive requirements are specified in Federal Law and in the Law of the Federal States.

6.5 Page for Greece (EN 1918-1 to EN 1918-5)

6.5.1 Relevant Greek legislation/regulation for underground storage of gas to which EN 1918-1 to EN 1918-5 are applicable

None.

6.6 Page for Hungary (EN 1918-1 to EN 1918-5)

6.6.1 Relevant Hungarian legislation/regulation for underground storage of gas to which EN 1918-1 to EN 1918-5 are applicable

6.6.1.1 National law/ Federal law

— **Law XL of 2008**: Natural Gas Supply (Gas Act)

— **Government Law Decree 19/2009 (I. 30.)**: On the implementation of provisions of Law XL of 2008

— **Government Law Decree 53/2012. (III. 28.)**: Regulations on statutory procedures for specific buildings that belong to the scope of competence of the mining authority

6.6.1.2 NSB National Functional standards

The National Standardization Body of Hungary (MSZT) has adopted EN 1918 standard without any alterations.

6.6.1.3 Technical rules – (Detailed) Code of practice

None.

6.6.2 More restrictive requirements in Hungarian legislation/regulations

6.6.2.1 General

None.

6.6.2.2 Clauses to note regarding EN 1918-1 to EN 1918-5

None.

6.7 Page for Ireland (EN 1918-1 to EN 1918-5)

6.7.1 Relevant Irish legislation/regulation for underground storage of gas to which EN 1918-1 to EN 1918-5 are applicable

6.7.1.1 National law

a) Energy

— Energy (Miscellaneous Provisions) Act 2006;

— Gas Act 1976 (No. 30 of 1976);

— S.I. No. 283 of 1987. (Gas [amendment] act, [section 2 order 1987]).

— S.I. No. 196 of 2003. (Gas (Amendment) Act 1987 (Section 2) (Distribution) Order 2003

Source of supply:
Irish Statute Book (http://www.irishstatutebook.ie/)

b) Health and safety

— Safety, Health and Welfare at work Act 2005 (No.10 of 2005), as amended.

Source of supply:
Irish Statute Book (http://www.irishstatutebook.ie/)

6.7.1.2 NSB National standards

None.

6.7.1.3 Technical rules – (Detailed) Code of practice

Commission for Energy Regulation – Gas safety framework

www.cer.ie

6.7.2 More restrictive requirements in Irish legislation/regulations

6.7.2.1 General

None.

6.7.2.2 Clauses to note regarding EN 1918-1 to EN 1918-5

None.

6.8 Page for Italy (EN 1918-1 to EN 1918-5)

6.8.1 Relevant Italian legislation/regulation for underground storage of gas to which EN 1918-1 to EN 1918-5 are applicable

6.8.1.1 National law/ Federal law

— Decreto 26 agosto 2005, Ministero delle Attività Produttive. Modalità di conferimento della concessione di stoccaggio di gas naturale in sotterraneo, approvazione del relativo disciplinare tipo nel quale sono previste le modalità di attuazione delle attività di stoccaggio, gli obiettivi qualitativi, i poteri di verifica, le conseguenze di eventuali inadempimenti e sostituisce il disciplinare tipo approvato con decreto del Ministro dell'industria, del commercio e dell'artigianato 28 luglio 1975.

(Decree of 26 August 2005, Ministry of Productive Activities. Procedures for granting of the concession of natural gas storage in underground, approval of the relevant specification type in which there are the modalities' for the implementation of the activities' of storage, quality objectives, audit powers, the consequences of any failure and replaces the specification approved by the Minister of Industry, trade and Crafts July 28, 1975))

— Decreto Legislativo 9 aprile 2008 , n. 81, Attuazione dell'articolo 1 della legge 3 agosto 2007, n. 123, in materia di tutela della salute e della sicurezza nei luoghi di lavoro.

(Legislative Decree 9 April 2008 no. 81, Implementation of Article 1 of the Law of 3 August 2007, n. 123, concerning the protection of health and safety in the workplace.)

— Autorità per l'energia elettrica e il gas (AEEG) Delibera 204/10, Testo Unico della regolazione della qualità e delle tariffe del servizio di stoccaggio del gas naturale per il periodo di regolazione 2011-2014 (TUSG): approvazione della Parte I "Regolazione della qualità del servizio di stoccaggio del gas naturale per il periodo di regolazione 2011-2014 (RQSG)"

(Regulatory Authority for Electricity and Gas (Aeeg) – Directive n.204/10 Consolidated regulation of the quality and prices of natural gas storage services for the regulatory period 2011-2014 (TUSG): approval of Part I "Adjusting the quality of the service of natural gas storage for the regulatory period 2011 - 2014 (RQSG))

6.8.1.2 NSB National Functional standards

No specific national standards exist.

6.8.1.3 Technical rules – (Detailed) Code of practice

The technical rules when issued by ministerial decree are compulsory. The directives issued by Regulatory Authority for Electricity, Gas and Water (AEEGSI) are compulsory. The guidelines issued by CIG (Italian Gas Committee) support some requirements given in the AEEGSI Directives.

CIG guidelines:

— La gestione delle emergenze di servizio nei sistemi di stoccaggio del gas naturale (Service emergency management in natural gas storage systems)

6.8.1.4 More restrictive requirements in in Italian legislation/regulations

6.8.1.4.1 General

No detailed specification needed.

6.8.1.4.2 Clause to note regarding EN 1918-1 to EN 1918-5

No detailed specification needed.

6.9 Page for the Netherlands (EN 1918-1 to EN 1918-5)

6.9.1 Relevant Dutch legislation/regulation for underground storage of gas to which EN 1918-1 to EN 1918-5 are applicable

6.9.1.1 National law/ Federal law

— Wet Milieubeheer

6.9.1.2 NSB National Functional standards

No specific national standards exist.

6.9.1.3 Technical rules – (Detailed) Code of practice

No specific technical rules/codes of practice exist.

6.9.1.4 More restrictive requirements in in Dutch legislation/regulations

6.9.1.4.1 General

No detailed specification needed.

6.9.1.4.2 Clause to note regarding EN 1918-1 to EN 1918-5

No detailed specification needed.

6.10 Page for Spain (EN 1918-1 to EN 1918-5)

No national technical legislation has been developed yet.

6.11 Page for UK

The UK gas safety legislation does not lend itself to the detailed breakdown given by other countries. If any interested party needs to understand the UK safety system the references given supply the latest information from the source of authority.

The United Kingdom Safety Regulator for Industry and Commerce is the: *Health and Safety Executive.* The principle UK Health and Safety Legislation is the *Health and Safety at Work Act 1974, as amended*. This Act has many branches with detailed regulations for the various sectors of Industry and Commerce.

http://www.hse.gov.uk/legislation/hswa.htm

The various Licenses issued by OFGEM for UK Gas Transport, Storage and Gas Supply etc. have a clause to ensure that the Licensee operates safely and securely. The HSE has a special website for *Gas* and a section for *Gas Supply.* This site describes the principle regulations governing gas supply and provides the related *Regulations* and the *Advisory Codes of Practice*:-

http://www.hse.gov.uk/gas/supply/legislation.htm

The UK safety legislation is *goal setting* and the *HSE* has worked for many years with the UK gas industry through the *Institution of Gas Engineers and Managers* to develop more detailed technical standards for the various elements of the gas infrastructure. These cover a range of topics, e.g.:

— Pipelines Safety Regulations;

— Pressure Systems Safety Regulations;

— Gas Safety (Management) Regulations;

— Gas Safety (Installation and Use) Regulations;

— Dangerous Substances and Explosive Atmospheres Regulations;

— Reporting of Injuries, Diseases and Dangerous Occurrences Regulations;

— Building Regulations;

— Health and Safety at Work etc. Act;

— Management of Health and Safety at Work Regulations;

— Pressure Equipment Regulations,

— Electricity at Work Regulations

The Full List of current IGEM standards and prices for January 2013 are at:

http://www.igem.org.uk/media/227989/igem%20standards%20list%20january%202013.pdf

When the CEN TC 234 ENs were published first in 2000, IGEM brought its Standards into line with these ENs, e.g. as regards pressure range and the 16 bar limit for EN 1594 and EN 12007 series.

Under the UK Safety Legislation, Licensed gas transporters, distributors and storage operators etc. are subject to a *Safety Case Regime,* which requires specific approval of the detail in the *Safety Case* by the HSE before operations can commence. This detail includes technical requirements for the design, construction, testing commissioning and operation under both normal and emergency conditions. The *Safety Case* document also covers quality management processes to ensure safety and security of gas supply according to the approved Safety Case. For this purpose, many Licensed Operators of gas infrastructure have their own complete technical and safety management details documented fully as part of their *Safety Case*. This detail describes how their business intends to operate under its License in order to ensure safety of the public and of the workforce.

7 Relevant national legislation/ regulation and standards for gas pipelines with maximum operating pressure up to and equal to 16 bar to which EN 12007-1:2012 to EN 12007-4 is applicable

7.1 Page for Austria (EN 12007-1 to EN 12007-4)

7.1.1 Relevant Austrian legislation/regulations for gas pipelines with maximum operating pressure up to and equal to 16 bar (gas distribution) to which EN 12007-1 to EN 12007-4 is applicable

7.1.1.1 National law/ Federal law

— BGBl. I Nr. 107/2011 Gaswirtschaftsgesetz (National Gas Law)

— BGBl. II Nr.171/2012 Gas-Marktmodell-Verordnung 2012 (Natural gas market regulation)

— BGBl. II Nr. 172/2012 Gasnetzdienstleistungsqualitäts-Verordnung (Gasgrid service quality regulation)

— BGBl. II Nr. 309/2012 Gas-Systemnutzungsentgelte-Verordnung 2013 (Gas system usage fee regulation)

Source of supply:

Rechtsinformationssystem des Bundes (RIS)
www.ris.bka.gv.at

Energie-Control Austria
Rudolfsplatz 13a
A-1010 Wien
http://www.e-control.at/de/recht/bundesrecht/gas

7.1.1.2 NSB National Functional standards

None.

7.1.1.3 Technical rules – (Detailed) Code of practice

— ÖVGW G E100: Erdgasleitungen (Natural gas pipelines)

— ÖVGW G E101: Druckprüfung von Erdgasleitungen (Pressure Testing of natural gas pipelines)

— ÖVGW G E110: Erdgasleitungen aus PE (Natural gas pipelines made of PE)

— ÖVGW G E120: Erdgasleitungen aus Stahl (Natural gas pipelines made of steel)

— ÖVGW G E130: Grabenlose Verfahren (Trenchless piping techniques)

— ÖVGW G B111: In- und Außerbetriebnahme von Erdgasleitungen und Erdgasanlagen (Commissioning and decommissioning of natural gas pipelines and stations)

— ÖVGW G B140: Organisation und Behandlung von Störfällen (Organization and handling of disturbances)

— ÖVGW G B300: Instandhaltung von Erdgasleitungsanlagen (Maintenance of natural gas pipeline facilities)

— ÖVGW G B310: Instandhaltung von Erdgasleitungen: (Maintenance of natural gas pipelines)

— ÖVGW G B430: Abstände von Erdgasleitungsanlagen zu elektrischen Anlagen (Distances between natural gas pipeline facilities and electric installations)

— ÖVGW G O310: Personalqualifikation, Aus- und Weiterbildung (Personnel qualification, training and further education)

— ÖVGW G O322: Ausbildung und Prüfung von Kunststoffrohrlegern (Training and examination of plastic tube fitters)

— ÖVGW G 20: Kathodischer Korrosionsschutz - Planung und Errichtung (Cathodic corrosion protection – Planning and construction)

— ÖVGW G 21: Kathodischer Korrosionsschutz Inbetriebnahme und Überwachung (Cathodic corrosion protection Commissioning and surveillance)

— ÖVGW G 24: Elektrische Trennstellen (Electric insulation spots)

— ÖVGW G 25: Passiver Korrosionsschutz (Passive protection against corrosion)

— ÖVGW G 52/1: Bau von Rohrleitungen aus Kunststoff – Teil 1: Rohre aus PVC – hart (Construction of gas mains from plastics – Part 1: Pipes of PVC hard)

— ÖVGW G 54: Bau von Gasrohrleitungen aus duktilen Gußrohren (Construction of gas mains from ductile cast iron)

— ÖVGW GW 10: Maßnahmen zum Schutz von Versorgungsanlagen bei Bauarbeiten (Measures for the protection of supplying units during construction works)

Source of supply:
Österreichische Vereinigung für das Gas- und Wasserfach
Schubertring 14
1010 Wien
Austria
www.ovgw.at

7.1.2 More restrictive requirements in Austrian legislation/ regulations

7.1.2.1 General

More detailed requirements are specified in the above mentioned technical rules.

7.2 Page for Finland (EN 12007-1 to EN 12007-4)

7.2.1 Relevant Finnish legislation/regulations for gas pipelines with maximum operating pressure up to and equal to 16 bar to which EN 12007-1 to EN 12007-4 is applicable

7.2.1.1 National law/ Federal law

— **Laki vaarallisten kemikaalien ja räjähteiden käsittelyn turvallisuudesta 390/2005** (Act on the Safe Handling and Storage of Dangerous Chemicals and Explosives (390/2005))

— **Valtioneuvoston asetus maakaasun käsittelyn turvallisuudesta 551/2009** (Government Decree on Natural Gas Safety)

— Valtioneuvoston asetus maakaasu-, nestekaasu- ja öljylämmityslaitteistojen asennus- ja huoltotoimintaa sekä maanalaisten öljysäiliöiden tarkastusta harjoittavien hyväksymisestä 558/2012 **(Government Decree on approval of installation and maintenance companies)**

7.2.1.2 NSB National Functional standards

— SFS 2897 **Maakaasuputkisto. Painekoe** (Natural gas pipeline - Pressure test, 1987-05-18)

7.2.1.3 Technical rules – (Detailed) Code of practice

— **Maakaasukäsikirja, Suomen Kaasuyhdistys, Marraskuu 2010** (Natural gas - Codes of practise, Finnish Gas Association, November 2010)

These codes of practice include additional useful information.

7.2.2 More restrictive requirements in Finnish legislation/ regulations

7.2.2.1 General

As a result of circumstances in Finland there is some restrictive legislation concerning the gas infrastructure. These regulations are stated in annex 1 and annex 2 in *Valtioneuvoston asetus maakaasun käsittelyn turvallisuudesta 551/2009* (Government Decree on Natural Gas Safety).

7.2.2.2 Clauses to note regarding EN 12007-1 to EN 12007-4

Annex 2 in Valtioneuvoston asetus maakaasun käsittelyn turvallisuudesta 551/2009 (Government Decree on Natural Gas Safety)

7.3 Page for France (EN 12007-1 to EN 12007-4)

7.3.1 Relevant French legislation/regulations for gas pipelines with maximum operating pressure up to and equal to 16 bar to which EN 12007-1 to EN 12007-4 (Canalisations pour pression maximale de service inférieure ou égale à 16 bar) is applicable

7.3.1.1 National law

— Décret du 18 janvier 1943 relatif au règlement sur les appareils à pression de gaz

— Loi du 19 juillet 1976 relative aux installations classées pour la protection de l'environnement

— Arrêté du 2 août 1977 modifié relatif aux règles techniques et de sécurité applicables aux installations de gaz combustible et d'hydrocarbures liquéfiés situées à l'intérieur des bâtiments d'habitation ou de leurs dépendances

— Loi du 22 juillet 1987 relative aux organisations de la sécurité civile, protection de la forêt contre l'incendie, protection des risques majeurs

— Décret du 6 mai 1988 relatif aux plans d'urgence pris en application de la loi du 22 juillet 1987

— Loi du 22 juin 1989 relative au code de la voirie routière

— Arrêté du 13 juillet 2000 modifié portant règlement de sécurité de la distribution de gaz combustible par canalisations

— Décret du 24 janvier 2003 relatif à la coordination en matière de sécurité et de protection de la santé lors des opérations de bâtiment ou de génie civil et modifiant le code du travail

— Décret n° 2004-555 du 15 juin 2004 relatif aux prescriptions techniques applicables aux canalisations et raccordements des installations de transport, de distribution et de stockage de gaz

— Arrêté du 5 mars 2014 portant règlement de sécurité des canalisations de transport de gaz combustibles, d'hydrocarbures liquides ou liquéfiés et de produits chimiques

— Décret n° 2007-684 du 4 mai 2007 relatif à l'agrément des distributeurs de gaz par réseaux publics

— Arrêté du 15 février 2012 modifié relatif à l'exécution de travaux à proximité des réseaux.

Source of supply:
Direction des Journaux Officiels
26 rue Desaix
F - 75727 PARIS Cedex 15.

7.3.1.2 Detaled codes of practice

Technical specifications (« cahiers des charges ») supporting the above listed regulation ‘arrêté du 13 juillet 2000’:

— RSDG1, Règles techniques et essais

— RSDG2, Capacité technique et compétence des opérateurs de réseau de distribution de gaz combustibles

— RSDG3-1, Soudage des canalisations et branchements en acier

— RSDG3-2, Soudage des canalisations et branchements en polyéthylène (PE)

— RSDG3-3, Canalisations et branchements en cuivre

— RSDG4, Voisinage des réseaux de distribution de gaz avec les autres ouvrages

— RSDG5, Canalisations à l’air libre ou dans les passages couverts, ouverts sur l’extérieur

— RSDG6, Organes de coupure et sectionnement des réseaux

— RSDG7, Organes de protection de branchement

— RSDG8, Cartographie des réseaux de distribution de gaz

— RSDG9, Intervention de sécurité en cas d’incident ou d’accident mettant en cause la sécurité

— RSDG10Rev1, Odeur du gaz distribué

— RSDG11, Travaux en charge

— RSDG12, Identification in situ des canalisations de distribution de gaz

— RSDG13-1Rev1, Protection cathodique des canalisations en acier

— RSDG13-2, Canalisations en acier non protégées cathodiquement

— RSDG14Rev1, Surveillance et maintenance des réseaux de distribution de gaz combustibles

— RSDG15Rev1, Mise hors exploitation et abandon des équipements de réseau

— RSDG 16.1, relatif aux réseaux de distribution de gaz de 2ème catégorie

— RSDG 16.2, relatif aux réseaux de distribution de gaz de 3ème catégorie

Source of supply:

AFG, Association Française du gaz
8 rue de l’Hotel de ville
F-92200 Neuilly-sur-Seine
Phone: +33 1 80 21 08 00
Fax: +33 1 46 37 19 55

7.4 Page for Germany (EN 12007-1 to -4)

7.4.1 Relevant German legislation/regulations for gas pipelines with maximum operating pressure up to and equal to 16 bar (gas distribution) to which EN 12007-1 to -4 is applicable

7.4.1.1 National law/ Federal law

— Gesetz über die Elektrizitäts- und Gasversorgung (Energiewirtschaftsgesetz - EnWG) vom 07. Juli 2005 (BGBl. I, S. 1970 (3621)), zuletzt geändert durch Art. 2 G v. (16. Januar 2012 (BGBl. I S. 74) (Energy Industry Act)

— Verordnung über Allgemeine Bedingungen für den Netzanschluss und dessen Nutzung für die Gasversorgung in Niederdruck (Niederdruckanschlussverordnung - NDAV) (Ordinance on general conditions for net connection and use for gas supply at low pressure (Low pressure connection ordinance)

— Vorschriften der Berufsgenossenschaft, BGV für Sicherheit und Gesundheit bei der Arbeit (Health and safety regulations of the professional association for occupational health and safety on safety and health at work):

  — BGV A1, "Allgemeine Vorschriften" (, BGV A1, "General regulations").

  — BGV A1, "Allgemeine Vorschriften" (Regulations of professional association for occupational health and safety BGV A1, "General regulations")

  — BGV A 5 "Erste Hilfe" (First Aid)

  — BGV C 22 "Bauarbeiten" (Construction works)

Source of supply:

Bundesanzeiger Verlagsges. mbH Bonn
Bundesgesetzblatt
Postfach 13 20
D – 53003 Bonn
Germany

7.4.1.2 NSB National Functional standards

There are no national functional standards in addition to EN 12007-1 to -4.

In Germany, there exists an agreement between DVGW and DIN. Whilst the DIN is responsible for national product standards, the DVGW is responsible for the setting of functional technical rules.

All European standards are published as DIN EN standards. DVGW technical rules are aligned to DIN/DIN EN standards, where applicable.

The DIN standards related to gas are taken into account by DVGW and are part of the so called DVGW Set of Codes of practice.

7.4.1.3 Technical rules – (Detailed) Code of practice

— DVGW-Arbeitsblatt GW 320-1 "Rehabilitation von Gas- und Wasserrohrleitungen durch PE-Relining mit Ringraum – Anforderungen, Gütesicherung und Prüfung" (Rehabilitstion of gas and water pipe lines by PE-relining with grouting annular space; requirements, quality assurance and testing)

— DVGW-Arbeitsblatt GW 320-2 "Rehabilitation von Gas- und Wasserrohrleitungen durch PE-Relining ohne Ringraum – Anforderungen, Gütesicherung und Prüfung" (Rehabilitstion of gas and water pipe lines by PE-relining without grouting annular space; requirements, quality assurance and testing)

— DVGW-Arbeitsblatt GW 330 "Schweißen von Rohren und Rohrleitungsteilen aus Polyethylen (PE 80. PE 100 und PE-Xa) für Gas- und Wasserleitungen; Lehr- und Prüfplan' (Welding of pipes and pipe-line components made of polyethylene (PE 80, PE 100 and PE-Xa) for gas and water lines; training and examination schedule)

— DVGW-Arbeitsblatt GW 331 "Schweißaufsicht für Schweißarbeiten an Rohrleitungen aus PE-HD für Gas- und Wasserversorgung, Lehr- und Prüfplan" (Welding supervisor for weldings at PE-pipelines for gas and water supply; training and examination schedule)

— DVGW-Arbeitsblatt G 402 "Netz- und Schadenstatistik - Erfassung und Auswertung von Daten zum Aufbau von Instandhaltungsstrategien für Gasverteilungsnetze" (Grid and damage statistics - Collection and evaluation of data for devising maintenance strategies for gas distribution systems)

— DVGW-Arbeitsblatt G 459-1 "Gas-Hausanschlüsse für Betriebsdrücke bis 4 bar; Planung und Errichtung" (Gas service pipes for operating pressures up to 4 bar – Design and construction)

— DVGW-Arbeitsblatt G 462 "Errichtung von Gasleitungen aus Stahlrohren bis 16 bar Betriebsdruck" (Installation of gas steel pipelines with an operating pressure up to and including 16 bar; construction)

— DVGW-Arbeitsblatt G 465-1 "Überprüfen von Gasrohrnetzen mit einem Betriebsdruck bis 4 bar" (Inspection of gas pipeline systems with an operating pressure up to and including 4 bar)

— DVGW-Arbeitsblatt G 465-2 "Arbeiten an Gasrohrnetzen mit einem Betriebsdruck bis 5 bar" (Working on gas pipeline systems with an operating pressure up to and including 5 bar)

— DVGW-Arbeitsblatt G 466-1 "Gasrohrnetze aus Stahlrohren mit einem Betriebsdruck von mehr als 5 bar – Instandhaltung" (Steel gas pipework with an operating pressure over 5 bar – maintenance)

— DVGW-Arbeitsblatt G 469 "Druckprüfverfahren für Gastransport und Gasverteilung" (Pressure testing for gas transport and gas distribution)

— DVGW-Arbeitsblatt G 472 "Gasleitungen aus Polyethylenrohren bis 10 bar Betriebsdruck – Errichtung" (Polyethylen gas pipelines with an operating pressure up to and including 10 bar – PE 80, PE 100 and PE-Xa; construction)

— DVGW-Arbeitsblatt G 478 "Sanierung von Gasrohrleitungen durch Gewebeschlauchrelining – Anforderungen, Gütesicherung und Prüfung" (Rehabilitation of gas pipe lines by textile fibre lining – Requirements, quality control and testing)

Source of supply:

Wirtschafts- und Verlagsgesellschaft Gas und Wasser mbh
Postfach 14 01 51
D – 53056 Bonn
Germany

7.4.1.4 Health and safety specifications

— Berufsgenossenschaftliche Regeln für Sicherheit und Gesundheit bei der Arbeit BGR 500/Teil 2 Kapitel 2.31 "Arbeiten an Gasleitungen" (Rules of professional association for occupational health and safety at work, Part 2, clause 2.31, "Working on Gas pipeworks");

Source of supply:

Carl Heymanns Verlag KG
Luxemburger Straße 449
D – 50939 Köln
Germany

7.4.2 More restrictive requirements in German legislation/ regulations

7.4.2.1 General

More detailed requirements are specified in the above mentioned codes of practice.

7.4.2.2 Clauses to note regarding EN 12007-1 to EN 12007-4

More detailed requirements are specified in the above mentioned codes of practice.

7.5 Page for Greece (EN 12007-1 to EN 12007-4)

7.5.1 Relevant Greek legislation/regulations for gas pipelines with maximum operating pressure up to and equal to 16 bar to which EN 12007-1 to EN 12007-4 is applicable

7.5.1.1 National law/ Federal law

— Ministerial Decision “Technical code for steel distribution grids with DP 19 bar” Governmental Gazette 1552B/24.10.2006. “Κανονισμός χαλύβδινων δικτύων διανομής φυσικού αερίου με πίεση σχεδιασμού 19 bar”.

— Ministerial Decision “Technical code for PE distribution grids with MOP 4 bar” Governmental Gazette 1530B/19.10.2006. “Κανονισμός δικτύων πολυαιθυλενίου διανομής φυσικού αερίου με μέγιστη πίεση λειτουργίας 4 bar”.

7.6 Page for Hungary (EN 12007-1 to EN 12007-4)

7.6.1 Relevant Hungarian legislation/regulations for gas pipelines with maximum operating pressure up to and equal to 16 bar (gas distribution) to which EN 12007-1 to EN 12007-4 is applicable

7.6.1.1 National law/ Federal law

— **Law XL of 2008**: Natural Gas Supply (Gas Act)

— **Government Law Decree 19/2009 (I. 30.)**: On the implementation of provisions of Law XL of 2008

— **GKM (Ministry of Economy and Transport) Decree 80/2005. (X. 11.)**: Safety requirements for gas supply pipelines and publishing the safety regulations for gas supply pipelines

— **Government Law Decree 53/2012. (III. 28.)**: Regulations on statutory procedures for specific buildings that belong to the scope of competence of the mining authority

7.6.1.2 NSB National Functional standards

The National Standardization Body of Hungary (MSZT) has adopted the above-mentioned EN standards without any alterations.

7.6.1.3 Technical rules – (Detailed) Code of practice

None.

7.6.2 More restrictive requirements in Hungarian legislation/ regulations

7.6.2.1 General

None.

7.6.2.2 Clauses to note regarding EN 12007-1 to EN 12007-4

None.

7.7 Page for Ireland (EN 12007-1 to EN 12007-4)

7.7.1 Relevant Irish legislation/regulations for gas pipelines with maximum operating pressure up to and equal to 16 bar to which EN 12007-1 to EN 12007-4 is applicable

7.7.1.1 National law

7.7.1.1.1 Energy

— Energy (Miscellaneous Provisions) Act 2006;

— Gas Act 1976 (No. 30 of 1976);

— S.I. No. 283 of 1987. (Gas [amendment] Act, [section 2 order 1987]).

— S.I. No. 196 of 2003. (Gas (Amendment) Act 1987 (section 2) (Distribution) Order 2003

Source of supply:
Irish Statute Book
(http://www.irishstatutebook.ie/)

7.7.1.1.2 Health and safety

— Safety, Health and Welfare at work Act 2005 (No.10 of 2005), as amended.

Source of supply:
Irish Statute Book
(http://www.irishstatutebook.ie/)

7.7.1.2 NSB National standards

— I.S. 329:2003, Gas distribution mains (edition 2)

— I.S. 265:2000, Installation of gas service pipes parts 1 and 2 (fourth edition)

— I.S. 370:2007, Colour code for buried plastics piping

7.7.1.3 Technical rules – (Detailed) Code of practice

Commission for Energy Regulation – Gas safety framework

www.cer.ie

7.7.2 More restrictive requirements in Irish legislation/ regulations

7.7.2.1 General

None

7.7.2.2 Clauses to note regarding EN 12007-1 to EN 12007-4

None.

7.8 Page for Italy (EN 12007-1 to EN 12007-4)

7.8.1 More restrictive requirements in Italian legislation/ regulations

7.8.1.1 Clauses to note regarding EN 12007-1 to EN 12007-4

7.8.1.1.1 Clauses to note regarding EN 12007-1

a) Clause 5.2 Odorization: The odorization of combustible gases is subjected to Law 06/12/1971 n. 1083 "Safety in the use of combustible gases", art. 2 and to standards UNI 7133.

b) Clause 7.9 Corrosion protection: For the protection of steel pipes, the active methods shal be used in combination with the passive methods.

7.8.1.1.2 Clauses to note regarding EN 12007-2

a) Clause 4.3 – Maximum operating pressure: The value of the overall service coefficient C for polyethylene pipes shall be at least 3.25 instead of 2.

b) Clause 4.4 – Assembly techniques: For PE to PE joints, and PE to steel joints, only weldings (fusion techniques) are allowed.

As regards PE to cast iron joints, mechanical systems are allowed only on the cast iron side.

c) Clause 4.6 – Pipework inside buildings: Italian regulations do not allow the installation of pipework polyethylene elements inside buildings.

d) Clause 5.2.3.4 – Compression joints: As stated in the comment to clause 4.4, the compression joints (that are mechanical joints) are not allowed for polyethylene pipes.

7.8.1.1.3 Clauses to note regarding EN 12007-3

a) Clause 4.7.2 Threaded joints: Buried threaded joints are allowed only up to a MOP of 0,5 bar.

7.9 Page for the Netherlands (EN 12007-1 to EN 12007-4)

7.9.1 Relevant Dutch legislation/regulations for gas pipelines with maximum operating pressure up to and equal to 16 bar to which EN 12007-1 to EN 12007-4 is applicable

7.9.1.1 National law/ Federal law

— Aansluit- en transportvoorwaarden Gas – RNB, onderdeel van de voorwaarden als bedoeld in artikel 12b van de Gaswet)

— Meetvoorwaarden Gas RNB

— GASWET, WET van 22 juni 2000, houdende regels omtrent het transport en de levering van gas (Gas Act 2000 (Management on quality aspects of gas distribution systems))

— Wet Informatie-uitwisseling Ondergrondse Netten (WION; document uitgegeven door de Rijksoverheid, Den Haag.

— ATEX ARBO richtlijnen 95 en 137 (Explosiegevaar)

— Activiteitenbesluit milieubeheer (Besluit algemene regels voor inrichtingen milieubeheer)

— Wet milieubeheer

— AMVB - Besluit van 27 oktober 2011 tot vaststelling van veiligheidseisen voor het transport van gas door buisleidingen bij een druk lager dan 16 bar (Besluit veiligheid lage druk gastransport)

— Bouwbesluit 2012

— Activiteitenregeling milieubeheer (Regeling algemene regels voor inrichtingen milieubeheer)

7.9.1.2 NSB National Functional standards

— NEN 7244-1:2003 Nederlandse editie op basis van NEN-EN 12007-1 — Gasvoorzieningsystemen – Leidingen voor maximale bedrijfsdruk tot en met 16 bar – Deel 1: Algemene functionele eisen (Dutch edition on base of NEN-EN 12007-1 — Gas supply systems - Pipelines for maximum operating pressure up to and including 16 bar - Part 1: General functional recommendations)

— Ontwerp NEN 7244-1: 2012 Gasvoorzieningssystemen – Leidingen voor maximale druk tot en met 16 bar - Deel 1: Algemene functionele aanbevelingen - Vertaalde editie van NEN-EN 12007-1 met Nederlandse Aanvullingen (Dutch edition on base of NEN-EN 12 007-1 — Gas supply systems -Pipelines for maximum operating pressure up to and including 16 bar -Part 1: General functional recommendations)

— NEN 7244-2:2004 Nederlandse editie op basis van NEN-EN 12007-2 — Gasvoorzieningsystemen – Leidingen voor maximale bedrijfsdruk tot en met 16 bar – Deel 2: Specifieke functionele eisen voor polyetheen (MOP tot en met 10 bar) (Dutch edition based on NEN-EN 12007-2 — Gas supply systems - Pipelines for maximum operating pressure up to and including 16 bar - Part 2: Specific functional requirements for polyethylene (MOP up to and including 10 bar))

— NEN 7244-3:2004 Nederlandse editie op basis van NEN-EN 12007-3 — Gasvoorzieningsystemen – Leidingen voor maximale bedrijfsdruk tot en met 16 bar – Deel 3: Specifieke functionele eisen voor staal (Dutch edition based on NEN-EN 12007-2 — Gas supply sustems - Pipelines for maximum operating pressure up to and including 16 bar - Part 2: Specific functional requirements for polyethylene (MOP up to and including 10 bar))

— NEN 7244-4:2004 Gasvoorzieningsystemen – Leidingen voor maximale bedrijfsdruk tot en met 16 bar – Deel 4: Specifieke functionele eisen voor nodulair gietijzeren leidingen met een maximale bedrijfsdruk van 8 bar (Gas supply systems - Pipelines for maximum operating pressure up to and including 16 bar - Part 6: Specific functional recommendations for ductile cast iron with a MOP of 8 bar)

— NEN 7244-5:2004 Gasvoorzieningsystemen – Leidingen voor maximale bedrijfsdruk tot en met 16 bar – Deel 5: Specifieke functionele eisen voor slagvaste PVC-leidingen met een maximale bedrijfsdruk van 200 mbar (Gas supply systems - Pipelines for maximum operating pressure up to and including 16 bar - Part 5: Specific functional recommendations for high impact PVC with a MOP of 200 mbar)

— NEN 7244-7:2005 Nederlandse editie op basis van NEN-EN 12327 — Gasvoorzieningsystemen – Leidingen voor maximale bedrijfsdruk tot en met 16 bar – Deel 7: Specifieke functionele eisen voor sterkte- en dichtheidsbeproeving en voor het in bedrijf en buiten bedrijf stellen van gasdistributieleidingen

(Dutch edition on base of NEN-EN 12327 — Gas supply systems – Pipelines for maximum operating pressure up to and including 16 bar – Part 7: Specific functional requirements for strength- and tightness testing and for commissioning and decommissioning of gasdistribution pipelines)

— NEN 7244-7/A1:2009 Nederlandse editie op basis van NEN-EN 12327 — Gasvoorzieningsystemen – Leidingen voor maximale bedrijfsdruk tot en met 16 bar – Deel 7: Specifieke functionele eisen voor sterkte- en dichtheidsbeproeving en voor het in bedrijf en buiten bedrijf stellen van gasdistributieleidingen (Dutch edition on base of NEN-EN 12327 — Gas supply systems – Pipelines for maximum operating pressure up to and including 16 bar – Part 7: Specific functional requirements for strength- and tightness testing and for commissioning and decommissioning of gasdistribution pipelines)

— NEN 7244-9:2008 Gasvoorzieningsystemen – Leidingen voor maximale bedrijfsdruk tot en met 16 bar – Deel 9: Specifieke functionele eisen voor de afhandeling van gasmeldingen en periodiek gaslek zoeken (Gas supply systems - Pipelines for maximum operating pressure up to and including 16 bar - Part 9: Specific functional requirements for processing of reported gas leaks and gas leakage survey)

— NEN 7244-2:2013 Ontw. Nl
Nederlandse editie op basis van NEN-EN 12007-2 - Gasvoorzieningsystemen - Leidingen voor maximale druk tot en met 16 bar - Deel 2: Specifieke functionele eisen voor polyetheen (MOP tot en met 10 bar)) (Dutch edition based on NEN-EN 12007-2 — Gas supply systems - Pipelines for maximum operating pressure up to and including 16 bar - Part 2: Specific functional requirements for polyethylene (MOP up to and including 10 bar))

— NEN 7244-4:2013 Ontw. Nl
Gasvoorzieningsystemen - Leidingen voor maximale druk tot en met 16 bar - Deel 4: Specifieke functionele eisen voor nodulair gietijzeren leidingen met een maximale bedrijfsdruk van 8 bar (Gas supply systems - Pipelines for maximum operating pressure up to and including 16 bar - Part 6: Specific functional recommendations for ductile cast iron with a MOP of 8 bar)

— NEN 7244-5:2013 Ontw. Nl
Gasvoorzieningsystemen - Leidingen voor maximale druk tot en met 16 bar - Deel 5: Specifieke functionele eisen voor slagvaste PVC-leidingen met een maximale bedrijfsdruk van 200 mbar (Gas supply systems - Pipelines for maximum operating pressure up to and including 16 bar - Part 5: Specific functional recommendations for high impact PVC with a MOP of 200 mbar)

7.9.1.3 Technical rules – (Detailed) Code of practice

— NTA 8120:2014 Assetmanagement - Eisen aan een veiligheids-, kwaliteits- en capaciteitsmanagementsysteem voor het elektriciteits- en gasnetbeheer (Asset management - Requirements for a safety, quality and capacity management system for electricity and gas network operations)

7.9.2 More restrictive requirements in Dutch legislation/regulations

7.9.2.1 General

No detailed specifications needed.

7.9.2.2 Clauses to note regarding EN 12007-1 to EN 12007-4

No detailed specifcations needed.

7.10 Page for Spain (EN 12007-1 to EN 12007-4)

7.10.1 Relevant Spanish legislation/regulations for gas pipelines with maximum operating pressure up to and equal to 16 bar to which EN 12007-1 to EN 12007-4 is applicable

7.10.1.1 National law/ Federal law

— Ley del Sector de Hidrocarburos (Ley 34/1998, de 7 de octubre) y sus modificaciones (Hydrocarbons Sector Law and its subsequent amendments)

The Regulations below are applicable to the whole country. The regions (Comunidades Autónomas) may have additional requirements.

— Reglamento General del Servicio Público de Gases Combustibles (Decreto 2913/1973 de 26 de octubre) (Gaseous Fuels Public Supply Service General Regulations)

— Reglamento de la actividad de distribución de gases licuados del petróleo (Decreto 1085/1992) (LPG Distribution Regulations)

— Real Decreto por el que se regula el acceso de terceros a las instalaciones gasistas y se establece un sistema económico integrado del sector de gas natural (Real Decreto 949/2001, de 3 de agosto) (Regulations on third party access to gas installations and establishment of an integrated economic system for the natural gas sector)

— Real Decreto por el que se regulan las actividades de transporte, distribución, comercialización, suministro y procedimientos de autorización de instalaciones de gas natural (Real Decreto 1434/2002, de 27 de diciembre) (Regulations on Transmisión, Distribution, Trading, and Supply activities, as well as permit granting procedures of natural gas infrastructures)

— Reglamento Técnico de Distribución y Utilización de Combustibles Gaseosos y sus instrucciones técnicas complementarias ICG 01 a 11 (Real Decreto 919/2006, de 28 de julio) (Gas Distribution and Utilization Technical Regulations)

  This *“Reglamento”* includes a number of applicable *"Instrucciones Técnicas Complementarias"* (Complementary Technical Instructions) or ITC:

  — ITC-ICG 01 Instalaciones de distribución de combustibles gaseosos por canalización (Gas Distribution Installations)

  — ITC-IGC 04 Plantas Satélite de gas natural licuado (LNG Satellite Plants)

  — ITC-IGC 07 Instalaciones Receptoras de combustibles gaseosos (Gas Receiving Installations)

  — ITC-IGC 09 Instaladores y Empresas Instaladoras (Gas Installers and Gas Installation Businesses)

  — ITC-ICG 11 Relación de normas UNE de referencia (List of reference UNE Standards)

7.10.1.2 NSB National Functional standards

The following standards are declared mandatory by the Fuel Gas Mains and Services Regulations:

— UNE-EN 437, Gases de ensayo. Presiones de ensayo. Categorías de los aparatos (Test gases - Test pressures - Appliance categories)

— UNE 60302, Canalizaciones para combustibles gaseosos. Emplazamiento (Fuel Gas pipelines. Location)

— UNE 60305, Canalizaciones en acero para combustibles gaseosos. Zonas de seguridad y coeficientes de cálculo según el emplazamiento (Steel Pipelines for Fuel Gas. Safety Zones and Design Factors according to Location)

— UNE 60309, Canalizaciones para combustibles gaseosos. Espesores mínimos para tuberías de acero (Fuel Gas Pipelines. Minimum Wall Thicknesses for Steel Pipelines)

The following standards develop and have complementary requirements to the functional recommendations of EN 12007:

— UNE 60310 Canalizaciones de distribución de combustibles gaseosos con presión máxima de operación superior a 5 bar y hasta 16 bar. (Gas Supply Systems. Pipelines for maximum operating pressure greather than 5 bar and up to 16 bar)

— UNE 60311, Canalizaciones de distribución de combustibles gaseosos con presión máxima de operación hasta 5 bar. (Gas Supply Systems. Pipelines for maximum operating pressure up to 5 bar)

7.10.1.3 Technical rules – (Detailed) Code of practice

SEDIGAS recommendations (of the national gas sector):

— RS-D-01, Detección y clasificación de fugas de canalizaciones subterráneas de gas en servicio (Leak detection and classification in buried gas distribution networks in service)

— RS-D-02, Conservación y mantenimiento de las canalizaciones subterráneas de gas en servicio (Conservation and maintenance of buried gas distribution networks in service)

— RS-D-07, Puesta en servicio de una red de distribución de gas después de una interrupción de servicio en una zona (Commissioning of a gas distribution network after a service interruption in a zone)

— RS-D-08, Ubicación de las redes y acometidas de gas respecto a otros servicios (Location of gas networks and service lines respect to other services)

— RS-S-02, Operativa de seguridad en roturas o afecciones con escape de gas en canalizaciones (Operational safety conditions in breaks or damages with gas leakage in pipelines)

— RS-S-04, Acciones preventivas para evitar daños que puedan ocasionar terceros en instalaciones de gas (Preventive actions in gas installations to avoid damage caused by third party interferences)

7.10.2 More restrictive requirements inSpanish legislation/ regulations

7.10.2.1 General

The minimum burial depth is set by UNE 60310 and UNE 60311.

UNE 60310 and UNE 60311 define distances to other utilities, both in parallel or in crossings.

The network leaktightness will be checked, at least, once every two years in urban areas and once every four years in rural areas. In addition, different kind of mandatory surveillances are defined for gas distribution mains with MOP > 5 bar (UNE 60310).

The cathodic protection devices shall be revised every three months.

7.10.2.2 Clauses to note regarding EN 12007-1 to EN 12007-4

7.10.2.2.1 Clauses to note regarding EN 12007-3

a) Clause 4.2.1: most all the minimum pipe wall thicknesses shown in Table 2 are lower than those of UNE 60309;

b) Clause 4.7.2: The threaded joints are accepted in EN 12007-3 (4.7.2) for nominal diameters up to and including 50 mm, while UNE 60311 accepts them only for diameters less than 40 mm and only for ancillary equipment.

7.11 Page for UK

The UK gas safety legislation does not lend itself to the detailed breakdown given by other countries. If any interested party needs to understand the UK safety system the references given supply the latest information from the source of authority.

The United Kingdom Safety Regulator for Industry and Commerce is the: *Health and Safety Executive.* The principle UK Health and Safety Legislation is the *Health and Safety at Work Act 1974, as amended*. This Act has many branches with detailed regulations for the various sectors of Industry and Commerce.

http://www.hse.gov.uk/legislation/hswa.htm

The various Licenses issued by OFGEM for UK Gas Transport, Storage and Gas Supply etc. have a clause to ensure that the Licensee operates safely and securely. The HSE has a special website for *Gas* and a section for *Gas Supply.* This site describes the principle regulations governing gas supply and provides the related *Regulations* and the *Advisory Codes of Practice*:

http://www.hse.gov.uk/gas/supply/legislation.htm

The UK safety legislation is *goal setting* and the *HSE* has worked for many years with the UK gas industry through the *Institution of Gas Engineers and Managers* to develop more detailed technical standards for the various elements of the gas infrastructure. These cover a range of topics, e.g.:

— Pipelines Safety Regulations;

— Pressure Systems Safety Regulations;

— Gas Safety (Management) Regulations;

— Gas Safety (Installation and Use) Regulations;

— Dangerous Substances and Explosive Atmospheres Regulations;

— Reporting of Injuries, Diseases and Dangerous Occurrences Regulations;

— Building Regulations;

— Health and Safety at Work etc. Act;

— Management of Health and Safety at Work Regulations;

— Pressure Equipment Regulations;

— Electricity at Work Regulations.

The Full List of current IGEM standards and prices for January 2013 are at:

http://www.igem.org.uk/media/227989/igem%20standards%20list%20january%202013.pdf

When the CEN TC 234 ENs were published first in 2000, IGEM brought its Standards into line with these ENs, e.g. as regards pressure range and the 16 bar limit for EN 1594 and EN 12007 series.

Under the UK Safety Legislation, Licensed gas transporters, distributors and storage operators etc. are subject to a *Safety Case Regime,* which requires specific approval of the detail in the *Safety Case* by the HSE before operations can commence. This detail includes technical requirements for the design, construction, testing commissioning and operation under both normal and emergency conditions. The *Safety Case* document also covers quality management processes to ensure safety and security of gas supply according to the approved Safety Case. For this purpose, many Licensed Operators of gas infrastructure have their own complete technical and safety management details documented fully as part of their *Safety Case*. This detail describes how their business intends to operate under its License in order to ensure safety of the public and of the workforce.

8 Relevant national legislation/ regulation for service lines to which EN 12007-5 is applicable

8.1 Page for Austria (EN 12007-5)

8.1.1 Relevant Austrian legislation/regulations for service lines to which EN 12007-5 is applicable

8.1.1.1 National law/ Federal law

— BGBl. I Nr. 107/2011 Gaswirtschaftsgesetz (National gas law)

— BGBl. II Nr.171/2012 Gas-Marktmodell-Verordnung 2012 (Natural gas market regulation)

— BGBl. II Nr. 172/2012 Gasnetzdienstleistungsqualitäts-Verordnung (Gasgrid service quality regulation)

— BGBl. II Nr. 309/2012 Gas-Systemnutzungsentgelte-Verordnung 2013 (Gas system usage fee regulation)

Source of supply:

Rechtsinformationssystem des Bundes (RIS)

www.ris.bka.gv.at

Energie-Control Austria

Rudolfsplatz 13a

A-1010 Wien

http://www.e-control.at/de/recht/bundesrecht/gas

8.1.1.2 NSB National Functional standards

None.

8.1.1.3 Technical rules – (Detailed) Code of practice

— ÖVGW G E100: Erdgasleitungen (Natural gas pipelines)

— ÖVGW G E101: Druckprüfung von Erdgasleitungen (Pressure Testing of natural gas pipelines)

— ÖVGW G E110: Erdgasleitungen aus PE (Natural gas pipelines made of PE)

— ÖVGW G E120: Erdgasleitungen aus Stahl (Natural gas pipelines made of steel)

— ÖVGW G E151: Hausanschlussleitungen (Gas service lines)

— ÖVGW G B111: In- und Außerbetriebnahme von Erdgasleitungen und Erdgasanlagen (Commissioning and decommissioning of natural gas pipelines and stations)

— ÖVGW G B300: Instandhaltung von Erdgasleitungsanlagen (Maintenance of natural gas pipeline facilities)

— ÖVGW G B310: Instandhaltung von Erdgasleitungen: (Maintenance of natural gas pipelines)

Source of supply:

Österreichische Vereinigung für das Gas- und Wasserfach
Schubertring 14
1010 Wien
Austria
www.ovgw.at

8.1.2 More restrictive requirements in Austrian legislation/ regulations

More detailed requirements are specified in the above mentioned technical rules.

8.2 Page for Finland (EN 12007-5)

8.2.1 Relevant Finnish legislation/regulations for service lines to which EN 12007-5 is applicable is applicable

8.2.1.1 National law/ Federal law

— **Laki vaarallisten kemikaalien ja räjähteiden käsittelyn turvallisuudesta 390/2005** (Act on the Safe Handling and Storage of Dangerous Chemicals and Explosives (390/2005))

— **Valtioneuvoston asetus maakaasun käsittelyn turvallisuudesta 551/2009** (Government Decree on Natural Gas Safety)

— Valtioneuvoston asetus maakaasu-, nestekaasu- ja öljylämmityslaitteistojen asennus- ja huoltotoimintaa sekä maanalaisten öljysäiliöiden tarkastusta harjoittavien hyväksymisestä 558/2012 **(Government Decree on approval of installation and maintenance companies)**

8.2.1.2 NSB National Functional standards

— SFS 2897 **Maakaasuputkisto. Painekoe** (Natural gas pipeline - Pressure test, 1987-05-18)

8.2.1.3 Technical rules – (Detailed) Code of practice

— **Maakaasukäsikirja, Suomen Kaasuyhdistys, Marraskuu 2010** (Natural gas - Codes of practise, Finnish Gas Association, November 2010)

These codes of practice include additional useful information.

8.2.2 More restrictive requirements in Finnish legislation/ regulations

8.2.2.1 General

As a result of circumstances in Finland there is some restrictive legislation concerning the gas infrastructure. These regulations are stated in annex 1 and annex 2 in *Valtioneuvoston asetus maakaasun käsittelyn turvallisuudesta 551/2009* (Government Decree on Natural Gas Safety

8.2.2.2 Clauses to note regarding EN 12007-5 is applicable

— Annex 2 in Valtioneuvoston asetus maakaasun käsittelyn turvallisuudesta 551/2009 (Government Decree on Natural Gas Safety)

8.3 Page for France (EN 12007-5)

8.3.1 French legislation/regulations for service lines to which EN 12007-5 (Systèmes d'alimentation en gaz - Branchements) is applicable

8.3.2 National law

— Décret du 18 janvier 1943 relatif au règlement sur les appareils à pression de gaz

— Arrêté du 2 août 1977 modifié relatif aux règles techniques et de sécurité applicables aux installations de gaz combustible et d'hydrocarbures liquéfiés situées à l'intérieur des bâtiments d'habitation ou de leurs dépendances

— Décret du 15 octobre 1985 relatif au régime des transports de gaz combustible par canalisations

— Loi du 22 juillet 1987 relative aux organisations de la sécurité civile, protection de la forêt contre l'incendie, protection des risques majeurs

— Décret du 6 mai 1988 relatif aux plans d'urgence pris en application de la loi du 22 juillet 1987

— Loi du 22 juin 1989 relative au code de la voirie routière

— Arrêté du 13 juillet 2000 modifié portant règlement de sécurité de la distribution de gaz combustible par canalisations

— Décret du 24 janvier 2003 relatif à la coordination en matière de sécurité et de protection de la santé lors des opérations de bâtiment ou de génie civil et modifiant le code du travail

— Décret n° 2004-555 du 15 juin 2004 relatif aux prescriptions techniques applicables aux canalisations et raccordements des installations de transport, de distribution et de stockage de gaz

— Arrêté du 5 mars 2014 portant règlement de sécurité des canalisations de transport de gaz combustibles, d'hydrocarbures liquides ou liquéfiés et de produits chimiques

— Décret n° 2007-684 du 4 mai 2007 relatif à l'agrément des distributeurs de gaz par réseaux publics

Source of supply:

Direction des Journaux Officiels
26 rue Desaix
F - 75727 PARIS Cedex 15.

8.3.2.1 Detailed codes of practice

Technical specifications (« cahiers des charges ») supporting the above listed regulation ‘arrêtédu 13 juillet 2000’:

— RSDG1 Règles techniques et essais

— RSDG2 Capacité technique et compétence des opérateurs de réseau de distribution de gaz combustibles

— RSDG3-1 Soudage des canalisations et branchements en acier

— RSDG3-2 Soudage des canalisations et branchements en polyéthylène (PE)

— RSDG3-3 Canalisations et branchements en cuivre

— RSDG4 Voisinage des réseaux de distribution de gaz avec les autres ouvrages

— RSDG5 Canalisations à l’air libre ou dans les passages couverts, ouverts sur l’extérieur

— RSDG6 Organes de coupure et sectionnement des réseaux

— RSDG7 Organes de protection de branchement

— RSDG8 Cartographie des réseaux de distribution de gaz

— RSDG9 Intervention de sécurité en cas d’incident ou d’accident mettant en cause la sécurité

— RSDG10Rev1 Odeur du gaz distribué

— RSDG11 Travaux en charge

— RSDG12 Identification in situ des canalisations de distribution de gaz

— RSDG13-1Rev1 Protection cathodique des canalisations en acier

— RSDG13-2 Canalisations en acier non protégées cathodiquement

— RSDG14Rev1 Surveillance et maintenance des réseaux de distribution de gaz combustibles

— RSDG15Rev1 Mise hors exploitation et abandon des équipements de réseau

— RSDG 16.1 relatif aux réseaux de distribution de gaz de 2ème catégorie

— RSDG 16.2 relatif aux réseaux de distribution de gaz de 3ème catégorie

Source of supply:

AFG, Association Française du gaz
8 rue de l’Hotel de ville

F-92200 Neuilly-sur-Seine
Phone: +33 1 80 21 08 00
Fax: +33 1 46 37 19 55

8.4 Page for Germany (EN 12007-5)

8.4.1 Relevant German legislation/regulations for service lines to which EN 12007-5 is applicable

8.4.1.1 National law/ Federal law

See 7.4.1 (EN 12007-1 to EN 12007-4)

8.4.1.2 NSB National Functional standards

There are no national functional standards in addition to EN 12007-5.

In Germany, there exists an agreement between DVGW and DIN. Whilst the DIN is responsible for national product standards, the DVGW is responsible for the setting of functional technical rules.

All European standards are published as DIN EN standards. DVGW technical rules are aligned to DIN/DIN EN standards, where applicable.

The DIN standards related to gas are taken into account by DVGW and are part of the so called DVGW Set of Codes of practice.

8.4.1.3 Technical rules – (Detailed) Code of practice

— DVGW-Arbeitsblatt G 459-1 “Gas-Hausanschlüsse für Betriebsdrücke bis 4 (5) bar; Planung und Errichtung”(Gas service pipes for operating pressures up to 4 (5) bar – Design and construction)

Source of supply:

Wirtschafts- und Verlagsgesellschaft Gas und Wasser mbh
Postfach 14 01 51
D – 53056 Bonn
Germany

8.4.1.4 Health and safety

See 7.4.1 (EN 12007-1 to EN 12007-4)

8.4.2 More restrictive requirements in German legislation/ regulations

8.4.2.1 General

More detailed requirements are specified in the above mentioned codes of practice.

8.4.2.2 Clauses to note regarding EN 12007-1 to EN 12007-4

More detailed requirements are specified in the above mentioned codes of practice.

8.5 Page for Greece (EN 12007-5)

8.5.1 Relevant Greek legislation/regulations for service lines to which EN 12007-5 is applicable is applicable

8.5.1.1 National law/ Federal law

— Ministerial Decision “Technical code for service lines and gas meters with OP 4 bar” Governmental Gazette 1810B/12.12.2006. “ Κανονισμός εγκατάστασης παροχετευτικών αγωγών και μετρητών φυσικού αερίου με πίεση λειτουργίας έως και 4 bar”.

8.6 Page for Hungary (EN 12007-5)

8.6.1 Relevant Hungarian legislation/regulations for service lines to which EN 12007-5 is applicable

8.6.1.1 National law/ Federal law

— **Law XL of 2008**: Natural Gas Supply (Gas Act)

— **Government Law Decree 19/2009 (I. 30.)**: On the implementation of provisions of Law XL of 2008

— **GKM (Ministry of Economy and Transport) Decree 80/2005. (X. 11.)**: Safety requirements for gas supply pipelines and publishing the safety regulations for gas supply pipelines

8.6.1.2 NSB National Functional standards

None.

8.6.1.3 Technical rules – (Detailed) Code of practice

None.

8.6.2 More restrictive requirements in Hungarian legislation/ regulations

8.6.2.1 General

None.

8.6.2.2 Clauses to note regarding EN 12007-5 is applicable

None

8.7 Page for Ireland (EN 12007-5)

8.7.1 Relevant Irish legislation/regulations for service lines to which EN 12007-5 is applicable is applicable

8.7.1.1 National law

8.7.1.1.1 Energy

— Energy (Miscellaneous Provisions) Act 2006;

— Gas Act 1976 (No. 30 of 1976);

— S.I. No. 283 of 1987. (Gas [amendment] act, [section 2 order 1987]).

— S.I. No. 196 of 2003. (Gas (Amendment) Act 1987 (Section 2) (Distribution) Order 2003

Source of supply:

Irish Statute Book (http://www.irishstatutebook.ie/)

8.7.1.1.2 Health and safety

— Safety, Health and Welfare at work Act 2005 (No.10 of 2005), as amended.

Source of supply:

Irish Statute Book (http://www.irishstatutebook.ie/)

8.7.1.2 NSB National standards

— I.S. 265:2000, Installation of gas service pipes parts 1 and 2 (fourth edition)

— I.S. 370:2007, Colour code for buried plastics piping

8.7.1.3 Technical rules – (Detailed) Code of practice

Commission for Energy Regulation – Gas safety framework

www.cer.ie

8.7.2 More restrictive requirements in Irish legislation/ regulations

8.7.2.1 General

None.

8.7.2.2 Clauses to note regarding EN 12007-5 is applicable

None.

8.8 Page for Italy (EN 12007-5)

8.8.1 Relevant Italian legislation/regulations for service lines to which EN 12007-5 is applicable

8.8.1.1 National law/ Federal law

— Legge 6 dicembre 1971, n. 1083 – Norme per la sicurezza dell'impiego del gas combustibile (Law 06/12/1971 n. 1083 "Safety in the use of combustible gases")

— Decreto 12 aprile 1996 – Approvazione della regola tecnica di prevenzione incendi per la progettazione, la costruzione e l'esercizio degli impianti termici alimentati da combustibili gassosi (Decree of April 12, 1996 – Approval of technical rules of fire prevention for the design, construction and operation of thermal plants fuelled by gaseous fuels)

— Decreto del Ministero dello sviluppo economico 22/01/2008, n. 37 – "Regolamento concernente l'attuazione dell'art. 11-quaterdecies, comma 13, lettera a), della Legge n. 248 del 02/12/2005, recante riordino delle disposizioni in materia di attività di installazione degli impianti all'interno degli edifici. (Decree of the Ministry of Economic Development 22/01/2008, n. 37 "Regulation on the implementation of Article. 11-quaterdecies, paragraph 13, letter a) of Law no. 248 of 02/12/2005 laying down rules on reorganization of the activities of installation of the plants inside the building)

— Decreto Ministeriale 16/04/08 Regola tecnica per la progettazione, costruzione, collaudo, esercizio e sorveglianza delle opere e dei sistemi di distribuzione e di linee dirette del gas naturale con densità non superiore a 0,8. (Ministry Decree 16/04/08 – Technical regulations for design , construction, ,testing, operation and surveillance of natural gas distribution networks)

— Decreto Ministeriale 17/04/08 Regola tecnica per la progettazione, costruzione, collaudo, esercizio e sorveglianza delle opere e degli impianti di trasporto del gas naturale con densità non superiore a 0,8. (Ministry Decree 17/04/08 – Technical regulations for design , construction, testing, operation and surveillance of natural gas transport networks)

— Decreto Ministeriale 4 aprile 2014 Norme tecniche per gli attraversamenti e per i parallelismi di condotte e canali convoglianti liquidi e gas con ferrovie ed altre linee di trasporto. (Ministry Decree 4 aprile 2014- Technical standards for crossing and parallelism of pipes and ducts carrying liquids and gas with railways and other transportation lines.)

— Decreto Ministeriale 01/12 2004, n. 329 Regolamento recante norme per la messa in servizio ed utilizzazione delle attrezzature a pressione e degli insiemi di cui all'articolo 19 del decreto legislativo 25 febbraio 2000, n. 93. Ministerial Decree 01/12 2004, n. 329 Regulations for commissioning and use of pressure equipment and assemblies referred to in Article 19 of Legislative Decree 25 February 2000, n. 93

— Decreto Legislativo 9 aprile 2008 , n. 81 – Attuazione dell'articolo 1 della legge 3 agosto 2007, n. 123, in materia di tutela della salute e della sicurezza nei luoghi di lavoro. (Legislative Decree 9 April 2008 no. 81 - Implementation of Article 1 of the Law of 3 August 2007, n. 123, concerning the protection of health and safety in the workplace

— Lettera circolare n. 6181/2014 del Ministero dell'interno: "D.M. 12 aprile 1996 "Approvazione della regola tecnica di prevenzione incendi per la progettazione, la costruzione e l'esercizio degli impianti termici alimentati da combustibili gassosi"- Indicazioni applicative" (circular letter n. 6181/2014 of Ministry of Interior - Decree of April 12, 1996 - Approval of technical rules of fire prevention for the design, construction and operation of thermal plants fuelled by gaseous fuels – Application recommendations)

— Autorità per l'energia elettrica il gas e il sistema idrico (AEEGSI) - Deliberazione n. 574/2013/R/GAS - Regolazione della qualità dei servizi di distribuzione e misura del gas per il periodo di regolazione 2014-2019 - Parte I del testo unico della regolazione della qualità e delle tariffe dei servizi di distribuzione e misura del gas per il periodo di regolazione 2014-2019 (Regulatory Authority for Electricity, Gas and Water (AEEGSI) – Directive n. 574/2013, Regulation of the quality of distribution and measurement services for the regulatory period 2014-2019: Part I "Adjusting the quality and the pricing for the distribution and measurement services of natural gas for the period of adjustment 2014-2019).

8.8.1.2 NSB National Functional standards

— UNI 7133-1, Odorizzazione di gas per uso domestico e similare Parte 1: Termini e definizioni (Gas odorisation for domestic and similar uses - Part 1: Terms and definitions)

— UNI 7133-2, Odorizzazione di gas per uso domestico e similare - Parte 2: Requisiti, controllo e gestione (Gas odorisation for domestic and similar uses - Part 2: Requirements, check and management)

— UNI 7133-3, Odorizzazione di gas per uso domestico e similare Parte 3: Procedure per la definizione delle caratteristiche olfattive di fluidi odorosi (Gas odorisation for domestic and similar uses - Part 3: Test procedures for olfactory characteristics of odorous fluids)

— UNI 7133-4, Odorizzazione di gas per uso domestico e similare - Parte 4: Definizione dei requisiti degli odorizzanti (Gas odorisation for domestic and similar uses - Part 4: Odorant requirements)

— UNI 9165, Reti di distribuzione del gas – Condotte con pressione massima di esercizio minore o uguale di 5 bar - Progettazione, costruzione, collaudo, conduzione, manutenzione e risanamento (Gas distribution networks - Pipelines with maximum operating pressure less than or equal to 5 bar - Design, construction, testing, operation, maintenance and rehabilitation)

— UNI 9463-1, Impianti di odorizzazione e depositi di odorizzanti per gas combustibili impiegati in usi domestici o similari - Parte 1: Termini e definizioni (Ottobre 2012) (Odorisation plants and odorant storages for combustible gases employed in domestic of similar uses Part 1: Term and definitions)

— UNI 9463-2, Impianti di odorizzazione e depositi di odorizzanti per gas combustibili impiegati in usi domestici o similari - Parte 2: Impianti di odorizzazione - Progettazione, costruzione, collaudo e sorveglianza (Odorisation plants and odorant storages for combustible gases employed in domestic of similar uses - Part 2: Odorisation plants - Design, construction, testing and surveillance)

— UNI 9463-3, Impianti di odorizzazione e depositi di odorizzanti per gas combustibili impiegati in usi domestici o similari - Parte 3: Depositi di odorizzanti - Progettazione, costruzione ed esercizio (Odorisation plants and odorant storages for combustible gases employed in domestic of similar uses - Part 3: Odorant storages - Design, construction and operating criteria)

— UNI 9463-4, Impianti di odorizzazione e depositi di odorizzanti per gas combustibili impiegati in usi domestici o similari - Parte 4: Modalità di fornitura di odorizzanti (Odorisation plants and odorant storages for combustible gases employed in domestic of similar uses Part 4: Odorant supply conditions)

— UNI 9860, Impianti di derivazione di utenza del gas – Progettazione, costruzione, collaudo, conduzione, manutenzione e risanamento (Gas service pipes – Design, construction, testing, operation, maintenance and rehabilitation)

— UNI 10390, Impianti di riduzione finale della pressione del gas naturale funzionanti con pressione a monte massima compresa tra 5 e 12 bar. Progettazione, costruzione e collaudo. (Final natural gas pressure-regulating installations for inlet pressure between 5 and 12 bar – Design, construction and testing)

— UNI 10576, Protezione delle tubazioni gas durante i lavori nel sottosuolo + EC (Gas pipelines protection during underground works)

— UNI 10619, Impianti di riduzione della pressione del gas naturale funzionanti con pressione a monte massima di 12 bar per utilizzo: industriale e assimilabile e per utilizzo civile con pressione a valle compresa tra 0,04 e 0,5 bar - Progettazione, costruzione, installazione e collaudo (Natural gas pressure reduction and metering plant with upstream maximum operating pressure of 12 bar for industrial uses and similar and for service lines with downstream pressure between 0,04 and 0,5 bar – Design, construction, installation and testing)

— UNI 10611, Rivestimenti isolanti di strutture metalliche interrate da associare alla protezione catodica. Criteri di progettazione e controllo (Insulating coatings for buried metal structures to be associated with cathodic protection. Design criteria and control)

— UNI 10702, Impianti di riduzione della pressione del gas funzionanti con pressione a monte compresa fra 0,04 e 12 bar. Conduzione e manutenzione + EC (Gas pressure regulating installations for inlet pressure between 0,04 and 12 bar – Operation and maintenance)

— UNI/TR 11228, Opere di protezione per tubazioni gas interrate per interferenze con ferrovie, tranvie, strade, altri servizi interrati e fabbricati (Protecting structures for buried gas pipes for interferences with railways, tramways, roads, other buried utilities and buildings)

—

— UNI 10619-1 Sistemi di controllo della pressione e/o impianti di misurazione del gas naturale funzionanti con pressione a monte massima di 12 bar per utilizzo industriale e civile - Parte 1: Progettazione, costruzione e collaudo - Generalità (Gas pressure control systems and/or gas measurements installations for inlet max pressure up to 12 bar for industrial and domestic use – Part 1: Design, construction and testing - General).

— UNI 10619-2 Sistemi di controllo della pressione e/o impianti di misurazione del gas naturale funzionanti con pressione a monte massima di 12 bar per utilizzo industriale e civile - Parte 2: Progettazione, costruzione e collaudo - Sistemi di controllo del gas (Gas pressure control systems and/or gas measurements installations for inlet max pressure up to 12 bar for industrial and domestic use – Part 2: Design, construction and testing – Equipment for gas control).

8.8.1.3 Technical rules – (Detailed) Code of practice

The technical rules when issued by ministerial decree are compulsory. The directives issued by Regulatory Authority for Electricity and Gas (Aeeg) are compulsory. The guidelines issued by CIG (Italian Gas Committee) support some requirements given in the Aeeg Directives.

CIG Guidelines:

— La gestione delle emergenze da gas combustibile (Gas emergency management in distribution networks)

— Classificazione delle dispersioni di gas (Gas leaks – Classification)

— L'esecuzione delle attività di pronto intervento gas (Gas emergency – Activities in distribution networks)

— Linee guida per l'applicazione della normativa sismica nazionale alle attività di progettazione, costruzione e verifica dei sistemi di trasporto e distribuzione per gas combustibile (Seismic guidelines in gas supply)

— La gestione degli incidenti da gas combustibile (Gas accidents management in distribution networks)

— Esecuzione delle ispezioni programmate e localizzate delle dispersioni sulla rete di distribuzione per gas con densità < 0,8 e con densità > 0,8 (Settembre 2011) (Distribution networks – Gas leaks inspections)

— Linee guida riguardanti la protezione contro le esplosioni nelle attività di installazione e/o sorveglianza di apparecchi utilizzati negli impianti di regolazione della pressione e di odorizzazione nelle reti di trasporto e distribuzione del gas combustibile (Guidelines on protection against explosions in the appliances installation and surveillance activity for pressure regulation and odorization installations in trasmission and distribution network.

8.8.2 More restrictive requirements in Italian legislation/ regulations

8.8.2.1 General

Detailed specification needed.

8.8.2.2 Clauses to note regarding EN 12007-5 is applicable

a) 3.1.4, point of delivery: In Italy the definitions of AEEGSI Directive 574/2013 and standard UNI 7128 are applied

Italian regulations do not allow the installation of pipework polyethylene elements inside buildings.

8.9 Page for the Netherlands (EN 12007-5)

8.9.1 Relevant Dutch legislation/regulations for service lines to which EN 12007-5 is applicable is applicable

8.9.1.1 National law/ Federal law

— Aansluit- en transportvoorwaarden Gas – RNB, onderdeel van de voorwaarden als bedoeld in artikel 12b van de Gaswet (

— GASWET, WET van 22 juni 2000, houdende regels omtrent het transport en de levering van gas (Gas Act 2000 (Management on quality aspects of gas distribution systems))

— Wet Informatie-uitwisseling Ondergrondse Netten (WION; document uitgegeven door de Rijksoverheid, Den Haag.

— Activiteitenbesluit milieubeheer (Besluit algemene regels voor inrichtingen milieubeheer)

— Wet milieubeheer

— AMVB - Besluit van 27 oktober 2011 tot vaststelling van veiligheidseisen voor het transport van gas door buisleidingen bij een druk lager dan 16 bar (Besluit veiligheid lage druk gastransport)

— Bouwbesluit 2012

— Meetvoorwaarden Gas – RNB, onderdeel van de voorwaarden als bedoeld in artikel 12b van de Gaswet

— ATEX ARBO richtlijnen 95 en 137 (Explosiegevaar)

— Activiteitenregeling milieubeheer (Regeling algemene regels voor inrichtingen milieubeheer)

8.9.1.2 NSB National Functional standards

— NEN 7244-1:2003, Nederlandse editie op basis van NEN-EN 12007-1 — Gasvoorzieningsystemen – Leidingen voor maximale bedrijfsdruk tot en met 16 bar – Deel1: Algemene functionele eisen (Dutch edition on base of NEN-EN 12007-1 — Gas supply systems - Pipelines for maximum operating pressure up to and including 16 bar - Part 1: General functional recommendations)

— Ontwerp NEN 7244-1: 2012, Gasvoorzieningssystemen – Leidingen voor maximale druk tot en met 16 bar - Deel 1: Algemene functionele aanbevelingen (Dutch edition on base of NEN-EN 12007-1 — Gas supply systems - Pipelines for maximum operating pressure up to and including 16 bar - Part 1: General functional recommendations)

— NEN 7244-6:2005, Gasvoorzieningsystemen – Leidingen voor maximale bedrijfsdruk tot en met 16 bar – Deel 6: Specifieke functionele eisen voor aansluitleidingen (Gas supply sustems - Pipelines for maximum operating pressures up to and including 16 bar - Part 6: Specific functional requirements for servicelines)

— NEN 7244-7:2005, Nederlandse editie op basis van NEN-EN 12327 — Gasvoorzieningsystemen – Leidingen voor maximale bedrijfsdruk tot en met 16 bar – Deel 7: Specifieke functionele eisen voor sterkte- en dichtheidsbeproeving en voor het in bedrijf en buiten bedrijf stellen van gasdistributieleidingen (Dutch edition on base of NEN-EN 12327 — Gas supply systems – Pipelines for maximum operating pressure up to and including 16 bar – Part 7: Specific functional requirements for strength- and tightness testing and for commissioning and decommissioning of gasdistribution pipelines)

— NEN 7244-7/A1:2009, Nederlandse editie op basis van NEN-EN 12327 — Gasvoorzieningsystemen – Leidingen voor maximale bedrijfsdruk tot en met 16 bar – Deel 7: Specifieke functionele eisen voor

sterkte- en dichtheidsbeproeving en voor het in bedrijf en buiten bedrijf stellen van gasdistributieleidingen (Dutch edition on base of NEN-EN 12327 — Gas supply systems – Pipelines for maximum operating pressure up to and including 16 bar – Part 7: Specific functional requirements for strength- and tightness testing and for commissioning and decommissioning of gasdistribution pipelines)

— NEN 7244-10:2010, Gasvoorzieningsystemen – Leidingen voor maximale bedrijfsdruk tot en met 16 bar – Deel 10: Specifieke functionele eisen voor opstellingsruimten en meteropstellingen met een maximale inlaatdruk van 100 mbar en een maximale ontwerpcapaciteit van 650 mn3/h (Gas supply systems – Pipelines for maximum operating pressure up to and including 16 bar – Part 10: Specific functional requirements for housing for installations and housing for meters with a maximum inlet pressure of 100 mbar and a maximum design capacity of 650 mn3/h)

— NEN 7244-10:2010/A1:2013 nl, Gasvoorzieningsystemen - Leidingen voor maximale bedrijfsdruk tot en met 16 bar - Deel 10: Specifieke functionele eisen voor opstellingsruimten en meteropstellingen met een maximale inlaatdruk van 100 mbar en een maximale ontwerpcapaciteit van 650 mn3/h (Gas supply systems - Pipelines for maximum operating pressure up to and including 16 bar - Part 10: Specific functional requirements for housing for installations and housing for meters with a maximum inlet pressure of 100 mbar and a maximum design capacity of 650 mn3/h

8.9.1.3 Technical rules – (Detailed) Code of practice

— NTA 8120:2014 Assetmanagement - Eisen aan een veiligheids-, kwaliteits- en capaciteitsmanagementsysteem voor het elektriciteits- en gasnetbeheer (Asset management - Requirements for a safety, quality and capacity management system for electricity and gas network operations)

8.9.2 More restrictive requirements in Dutch legislation/regulations

8.9.2.1 General

No detailed specifications needed.

8.9.2.2 Clauses to note regarding EN 12007-5 is applicable

No detailed specifications needed.

8.10 Page for Spain (EN 12007-5)

8.10.1 Relevant Spanish legislation/regulations for service lines to which EN 12007-5 is applicable is applicable

8.10.1.1 National law/ Federal law

— Ley del Sector de Hidrocarburos (Ley 34/1998, de 7 de octubre) y sus modificaciones (Hydrocarbons Sector Law and its subsequent amendments)

The Regulations below are applicable to the whole country. The regions (Comunidades Autónomas) may have additional requirements:

— Reglamento General del Servicio Público de Gases Combustibles (Decreto 2913/1973 de 26 de octubre) (Gaseous Fuels Public Supply Service General Regulations)

— Reglamento de la actividad de distribución de gases licuados del petróleo (Decreto 1085/1992) (LPG Distribution Regulations)

— Real Decreto por el que se regula el acceso de terceros a las instalaciones gasistas y se establece un sistema económico integrado del sector de gas natural (Real Decreto 949/2001, de 3 de agosto) (Regulations on third party access to gas installations and establishment of an integrated economic system for the natural gas sector)

— Real Decreto por el que se regulan las actividades de transporte, distribución, comercialización, suministro y procedimientos de autorización de instalaciones de gas natural (Real Decreto 1434/2002, de 27 de diciembre) (Regulations on Transmisión, Distribution, Trading, and Supply activities, as well as permit granting procedures of natural gas infrastructures)

— Reglamento Técnico de Distribución y Utilización de Combustibles Gaseosos y sus instrucciones técnicas complementarias ICG 01 a 11 (Real Decreto 919/2006, de 28 de julio) (Gas Distribution and Utilization Technical Regulations)

  This *"Reglamento"* includes a number of applicable *"Instrucciones Técnicas Complementarias"* (Complementary Technical Instructions) or ITC:

  — ITC-ICG 01 Instalaciones de distribución de combustibles gaseosos por canalización (Gas Distribution Installations)

  — ITC-IGC 04 Plantas Satélite de gas natural licuado (LNG Satellite Plants)

  — ITC-IGC 07 Instalaciones Receptoras de combustibles gaseosos (Gas Receiving Installations)

  — ITC-IGC 09 Instaladores y Empresas Instaladoras (Gas Installers and Gas Installation Businesses)

  — ITC-ICG 11 Relación de normas UNE de referencia (List of reference UNE Standards)

8.10.1.2 NSB National Functional standards

The following standards are declared mandatory by the Fuel Gas Mains and Services Regulations:

— UNE-EN 437, Gases de ensayo. Presiones de ensayo. Categorías de los aparatos (Test gases - Test pressures - Appliance categories)

— UNE 60302, Canalizaciones para combustibles gaseosos. Emplazamiento (Fuel Gas pipelines. Location)

— UNE 60305, Canalizaciones en acero para combustibles gaseosos. Zonas de seguridad y coeficientes de cálculo según el emplazamiento (Steel Pipelines for Fuel Gas. Safety Zones and Design Factors according to Location)

— UNE 60309, Canalizaciones para combustibles gaseosos. Espesores mínimos para tuberías de acero (Fuel Gas Pipelines. Minimum Wall Thicknesses for Steel Pipelines)

The following standards develop and have complementary requirements to the functional recommendations of EN 12007:

— UNE 60310, Canalizaciones de distribución de combustibles gaseosos con presión máxima de operación superior a 5 bar y hasta 16 bar. (Gas Supply Systems. Pipelines for maximum operating pressure greather than 5 bar and up to 16 bar)

— UNE 60311, Canalizaciones de distribución de combustibles gaseosos con presión máxima de operación hasta 5 bar. (Gas Supply Systems. Pipelines for maximum operating pressure up to 5 bar)

8.10.1.3 Technical rules – (Detailed) Code of practice

SEDIGAS recommendations (of the national gas sector):

— RS-D-01 Detección y clasificación de fugas de canalizaciones subterráneas de gas en servicio (Leak detection and classification in buried gas distribution networks in service)

— RS-D-02 Conservación y mantenimiento de las canalizaciones subterráneas de gas en servicio (Conservation and maintenance of buried gas distribution networks in service)

— RS-D-07 Puesta en servicio de una red de distribución de gas después de una interrupción de servicio en una zona (Commissioning of a gas distribution network after a service interruption in a zone)

— RS-D-08 Ubicación de las redes y acometidas de gas respecto a otros servicios (Location of gas networks and service lines respect to other services)

— RS-S-02 Operativa de seguridad en roturas o afecciones con escape de gas en canalizaciones (Operational safety conditions in breaks or damages with gas leakage in pipelines)

— RS-S-04 Acciones preventivas para evitar daños que puedan ocasionar terceros en instalaciones de gas (Preventive actions in gas installations to avoid damage caused by third party interferences)

8.10.2 More restrictive requirements in Spanish legislation/ regulations

8.10.2.1 General

The minimum burial depth is set by UNE 60310 and UNE 60311.

UNE 60310 and UNE 60311 define distances to other utilities, both in parallel or in crossings.

The network leaktightness will be checked, at least, once every two years in urban areas and once every four years in rural areas. In addition, different kind of mandatory surveillances are defined for gas distribution mains with MOP > 5 bar (UNE 60310).

The cathodic protection devices shall be revised every three months.

8.10.2.2 Clauses to note regarding EN 12007-5 is applicable

No detailed specification is needed

8.11 Page for UK

The UK gas safety legislation does not lend itself to the detailed breakdown given by other countries. If any interested party needs to understand the UK safety system the references given supply the latest information from the source of authority.

The United Kingdom Safety Regulator for Industry and Commerce is the: *Health and Safety Executive.* The principle UK Health and Safety Legislation is the *Health and Safety at Work Act 1974, as amended*. This Act has many branches with detailed regulations for the various sectors of Industry and Commerce.

http://www.hse.gov.uk/legislation/hswa.htm

The various Licenses issued by OFGEM for UK Gas Transport, Storage and Gas Supply etc. have a clause to ensure that the Licensee operates safely and securely. The HSE has a special website for *Gas* and a section for *Gas Supply.* This site describes the principle regulations governing gas supply and provides the related *Regulations* and the *Advisory Codes of Practice*:

http://www.hse.gov.uk/gas/supply/legislation.htm

The UK safety legislation is *goal setting* and the *HSE* has worked for many years with the UK gas industry through the *Institution of Gas Engineers and Managers* to develop more detailed technical standards for the various elements of the gas infrastructure. These cover a range of topics, e.g.:

— Pipelines Safety Regulations;

— Pressure Systems Safety Regulations;

— Gas Safety (Management) Regulations;

— Gas Safety (Installation and Use) Regulations;

— Dangerous Substances and Explosive Atmospheres Regulations;

— Reporting of Injuries, Diseases and Dangerous Occurrences Regulations;

— Building Regulations;

— Health and Safety at Work etc. Act;

— Management of Health and Safety at Work Regulations;

— Pressure Equipment Regulations,

— Electricity at Work Regulations

The Full List of current IGEM standards and prices for January 2013 are at:-

http://www.igem.org.uk/media/227989/igem%20standards%20list%20january%202013.pdf

When the CEN TC 234 ENs were published first in 2000, IGEM brought its Standards into line with these ENs, e.g. as regards pressure range and the 16 bar limit for EN 1594 and EN 12007 series.

Under the UK Safety Legislation, Licensed gas transporters, distributors and storage operators etc. are subject to a *Safety Case Regime,* which requires specific approval of the detail in the *Safety Case* by the HSE before operations can commence. This detail includes technical requirements for the design, construction, testing commissioning and operation under both normal and emergency conditions. The *Safety Case* document also covers quality management processes to ensure safety and security of gas supply according to the approved Safety Case. For this purpose, many Licensed Operators of gas infrastructure have their own complete technical and safety management details documented fully as part of their *Safety Case*. This detail describes how their business intends to operate under its License in order to ensure safety of the public and of the workforce.

9 Relevant national legislation/ regulation for gas pressure regulating stations for transmission and distribution to which EN 12186 is applicable

9.1 Page for Austria (EN 12186)

9.1.1 Relevant Austrian legislation/regulations for gas pressure regulating stations for transmission and distribution to which EN 12186 is applicable

9.1.1.1 National law/ Federal law

— BGBl. I Nr. 107/2011, Gaswirtschaftsgesetz (National gas law)

— BGBl. I Nr. 38/1999, Mineralrohstoffgesetz (Mineral resource law)

— BGBl. II Nr.171/2012, Gas-Marktmodell-Verordnung 2012 (Natural gas market regulation)

— BGBl. II Nr. 172/2012, Gasnetzdienstleistungsqualitäts-Verordnung (Gasgrid service quality regulation)

— BGBl. II Nr. 309/2012,Gas-Systemnutzungsentgelte-Verordnung 2013 (Gas system usage fee regulation)

— BGBl. II Nr. 439/2011, Sonstige Transporte-Gas-Systemnutzungstarife Verordnung Novelle 2012 (Additional transport gas system usage regulation amendment 2012)

Source of supply:

Rechtsinformationssystem des Bundes (RIS)

www.ris.bka.gv.at

Energie-Control Austria

Rudolfsplatz 13a

A-1010 Wien

http://www.e-control.at/de/recht/bundesrecht/gas

9.1.1.2 NSB National Functional standards

None.

9.1.1.3 Technical rules – (Detailed) Code of practice

— ÖVGW G E500: Erdgasanlagen (Natural gas stations);

— ÖVGW G E501: Druckprüfung von Erdgasanlagen (Pressure testing of Natural Gas stations);

— ÖVGW G E510: Gasdruckregelanlagen (Gas pressure regulating stations);

— ÖVGW G B111, In- und Außerbetriebnahme von Erdgasleitungen und Erdgasanlagen (Commissioning and decommissioning of natural gas pipelines and stations);

— ÖVGW G B300, Instandhaltung von Erdgasleitungsanlagen (Maintenance of natural gas pipeline facilities);

— ÖVGW G B320: Instandhaltung von Erdgasanlagen (Maintenance of natural gas stations).

Source of supply:

Österreichische Vereinigung für das Gas- und Wasserfach
Schubertring 14
1010 Wien
Austria
www.ovgw.at

9.1.2 More restrictive requirements in (specify country/ nationality) legislation/regulations

9.1.2.1 General

More detailed requirements are specified in the above mentioned technical rules.

9.1.2.2 Clauses to note regarding EN 12186

None.

9.2 Page for Finland (EN 12186)

9.2.1 Relevant Finnish legislation/regulations for gas pressure regulating stations for transmission and distribution to which EN 12186 is applicable

9.2.1.1 National law/ Federal law

— **Laki vaarallisten kemikaalien ja räjähteiden käsittelyn turvallisuudesta 390/2005** (Act on the Safe Handling and Storage of Dangerous Chemicals and Explosives (390/2005))

— **Valtioneuvoston asetus maakaasun käsittelyn turvallisuudesta 551/2009** (Government Decree on Natural Gas Safety)

— Valtioneuvoston asetus maakaasu-, nestekaasu- ja öljylämmityslaitteistojen asennus- ja huoltotoimintaa sekä maanalaisten öljysäiliöiden tarkastusta harjoittavien hyväksymisestä 558/2012 **(Government Decree on approval of installation and maintenance companies)**

9.2.1.2 NSB National Functional standards

SFS 2897 Maakaasuputkisto. Painekoe (Natural gas pipeline - Pressure test, 1987-05-18)

9.2.1.3 Technical rules – (Detailed) Code of practice

Maakaasukäsikirja, Suomen Kaasuyhdistys, Marraskuu 2010 (Natural gas - Codes of practise, Finnish Gas Association, November 2010)

9.2.2 More restrictive requirements in (specify country/ nationality) legislation/regulations

9.2.2.1 General

As a result of circumstances in Finland there is some restrictive legislation concerning the gas infrastructure. These regulations are stated in annex 1 and annex 2 in *Valtioneuvoston asetus maakaasun käsittelyn turvallisuudesta 551/2009* (Government Decree on Natural Gas Safety

9.2.2.2 Clauses to note regarding EN 12186

Annex 1 and 2 in Valtioneuvoston asetus maakaasun käsittelyn turvallisuudesta 551/2009 (Government Decree on Natural Gas Safety)

9.3 Page for France (EN 12186)

9.3.1 Relevant French legislation/regulations for gas pressure regulating installations on service lines to which EN 12186 is applicable

9.3.1.1 National law

— Décret n°85-1108 du 15 octobre 1985 relatif au régime des transports de gaz combustibles par canalisations (article 36 abrogé par le décret 91-1147 du 14 octobre 1991), modifié par le décret n°95-494 du 25 avril 1995;

— Arrêté du 28 janvier 1981 relatif à la teneur en soufre et composés sulfurés des gaz naturels transportés par canalisations de transport;

— Arrêté du 12 janvier 1962 relatif au règlement de sécurité des canalisations d'usines modifié par les arrêtés des 19 février 1979 et 30 septembre 1981;

— Décret n°96-1010 du 19 novembre 1996 « relatif aux appareils et aux systèmes de protection destinés à être utilisés en atmosphère explosible ;

— Décret n°2002-1553 du 24 décembre 2002, Dispositions concernant la prévention des explosions applicables aux lieux de travail;

— Décret n°2002-1554 du 24 décembre 2002, Dispositions concernant la prévention des explosions que doivent observer les maîtres d'ouvrage lors de la construction des lieux de travail ».

— Arrêté du 8 juillet 2003, Signalisation des emplacements où une atmosphère explosive peut se presenter;

— Arrêté du 8 juillet 2003, Protection des travailleurs susceptibles d'être exposés à une atmosphère explosive ;

— Arrêté du 28 juillet 2003;Conditions d'installation des matériels électriques dans les emplacements où des atmosphères explosives peuvent se presenter;

— Arrêté du 5 mars 2014 portant règlement de sécurité des canalisations de transport de gaz combustibles, d'hydrocarbures liquides ou liquéfiés et de produits chimiques— Arrêté ministériel du 13 juillet 2000 modifié portant règlement de sécurité de la distribution de gaz combustibles par Canalisations, et le cahier des charges « Odorisation du gaz distribué » associé.

— Décret n° 99-1046 du 13 décembre 1999 modifié relatif aux équipements sous pression;

— Décret n° 2002-1553 du 24 décembre 2002 modifié relatif aux dispositions concernant la prévention des explosions applicables aux lieux de travail et modifiant le chapitre II du titre III du livre II du code du travail;

— Décret n° 2002-1554 du 24 décembre 2002 relatif aux dispositions concernant la prévention des explosions que doivent observer les maîtres d'ouvrage lors de la construction des lieux de travail et modifiant le chapitre V du titre III du livre II du code du travail;

— Arrêté ministériel du 15 mars 2000 modifié relatif à l'exploitation des équipements sous pression;

— Décret n°70-492 du 11 juin 1970 modifié portant règlement d'administration publique pour l'application de l'article 35 modifié de la loi du 08 avril 1946 concernant la procédure de déclaration d'utilité publique des travaux d'électricité et de gaz qui ne nécessitent que l'établissement de servitudes ainsi que les conditions d'établissement desdites servitudes";

— Règles de sécurité électriques induites par le décret n° 65-48 du 8 janvier 1965.

Source of supply:

Direction des Journaux Officiels
26 rue Desaix
F - 75727 PARIS Cedex 15.

9.3.1.2 Detailed code of practice

Recommended code of practice is the following:

— Conception, construction et installation des blocs de détente et des postes de détente alimentant une chaufferie (B.67-1), 1996 de l'AFG

Source of supply:

AFG, Association Française du gaz
8 rue de l'Hotel de ville
F-92200 Neuilly-sur-Seine
Phone: +33 1 80 21 08 00
Fax: +33 1 46 37 19 55

9.3.2 More restrictive requirements in EN 12186

The main contradiction between French regulations and the EN 12186 standard of the TC234/WG 6 is the following:

— Clause 8.4.3 requires two pressure safety devices when MOPu - MOPd > 16 bar and MOPu > MOPd.

— French legislation (arrêté du 11/05/70, article 32) is less restrictive because it requires «one or more» pressure safety devices.

So, that means this standard requirement is more restrictive than French legislation.

9.4 Page for Germany (EN 12186)

9.4.1 Relevant German legislation/regulations for gas pressure regulating stations for transmission and distribution to which EN 12186 is applicable

9.4.1.1 National law / Federal law

— Gesetz über die Elektrizitäts- und Gasversorgung (Energiewirtschaftsgesetz - EnWG) vom 07. Juli 2005 (BGBl. I, S. 1970 (3621)), zuletzt geändert durch Art. 2 G v. (16. Januar 2012 (BGBI. I S. 74) (Energy Industry Act)

— Verordnung über Gashochdruckleitungen (Gashochdruckleitungsverordnung - GasHDrLtgV) 18.05.2011 (BGBl. I S. 928) (Ordinance on high pressure gas pipelines (High pressure gas pipeline ordinance - GasHDrLtgV)

— Verordnung über Sicherheit und Gesundheitsschutz bei der Bereitstellung von Arbeitsmitteln und deren Benutzung bei der Arbeit, über Sicherheit beim Betrieb überwachungsbedürftiger Anlagen und über die Organisation des betrieblichen Arbeitsschutzes (Betriebssicherheitsverordnung – Ordinance concerning the protection of safety and health in the provision of work equipment and its use at work, concerning safety when operating installations suject to monitoring and concerning the organisation of industrial safety and health at work (Ordinance on Industrial Safety and Health – BetrSichV);

— Verordnung zum Schutz vor Gefahrstoffen (Gefahrstoffverordnung – GefStoffV) (Ordinance to protect against hazardous materials – Hazardous materials ordinance)

— Arbeitsschutzgesetz ASG (Occupational health and safety act)

— Lärm-Vibrations-Arbeitsschutzverordnung LärmVibrationsArbSchV (Ordinance on noise and vibrations related to occupational health and safety)

— Vorschriften der Berufsgenossenschaft, BGV für Sicherheit und Gesundheit bei der Arbeit (Health and safety regulations of the professional association for occupational health and safety on safety and health at work):

  — BGV A1, "Allgemeine Vorschriften" (, BGV A1, "General regulations").

  — BGV A 3 "Elektrische Anlagen und Betriebsmittel" (Electrical appliances/ stations and means of production);

  — ASR A1-3 "Sicherheits- und Gesundheitsschutzkennzeichnung" (Markings concerning safety- amd health protection at work);

  — BGV B3 "Lärm" (Noise).

Source of supply:

Bundesanzeiger Verlagsges. mbH Bonn
Bundesgesetzblatt
Postfach 13 20
D – 53003 Bonn
Germany
www.gesetze-im-internet.de

9.4.1.2 NSB National Functional standards

There are no national functional standards in addition to EN 12186.

In Germany, there exists an agreement between DVGW and DIN. Whilst the DIN is responsible for national product standards, the DVGW is responsible for the setting of functional technical rules.

All European standards, also functional standards, are published as DIN EN standards. DVGW technical rules are aligned to DIN/DIN EN standards, where applicable.

The DIN standards related to gas are taken into account by DVGW and are part of the so called DVGW Set of Codes of practice.

9.4.1.3 Technical rules – (Detailed) Code of practice

— DVGW 491, “Gas-Druckregelanlagen für Eingangsdrücke über 4 bis 100 bar – Planung, Fertigung, Errichtung, Prüfung und Inbetriebnahme” (Gas pressure regulating stations with inlet pressures exceeding 4 bar up to 100 bar – design, manufacturing, construction, testing and commissioning);

— DVGW G 495, “Gasanlagen – Instandhaltung (Gas installations - Maintenance);

— DVGW G 440, Explosionsschutzdokument für Anlagen zur leitungsgebundenen Versorgung der Allgemeinheit mit Gas (Explosion protection document for plants and systems for public gas supply);

— DVGW G 442, Explosionsgefährdete Bereiche an Ausblaseöffnungen von Leitungen zur Atmosphäre an Gasanlagen (Hazardous areas at exhaust openings of vent lines at gas plants and systems);

— DVGW G 479, Planung, Errichtung und Betrieb von Gasanlagen in Hochwassergefährdungsbereichen (Design, construction and operation of gas plants and systems in flood hazardous areas);

— DVGW G 493-1, Qualifikationskriterien für Hersteller von Gas-Druckregel- und Messanlagen (Qualification criteria for companies for the manufacturing of gas plants and systems);

— DVGW G 493-2, Qualifikationskriterien für Unternehmen zur Instandhaltung von Gasanlagen (Qualification criteria for companies for the maintenance of gas plants and systems);

— DVGW G 494, Schallschutzmaßnahmen an Geräten und Anlagen zur Gas-Druckregelung und Gasmessung (Noise control measures at equipment and plants for gas perssure regulation and measurement);

— DVGW G 498, Durchleitungsdruckbehälter in Rohrleitungen und Anlagen zur leitungsgebundenen Versorgung der Allgemeinheit mit Gas (Gasversorgungsanlagen) (Non-storage pressure vessels in gas pipelines and systems for public gas supply);

— DVGW G 499, Erdgas-Vorwärmung in Gasanlagen (Preheating of natural gas in gas stations);

— DVGW GW 24, Kathodischer Korrosionsschutz in Verbindung mit explosionsgefährdeten Bereichen;

— DVGW VP 702, Unterirdische Kompaktanlagen (UKA) - Gas-Druckregelung (Underground Units for Gas Pressure Regulation.

Source of supply:

Wirtschafts- und Verlagsgesellschaft Gas und Wasser mbH
Postfach 14 01 51
D – 53056 Bonn
Germany
www.wvgw.de

9.4.1.4 Health and safety specifications

— Berufsgenossenschaftliche Regeln für Sicherheit und Gesundheit bei der Arbeit (Rules of professional association for occupational health and safety at work:

  — BGR 104 "Regeln für die Sicherheit und Gesundheitsschutz bei der Arbeit – Explosionsschutzregeln (EX-RL)" (Occupational safety and health regulations – explosion protection regulations);

  — BGR 500/Teil 2 Kapitel 2.31 "Arbeiten an Gasleitungen" (Regulations of professional association for occupational health and safety at work, Part 2, clause 2.31, "Working on Gas pipeworks");

— TRBS 1112 Teil 1 "Explosionsgefähr;dungen bei und durch Instandhaltungsarbeiten - Beurteilungen und Schutzmaßnahmen";

— TRBS 2152 (TRGS 720) „Gefährliche explosionsfähige Atmosphäre – Allgemeines“;

— TRBS 2152 Teil 1 (TRGS 721) "Gefährliche explosionsfähige Atmosphäre - Beurteilung der Explosionsgefährdung";

— TRBS 2152 Teil 2 (TRGS 722) "Vermeidung oder Einschränkung gefährlicher explosionsfähiger Atmosphäre";

— TRBS 2152 Teil 3 "Gefährliche explosionsfähige Atmosphäre - Vermeidung der Entzündung gefährlicher explosionsfähiger Atmosphäre"

— Technische Anleitung zum Schutz gegen Lärm (TA-Lärm) vom 16. Juli 1968 (BGBL I, S. 1059).

Source of supply:

Germany

9.4.2 More restrictive requirements in German legislation/regulations

9.4.2.1 General

More detailed requirements are specified in the above mentioned codes of practice.

9.4.2.2 Clauses to note regarding EN 12186

More detailed requirements are specified in the above mentioned codes of practice.

9.5 Page for Greece (EN 12186)

9.5.1 Relevant Greek legislation/regulations for gas pressure regulating stations for transmission and distribution to which EN 12186 is applicable

9.5.1.1 National law/ Federal law

— Ministerial Decision “Technical code for service lines and gas meters with OP 4 bar” Governmental Gazette 1810B/12.12.2006. “Κανονισμός εγκατάστασης παροχετευτικών αγωγών και μετρητών φυσικού αερίου με πίεση λειτουργίας έως και 4 bar”.

9.6 Page for Hungary (EN 12186)

9.6.1 Relevant Hungarian legislation/regulations for gas pressure regulating stations for transmission and distribution to which EN 12186 is applicable

9.6.1.1 National law/ Federal law

— **Law XL of 2008**: Natural Gas Supply (Gas Act)

— **Government Law Decree 19/2009 (I. 30.)**: On the implementation of provisions of Law XL of 2008

— **GKM (Ministry of Economy and Transport) Decree 79/2005. (X. 11.)**: Safety requirements for hydrocarbon transportation pipelines and publishing the safety regulations for hydrocarbon transportation pipelines

— **GKM (Ministry of Economy and Transport) Decree 80/2005. (X. 11.)**: Safety requirements for gas supply pipelines and publishing the safety regulations for gas supply pipelines

9.6.1.2 NSB National Functional standards

The National Standardization Body of Hungary (MSZT) has adopted the above-mentioned EN standards without any alterations.

9.6.1.3 Technical rules – (Detailed) Code of practice

None.

9.6.2 More restrictive requirements in Hungarian legislation/regulations

9.6.2.1 General

None.

9.6.2.2 Clauses to note regarding EN 12186

None.

9.7 Page for Ireland (EN 12186)

9.7.1 Relevant Irish legislation/regulations for gas pressure regulating stations for transmission and distribution to which EN 12186 is applicable

9.7.1.1 National law

9.7.1.1.1 Energy

— Energy (Miscellaneous Provisions) Act 2006;

— Gas Act 1976 (No. 30 of 1976);

— S.I. No. 283 of 1987. (Gas [amendment] act, [section 2 order 1987]).

— S.I. No. 196 of 2003. (Gas (Amendment) Act 1987 (Section 2) (Distribution) Order 2003

Source of supply:

Irish Statute Book (http://www.irishstatutebook.ie/)

9.7.1.1.2 Health and safety

— Safety, Health and Welfare at work Act 2005 (No.10 of 2005), as amended.

Source of supply:

Irish Statute Book (http://www.irishstatutebook.ie/)

9.7.1.2 NSB National standards

— I.S. 821 - Gas pressure regulating stations for distribution

— I.S. 822 - Gas pressure regulating installations on service pipelines

— I.S. 328 - Code of Practice for Gas Transmission Pipelines and Pipeline Installations

9.7.2 More restrictive requirements in (specify country/ nationality) legislation/regulations

9.7.2.1 General

None.

9.7.2.2 Clauses to note regarding EN 12186

None.

9.8 Page for Italy (EN 12186)

9.8.1 Relevant Italian legislation/regulations for gas pressure regulating stations for transmission and distribution to which EN 12186 is applicable

9.8.1.1 National law/ Federal law

— Decreto Ministeriale 16/04/08, Regola tecnica per la progettazione, costruzione, collaudo, esercizio e sorveglianza delle opere e dei sistemi di distribuzione e di linee dirette del gas naturale con densità non superiore a 0,8. (Ministry Decree 16/04/08 – Technical regulations for design , construction, ,testing, operation and surveillance of natural gas distribution networks);

— Decreto Ministeriale 17/04/08 Regola tecnica per la progettazione, costruzione, collaudo, esercizio e sorveglianza delle opere e degli impianti di trasporto del gas naturale con densità non superiore a 0,8. (Ministry Decree 17/04/08 – Technical regulations for design , construction, testing, operation and surveillance of natural gas transport networks);

— Decreto Ministeriale 01/12 2004, n. 329 Regolamento recante norme per la messa in servizio ed utilizzazione delle attrezzature a pressione e degli insiemi di cui all'articolo 19 del decreto legislativo 25 febbraio 2000, n. 93. (Ministerial Decree 01/12 2004, n. 329 Regulations for commissioning and use of pressure equipment and assemblies referred to in Article 19 of Legislative Decree 25 February 2000, n. 93);

— Ordinanza del Presidente del Consiglio dei Ministri 23 marzo 2003, n. 3274 “Primi elementi in materia di criteri generali per la classificazione sismica del territorio nazionale e di normative tecniche per le costruzioni in zona sismica.” (Decree 23 March 2003 of President Ministries Council “Main elements for general requirements for seismic classification of national territory and technical building standards for seismic zones”)

— Decreto Legge 31 dicembre 2007, n. 248, convertito con modificazioni dalla Legge 28 febbraio 2008, n. 31 (Decree 31 december 2007, n. 248 converted with modifications by law 28 february 2008; n. 31 about seismic requirements);

— Decreto Legislativo 9 aprile 2008 , n. 81, Attuazione dell'articolo 1 della legge 3 agosto 2007, n. 123, in materia di tutela della salute e della sicurezza nei luoghi di lavoro (Legislative Decree 9 April 2008 no. 81 Implementation of Article 1 of the Law of 3 August 2007, n. 123, concerning the protection of health and safety in the workplace.);

— Decreto del Presidente della Repubblica 1° agosto 2011, n. 151, Regolamento recante semplificazione della disciplina dei procedimenti relativi alla prevenzione degli incendi, a norma dell’articolo 49, comma 4 -quater , del decreto-legge 31 maggio 2010, n. 78, convertito, con modificazioni, dalla legge 30 luglio 2010, n. 122. (Decree of the President of Republic 1 August 2011, n. 151. Regulation laying down simplified application of the rules on procedures relating to the prevention of fires, in accordance with Article 49, paragraph 4-c of the Decree-Law of 31 May 2010, n. 78, converted, with amendments by law of 30 July 2010, n. 122);

— Decreto Ministeriale 16 maggio 1987 n. 246, Norme di sicurezza antincendi per gli edifici di civile abitazione (Ministerial Decree 16 May 1987 n. 246 Fire safety standards for residential buildings.);

— Autorità per l’energia elettrica il gas e il sistema idrico (AEEGSI) - Deliberazione n. 574/2013/R/GAS - Regolazione della qualità dei servizi di distribuzione e misura del gas per il periodo di regolazione 2014-2019 - Parte I del testo unico della regolazione della qualità e delle tariffe dei servizi di distribuzione e misura del gas per il periodo di regolazione 2014-2019 (Regulatory Authority for Electricity, Gas and Water (AEEGSI) – Directive n. 574/2013, Regulation of the quality of distribution and measurement services for the regulatory period 2014-2019: Part I "Adjusting the quality and the pricing for the distribution and measurement services of natural gas for the period of adjustment 2014-2019).

— Autorità per l'energia elettrica e il gas e il sistema idrico (AEEGSI) - Deliberazione 602/2013/R/gas regolazione della qualità del servizio di trasporto del gas naturale per il periodo di regolazione 2014-2017 – Parte I del testo unico della regolazione della qualità e delle tariffe per i servizi di trasporto e dispacciamento del gas naturale per il periodo di regolazione 2014-2017 (Regulatory Authority for Electricity, Gas and Water (AEEGSI) – Directive n. 602/2013 Adjusting the quality of the transportation service of natural gas for the period of adjustment 2014-2017) - Part I Consolidated regulation of the quality and pricing of transport services and dispatching of natural gas for the regulatory period 2014-2017.

9.8.1.2 NSB National Functional standards

— UNI 10619 (series) Sistemi di controllo della pressione e/o impianti di misurazione del gas naturale funzionanti con pressione a monte massima di 12 bar per utilizzo industriale e civile - (Gas pressure control systems and/or gas measurements installations for inlet max pressure up to 12 bar for industrial and domestic use)

— UNI 10611, Rivestimenti isolanti di strutture metalliche interrate da associare alla protezione catodica. Criteri di progettazione e controllo (Insulating coatings for buried metal structures to be associated with cathodic protection. Design criteria and control);

— UNI 10702, Impianti di riduzione della pressione del gas funzionanti con pressione a monte compresa fra 0,04 e 12 bar. Conduzione e manutenzione + EC (Gas pressure regulating installations for inlet pressure between 0,04 and 12 bar – Operation and maintenance);

9.8.1.3 Technical rules – (Detailed) Code of practice

The technical rules when issued by ministerial decree are compulsory. The directives issued by Regulatory Authority for Electricity and Gas (Aeeg) are compulsory. The guidelines issued by CIG (Italian Gas Committee) support some requirements given in the Aeeg Directives.

9.8.2 More restrictive requirements in Italian legislation/regulations

9.8.2.1 General

Detailed specification needed.

9.8.2.2 Clauses to note regarding EN 12186

a) Clauses 7.1 and 7.5: Shall be applied the relevant requirements contained in the listed, applicable decrees.

b) Clause 8.1: For Italian legislation the relation among MOP, OP, TOP and MIP is as follows:

Table 4 — MOP, OP, TOP and MIP according to Italian legislation

Maximum operating pressure MOP	Operating pressure OP	Temporary operating pressure TOP	Minimum incidental pressure MIP
MOP > 24 bar	OP $\leq$ 1,025 MOP	TOP $\leq$ 1,05 MOP	MIP $\leq$ 1,10 MOP
24 bar $\geq$ MOP > 5 bar	OP $\leq$ 1,025 MOP	TOP $\leq$ 1,10 MOP	MIP $\leq$ 1,15 MOP
5 bar $\geq$ MOP > 0,04 bar	OP $\leq$ 1,075 MOP	TOP $\leq$ 1,10 MOP	MIP $\leq$ 1,15 MOP
MOP $\leq$ 0,04 bar	OP $\leq$ 1,075 MOP	TOP = MIP $\leq$ 1,20 MOP	

9.9 Page for the Netherlands (EN 12186)

9.9.1 Relevant Dutch legislation/regulations for gas pressure regulating stations for transmission and distribution to which EN 12186 is applicable

9.9.1.1 National law/ Federal law

— GASWET, WET van 22 juni 2000, houdende regels omtrent het transport en de levering van gas (Gas Act 2000 (Management on quality aspects of gas distribution systems))

— Aansluit- en transportvoorwaarden Gas – RNB, onderdeel van de voorwaarden als bedoeld in artikel 12b van de Gaswet

— Meetvoorwaarden Gas – RNB, onderdeel van de voorwaarden als bedoeld in artikel 12b van de Gaswet

— Besluit van 28 november 2006, houdende regels met betrekking tot de registratie van gegevens externe veiligheid inrichtingen, transportroutes en buisleidingen (Registratiebesluit externe veiligheid)

— Activiteitenbesluit milieubeheer (Besluit algemene regels voor inrichtingen milieubeheer)

— Wet milieubeheer

— AMVB - Besluit van 27 oktober 2011 tot vaststelling van veiligheidseisen voor het transport van gas door buisleidingen bij een druk lager dan 16 bar (Besluit veiligheid lage druk gastransport)

— Bouwbesluit 2012

— ATEX ARBO richtlijnen 95 en 137 (Explosiegevaar)

— Activiteitenregeling milieubeheer (Regeling algemene regels voor inrichtingen milieubeheer)

9.9.1.2 NSB National Functional standards

— NEN 1059:2010, Nederlandse editie op basis van NEN-EN 12186 en NEN-EN 12279 — Gasvoorzieningsystemen - Gasdrukregel- en meetstations voor transport en distributie (Dutch edition based on NEN-EN 12186 and NEN-EN 12279 — Gas supply systems – Gas pressure regulating stations for transmission and distribution);

— NEN 3653;2009, Methoden voor de vaststelling van acceptatiecriteria voor defecten in rondlassen van pijpleidingen (Methods for the determination of NDE acceptance criteria for defects in pipeline girth welds);

— NEN 3650-1:2012, Eisen voor buisleidingsystemen - Deel 1:Algemene eisen (Requirements for pipeline systems - Part 1:General requirements);

— NEN 3650-2:2012, Eisen voor buisleidingsystemen - Deel 2:Aanvullende eisen voor leidingen van staal (Requirements for pipeline systems - Part 2:Additional specifications for steel pipelines);

— NEN 3650-3:2012, Eisen voor buisleidingsystemen - Deel 3:Aanvullende eisen voor leidingen van kunststof (Requirements for pipeline systems - Part 3:Additional specifications for plastic pipelines);

— NEN 3650-4:2012, Eisen voor buisleidingsystemen - Deel 4:Aanvullende eisen voor leidingen van beton (Requirements for pipeline systems - Part 4:Additional specifications for concrete pipelines);

— NEN 3650-5:2012, Eisen voor buisleidingsystemen - Deel 5:Aanvullende eisen voor leidingen van gietijzer (Requirements for pipeline systems - Part 5:Additional specifications for cast iron pipelines);

— NEN 3651:2012, Aanvullende eisen voor buisleidingen in of nabij belangrijke waterstaatswerken (Additional requirements for pipelines in or nearby important public works).

9.9.1.3 Technical rules – (Detailed) Code of practice

— NTA 8120:2014, Assetmanagement - Eisen aan een veiligheids-, kwaliteits- en capaciteitsmanagementsysteem voor het elektriciteits- en gasnetbeheer (Asset management - Requirements for a safety,quality and capacity management system for electricity and gas network operations);

— NTA 8000:2009, Specificatie voor een risicomanagementsysteem (RMS) voor risico's van buisleidingsystemen voor het transport van gevaarlijke stoffen in de beheerfase beheerfase (Specification of a Risk Management System (RMS) for pipeline systems for the transport of hazardous substances during operations);

— NTA 8620:2006, Specificatie van een veiligheidsmanagementsysteem voor risico's van zware ongevallen (Specification of a safety management system for major accidents hazards);

— NPR 3659:1996/A1:2003/C1:2006, Ondergrondse pijpleidingen - Grondslagen voor de sterkteberekening (Underground pipelines. Basic principles for strenght calculation).

9.9.2 More restrictive requirements in (specify country/ nationality) legislation/regulations

9.9.2.1 General

No detailed specifications needed.

9.9.2.2 Clauses to note regarding EN 12186

No detailed specifications needed.

9.10 Page for Sweden (EN 12186)

9.10.1 Relevant Swedish legislation/regulations for gas pressure regulating stations for transmission and distribution to to which EN 12186 is applicable

9.10.1.1 National law/ Federal law

— [Regulations on Natural Gas MSBFS 2009:7] Naturgasföreskrifter MSBFS 2009:7 Clauses 2 kap 4§, 7 kap 2§.

9.10.1.2 NSB National Functional standards

None.

9.10.1.3 Technical rules – (Detailed) Code of practice

The technical rules mentioned above are legislative requirements.

9.10.2 More restrictive requirements in Swedish legislation/regulations

a) 8.14.2: The design factor F shall be 0.50 maximum.

b) 9.2: MIP shall not exceed TP.

c) 9.3.2: There shall be two independent safety devices.”

9.10.2.1 General

None.

9.10.2.2 Clauses to note regarding EN 12186

a) 8.14.2,

b) 9.2,

c) 9.3.2.

9.11 Page for Spain (EN 12186)

9.11.1 Relevant Spanish legislation/regulations for gas pressure regulating stations for transmission and distribution to to which EN 12186 is applicable

9.11.1.1 National law/ Federal law

— Ley del Sector de Hidrocarburos (Ley 34/1998, de 7 de octubre) y sus modificaciones (Hydrocarbons Sector Law and its subsequent amendments)

The Regulations below are applicable to the whole country. The regions (Comunidades Autónomas) may have additional requirements.

— Reglamento Técnico de Distribución y Utilización de Combustibles Gaseosos y sus instrucciones técnicas complementarias ICG 01 a 11 (Real Decreto 919/2006, de 28 de julio) (Gas Distribution and Utilization Technical Regulations).

  This “Reglamento” includes a number of applicable "Instrucciones Técnicas Complementarias" (Complementary Technical Instructions) or ITC:

  — ITC-ICG 01 Instalaciones de distribución de combustibles gaseosos por canalización (Gas Distribution Installations).

9.11.1.2 NSB National Functional standards

The standards listed below are mandatory:

— UNE 60402-1, Combustibles gaseosos. Reguladores de presión con presión máxima de operación (MOP) de entrada inferior o igual a 0,4 bar y MOP de salida inferior o igual a 0,05 bar. Parte 1: Reguladores con válvula de seguridad incorporada de disparo por mínima presión con caudal equivalente inferior o igual a 4,8 m3(n)/h de aire. (Gaseous fuels. Pressure regulator with an inlet MOP up to 0,4 bar and an outlet MOP up to 0,05 bar. Part 1: Regulators with an incorporated low pressure cut-off safety valve with an equivalent flow rate up to 4,8 m3 (n)/h of air.);

— UNE 60402-2, Combustibles gaseosos. Reguladores de presión con presión máxima de operación (MOP) de entrada inferior o igual a 0,4 bar y MOP de salida inferior o igual a 0,05 bar. Parte 2: Reguladores con MOP de entrada superior a 150 mbar, con válvula de seguridad incorporada de disparo por mínima presión, con válvula de seguridad incorporada de disparo por máxima presión y con caudal equivalente inferior o igual a 4,8 m3(n)/h de aire. (Gaseous fuels. Pressure regulator with an inlet MOP up to 0,4 bar and an oulet MOP up to 0,05 bar. Part 2: Regulator with a MOP greater than 150 mbar, with an incorporated minimum low pressure cut-off safety valve, with a maximum pressure safety valve and an equivalent flow rate up to 4,8 m3 (n)/h of air.);

— UNE 60403, Válvula de seguridad de interrupción por mínima presión para instalaciones receptoras de gases combustibles con caudal equivalente hasta 4,8 m3 (n)/h de aire (Shut-off safety valves on minimum pressure with an equivalent air flow rate up to 4,8 m3(n)/h for gas installations);

— UNE 60404-1, Combustibles gaseosos. Conjuntos de regulación de presión y/o medida, con presión máxima de operación (MOP) inferior o igual a 5 bar. Parte 1: Conjuntos para empotrar, adosar o situar en recintos con caudal nominal equivalente inferior o igual a 100 m³(n)/h de gas natural. (Gaseous fuels. Regulation pressure and/or measurement packages with a maximum operating pressure up to 5 bar. Part 1: Packages to built in, attach or place in enclosures with an equivalent nominal volume of flow up to 100 m3 (n)/h of natural gas.);

— UNE 60404-2, Combustibles gaseosos. Conjuntos de regulación de presión y/o medida con presión máxima de operación (MOP) inferior o igual a 5 bar. Parte 2: Conjuntos de regulación para situar en arqueta empotrable en vía pública con caudal nominal equivalente de inferior o igual a 50 m3 (n)/h de gas natural. (Gaseous fuels. Regulation pressure and/or measurement packages with a maximum operating pressure up to 5 bar. Part 2: Regulation packages to place in small chest built in a public way with a nominal volume of flow equivalent up to 50 m3(n)/h of natural gas);

— UNE 60404-3, Combustibles gaseosos. Conjuntos de regulación de presión con o sin medida, con presión de entrada hasta MOP 5. Parte 3 : Conjuntos para adosar o situar en recintos, con caudal nominal superior equivalente a 100 m3(n)/h y hasta 250 m3(n)/h de gas natural. (Gaseous fuels. Regulation pressure and/or measurement packages with a maximum operating pressure up to 5 bar. Part 3: Packages to built in, attach or place in enclosures with an equivalent nominal volume of flow from 100 m3(n)/h to 250 m3(n)/h of natural gas.);

— UNE 60410, Conjuntos de regulación y medida con presión máxima de operación (MOP) de entrada hasta 0,4 bar situados en armarios para empotrar o adosar en muros con caudal nominal equivalente de hasta 10 m³(n)/h de gas natural. (Regulation and measurement packages with an inlet pressure in MOP up to 0,4 bar, placed in wardrobes to build in or to lean against walls with an equivalent nominal flow up to 10 m³(n)/h of natural gas.);

— UNE 60411, Combustibles gaseosos. Reguladores de presión con presión máxima de operación de entrada (MOPe) superior a 0,4 bar e inferior o igual a 5 bar y presión máxima de operación de salida (MOPs) inferior o igual a 0,4 bar. (Gaseous fuels. Pressure regulator with a maximum inlet pressure (MOPe) greater than 0,4 bar and up to 5 bar and a maximum outlet pressure (MOPs) up to 0,4 bar.);

— UNE 60620 Instalaciones receptoras de gas natural sumnistradas a presiones superiores a 5 bar. (Natural gas receiving installations with supply pressure over 5 bar) Parte 1: Generalidades (General) Parte 3: Estaciones de regulación y medida (Pressure Reducing and Metering Stations).

The following standard develops and has complementary requirements to the functional recommendations of UNE-EN 12186:

— UNE 60312, Estaciones de regulación para canalizaciones de distribución de combustibles geseosos con presión de entrada no superior a 16 bar. (Gas pressure regulating stations for distribution of gaseous fuels with inlet pressure not greather than 16 bar).

9.11.1.3 Technical rules – (Detailed) Code of practice

There are none.

9.11.2 More restrictive requirements in Spanish legislation/regulations

9.11.2.1 General

There are not general coments.

9.11.2.2 Clauses to note regarding EN 12186

a) Clause 5.3: UNE 60312 requires a 1,8 m high wall or fence around an open-air station, and a free zone 2 m wide around it.

b) Clause 6.2.6: UNE 60312 requires separate inlet and outlet ducts for ventilation.

9.12 Page for UK

The UK gas safety legislation does not lend itself to the detailed breakdown given by other countries. If any interested party needs to understand the UK safety system the references given supply the latest information from the source of authority.

The United Kingdom Safety Regulator for Industry and Commerce is the: *Health and Safety Executive.* The principle UK Health and Safety Legislation is the *Health and Safety at Work Act 1974, as amended*. This Act has many branches with detailed regulations for the various sectors of Industry and Commerce.

http://www.hse.gov.uk/legislation/hswa.htm

The various Licenses issued by OFGEM for UK Gas Transport, Storage and Gas Supply etc. have a clause to ensure that the Licensee operates safely and securely. The HSE has a special website for *Gas* and a section for *Gas Supply.* This site describes the principle regulations governing gas supply and provides the related *Regulations* and the *Advisory Codes of Practice*:-

http://www.hse.gov.uk/gas/supply/legislation.htm

The UK safety legislation is *goal setting* and the *HSE* has worked for many years with the UK gas industry through the *Institution of Gas Engineers and Managers* to develop more detailed technical standards for the various elements of the gas infrastructure. These cover a range of topics, e.g.:

— Pipelines Safety Regulations;

— Pressure Systems Safety Regulations;

— Gas Safety (Management) Regulations;

— Gas Safety (Installation and Use) Regulations;

— Dangerous Substances and Explosive Atmospheres Regulations;

— Reporting of Injuries, Diseases and Dangerous Occurrences Regulations;

— Building Regulations;

— Health and Safety at Work etc. Act;

— Management of Health and Safety at Work Regulations;

— Pressure Equipment Regulations,

— Electricity at Work Regulations

The Full List of current IGEM standards and prices for January 2013 are at:-

http://www.igem.org.uk/media/227989/igem%20standards%20list%20january%202013.pdf

When the CEN TC 234 ENs were published first in 2000, IGEM brought its Standards into line with these ENs, e.g. as regards pressure range and the 16 bar limit for EN 1594 and EN 12007 series.

Under the UK Safety Legislation, Licensed gas transporters, distributors and storage operators etc. are subject to a *Safety Case Regime,* which requires specific approval of the detail in the *Safety Case* by the HSE before operations can commence. This detail includes technical requirements for the design, construction, testing commissioning and operation under both normal and emergency conditions. The *Safety Case* document also covers quality management processes to ensure safety and security of gas supply according to the approved Safety Case. For this purpose, many Licensed Operators of gas infrastructure have their own complete technical and safety management details documented fully as part of their *Safety Case*. This detail describes how their business intends to operate under its License in order to ensure safety of the public and of the workforce.

10 Relevant national legislation/ regulation for Gas pressure regulating installations on service lines to which EN 12279 is applicable

10.1 Page for Austria (EN 12279)

10.1.1 Relevant Austrian legislation/ regulation for Gas pressure regulating installations on service lines to which EN 12279 is applicable

10.1.1.1 National law/ Federal law

— BGBl. I Nr. 107/2011 Gaswirtschaftsgesetz (National gas law)

— BGBl. I Nr. 38/1999 Mineralrohstoffgesetz (Mineral resource law)

— BGBl. II Nr.171/2012 Gas-Marktmodell-Verordnung 2012 (Natural gas market regulation)

— BGBl. II Nr. 172/2012 Gasnetzdienstleistungsqualitäts-Verordnung (Gasgrid service quality regulation)

— BGBl. II Nr. 309/2012 Gas-Systemnutzungsentgelte-Verordnung 2013 (Gas system usage fee regulation)

— BGBl. II Nr. 439/2011 Sonstige Transporte-Gas-Systemnutzungstarife Verordnung Novelle 2012 (Additional transport gas system usage regulation amendment 2012)

Source of supply:

Rechtsinformationssystem des Bundes (RIS)

www.ris.bka.gv.at

Energie-Control Austria

Rudolfsplatz 13a

A-1010 Wien

http://www.e-control.at/de/recht/bundesrecht/gas

10.1.1.2 NSB National Functional standards

None.

10.1.1.3 Technical rules – (Detailed) Code of practice

— ÖVGW G E500: Erdgasanlagen (Natural gas stations)

— ÖVGW G E501: Druckprüfung von Erdgasanlagen (Pressure testing of Natural Gas stations)

— ÖVGW G E510: Gasdruckregelanlagen (Gas pressure regulating stations)

— ÖVGW G B111, In- und Außerbetriebnahme von Erdgasleitungen und Erdgasanlagen (Commissioning and decommissioning of natural gas pipelines and stations);

— ÖVGW G B300, Instandhaltung von Erdgasleitungsanlagen (Maintenance of natural gas pipeline facilities);

— ÖVGW G B320: Instandhaltung von Erdgasanlagen (Maintenance of natural gas stations).

Source of supply:
Österreichische Vereinigung für das Gas- und Wasserfach
Schubertring 14
1010 Wien
Austria
www.ovgw.at

10.1.2 More restrictive requirements in Austrian legislation/regulations

10.1.2.1 General

More detailed requirements are specified in the above mentioned technical rules.

10.1.2.2 Clauses to note regarding EN 12279

None.

10.2 Page for Finland (EN 12279)

10.2.1 Relevant Finnish legislation/regulations for gas pressure regulating installations on service lines to which EN 12279 is applicable

10.2.1.1 National law/ Federal law

— **Laki vaarallisten kemikaalien ja räjähteiden käsittelyn turvallisuudesta 390/2005** (Act on the Safe Handling and Storage of Dangerous Chemicals and Explosives (390/2005))

— **Valtioneuvoston asetus maakaasun käsittelyn turvallisuudesta 551/2009** (Government Decree on Natural Gas Safety)

10.2.1.2 NSB National Functional standards

— SFS 2897 Maakaasuputkisto. Painekoe (Natural gas pipeline - Pressure test, 1987-05-18)

— SFS 5717 Maakaasun siirtoputkiston sijoittaminensuurjännitejohdon tai -kytkinlaitoksen läheisyyteen (Placing of the natural gas transmission pipeline close to a high-voltage line or substation, 1992-01-28)

10.2.1.3 Technical rules – (Detailed) Code of practice

— Maakaasukäsikirja, Suomen Kaasuyhdistys, Marraskuu 2010 (Natural gas - Codes of practise, Finnish Gas Association, November 2010)

10.2.2 More restrictive requirements in Finnish legislation/regulations

10.2.2.1 General

As a result of circumstances in Finland there is some restrictive legislation concerning the gas infrastructure. These regulations are stated in annex 1 and annex 2 in *Valtioneuvoston asetus maakaasun käsittelyn turvallisuudesta 551/2009* (Government Decree on Natural Gas Safety).

10.2.2.2 Clauses to note regarding EN 12279

— Annex 1 and 2 in Valtioneuvoston asetus maakaasun käsittelyn turvallisuudesta 551/2009 (Government Decree on Natural Gas Safety)

10.3 Page for France (EN 12279)

10.3.1 Relevant French legislation/regulations for gas pressure regulating installations on service lines to which EN 12279 is applicable

10.3.1.1 National law

— Décret n°85-1108 du 15 octobre 1985 relatif au régime des transports de gaz combustibles par canalisations (article 36 abrogé par le décret 91-1147 du 14 octobre 1991), modifié par le décret n°95-494 du 25 avril 1995;

— Arrêté du 28 janvier 1981 relatif à la teneur en soufre et composés sulfurés des gaz naturels transportés par canalisations de transport;

— Arrêté du 12 janvier 1962 relatif au règlement de sécurité des canalisations d'usines modifié par les arrêtés des 19 février 1979 et 30 septembre 1981;

— Décret n°96-1010 du 19 novembre 1996 « relatif aux appareils et aux systèmes de protection destinés à être utilisés en atmosphère explosible ;

— Décret n°2002-1553 du 24 décembre 2002, Dispositions concernant la prévention des explosions applicables aux lieux de travail;

— Décret n°2002-1554 du 24 décembre 2002, Dispositions concernant la prévention des explosions que doivent observer les maîtres d'ouvrage lors de la construction des lieux de travail ».

— Arrêté du 8 juillet 2003, Signalisation des emplacements où une atmosphère explosive peut se presenter;

— Arrêté du 8 juillet 2003, Protection des travailleurs susceptibles d'être exposés à une atmosphère explosive;

— Arrêté du 28 juillet 2003;Conditions d'installation des matériels électriques dans les emplacements où des atmosphères explosives peuvent se presenter;

— Arrêté du 5 mars 2014 portant règlement de sécurité des canalisations de transport de gaz combustibles, d'hydrocarbures liquides ou liquéfiés et de produits chimiques

— Arrêté ministériel du 13 juillet 2000 modifié portant règlement de sécurité de la distribution de gaz combustibles par Canalisations, et le cahier des charges « Odorisation du gaz distribué » associé.

— Décret n° 99-1046 du 13 décembre 1999 modifié relatif aux équipements sous pression;

— Décret n° 2002-1553 du 24 décembre 2002 modifié relatif aux dispositions concernant la prévention des explosions applicables aux lieux de travail et modifiant le chapitre II du titre III du livre II du code du travail;

— Décret n° 2002-1554 du 24 décembre 2002 relatif aux dispositions concernant la prévention des explosions que doivent observer les maîtres d'ouvrage lors de la construction des lieux de travail et modifiant le chapitre V du titre III du livre II du code du travail;

— Arrêté ministériel du 15 mars 2000 modifié relatif à l'exploitation des équipements sous pression;

— Décret n°70-492 du 11 juin 1970 modifié portant règlement d'administration publique pour l'application de l'article 35 modifié de la loi du 08 avril 1946 concernant la procédure de déclaration d'utilité publique des travaux d'électricité et de gaz qui ne nécessitent que l'établissement de servitudes ainsi que les conditions d'établissement desdites servitudes";

— Règles de sécurité électriques induites par le décret n° 65-48 du 8 janvier 1965.

Source of supply:

Direction des Journaux Officiels
26 rue Desaix
F - 75727 PARIS Cedex 15.

10.3.1.2 Detailed code of practice

Recommended code of practice is the following:

— Conception, construction et installation des blocs de détente et des postes de détente alimentant une chaufferie (B.67-1), 1996 de l'AFG

Source of supply:

AFG, Association Française du gaz
8 rue de l'Hotel de ville
F-92200 Neuilly-sur-Seine
Phone: +33 1 80 21 08 00
Fax: +33 1 46 37 19 55

10.3.2 More restrictive requirements in French legislation/regulations

The main restrictive requirements of the French legislation (arrêté du 11/05/70) for stations are the following:

a) scope = stations for which OP ≥ 4 bar and OP x D_{ext} ≥1500 and T≤100°C (D_{ext} is external diameter);

b) sizing of the pressure reducing stations pipeline is linked to the environment;

a) pressure safety devices shall not allow MIP in the downstream network to exceed 1,10 MOPd;

b) pressure delivered in the downstream network shall be measured and recorded.

10.4 Page for Germany (EN 12279)

10.4.1 Relevant German legislation/regulations for gas pressure regulating installations on service lines to which EN 12279 is applicable

10.4.1.1 National law/ Federal law

— Gesetz über die Elektrizitäts- und Gasversorgung (Energiewirtschaftsgesetz - EnWG) vom 07. Juli 2005 (BGBl. I, S. 1970 (3621)), zuletzt geändert durch Art. 2 G v. (16. Januar 2012 (BGBl. I S. 74) (Energy Industry Act);

— Arbeitsschutzgesetz ASG (Occupational health and safety act);

— Verordnung über Allgemeine Bedingungen für den Netzanschluss und dessen Nutzung für die Gasversorgung in Niederdruck (Niederdruckanschlussverordnung - NDAV) (Ordinance on general conditions for net connection and use for gas supply at low pressure (Low pressure connection ordinance)

— Verordnung über Sicherheit und Gesundheitsschutz bei der Bereitstellung von Arbeitsmitteln und deren Benutzung bei der Arbeit, über Sicherheit beim Betrieb überwachungsbedürftiger Anlagen und über die Organisation des betrieblichen Arbeitsschutzes (Betriebssicherheitsverordnung – Ordinance concerning the protection of safety and health in the provision of work equipment and its use at work, concerning safety when operating installations suject to monitoring and concerning the organisation of industrial safety and health at work (Ordinance on Industrial Safety and Health – BetrSichV)

— Verordnung zum Schutz vor Gefarhrstoffen (Gefahrstoffverordnung – GefStoffV) (Ordinance to protect against hazardous materials – Hazardous materials ordinance);

— Vorschriften der Berufsgenossenschaft, BGV für Sicherheit und Gesundheit bei der Arbeit BGV A1, "Allgemeine Vorschriften" (Health and safety regulations of the professional association for occupational health and safety on safety and health at work, BGV A1, "General regulations").

Source of supply:

Bundesanzeiger Verlagsges. mbH Bonn
Bundesgesetzblatt
Postfach 13 20
D – 53003 Bonn
Germany

10.4.1.2 NSB National Functional standards

There are no national functional standards in addition to EN 12279.

In Germany, there exists an agreement between DVGW and DIN. Whilst the DIN is responsible for national product standards, the DVGW is responsible for the setting of functional technical rules.

All European standards, including the functional standards, are published as DIN EN standards. DVGW technical rules are aligned to DIN/DIN EN standards, where applicable.

The DIN standards related to gas are taken into account by DVGW and are part of the so called DVGW Set of Codes of practice.

10.4.1.3 Technical rules – (Detailed) Code of practice

— DVGW-Arbeitsblatt G 459-2 "Gas-Druckregelung mit Eingangsdrücken bis 5 bar in Anschlussleitungen" (Gas pressure regulation with inlet pressures up to 5 bar in service lines);

— DVGW-Arbeitsblatt G 495 "Gasanlagen - Instandhaltung" (Gas installations - Maintenance);

Source of supply:

Wirtschafts- und Verlagsgesellschaft Gas und Wasser mbH
Postfach 14 01 51
D – 53056 Bonn
Germany
www.wvgw.de

10.4.1.4 Health and safety specifications

— Berufsgenossenschaftliche Regeln für Sicherheit und Gesundheit bei der Arbeit (Rules of professional association for occupational health and safety at work:

  — BGR 104, "Regeln für die Sicherheit und Gesundheitsschutz bei der Arbeit – Explosionsschutzregeln (EX-RL)" (Occupational safety and health regulations – explosion protection regulations);

  — BGR 500/Teil 2 Kapitel 2.31, "Arbeiten an Gasleitungen" (Regulations of professional association for occupational health and safety at work, Part 2, clause 2.31, "Working on Gas pipeworks");

— TRBS 1112 Teil 1, "Explosionsgefährdungen bei und durch Instandhaltungsarbeiten - Beurteilungen und Schutzmaßnahmen";

— TRBS 2152 (TRGS 720) "Gefährliche explosionsfähige Atmosphäre – Allgemeines";

— TRBS 2152 Teil 1 (TRGS 721) "Gefährliche explosionsfähige Atmosphäre - Beurteilung der Explosionsgefährdung";

— TRBS 2152 Teil 2 (TRGS 722) "Vermeidung oder Einschränkung gefährlicher explosionsfähiger Atmosphäre;

— TRBS 2152 Teil 3 "Gefährliche explosionsfähige Atmosphäre - Vermeidung der Entzündung gefährlicher explosionsfähiger Atmosphäre".

Source of supply:

Carl Heymanns Verlag KG

Luxemburger Straße 449

D – 50939 Köln

Germany

10.4.2 More restrictive requirements in German legislation/regulations

10.4.2.1 General

More detailed requirements are specified in the above mentioned codes of practice.

10.4.2.2 Clauses to note regarding EN 12279

More detailed requirements are specified in the above mentioned codes of practice.

10.5 Page for Greece (EN 12279)

10.5.1 Relevant Greek legislation/regulations for gas pressure regulating installations on service lines to which EN 12279 is applicable

10.5.1.1 National law/ Federal law

— Mimisterial Decision “Technical code for service lines and gas meters with OP 4 bar” Governmental Gazette 1810B/12.12.2006. “Κανονισμός εγκατάστασης παροχετευτικών αγωγών και μετρητών φυσικού αερίου με πίεση λειτουργίας έως και 4 bar”.

10.6 Page for Hungary (EN 12279)

10.6.1 Relevant Hungarian legislation/regulations for gas pressure regulating installations on service lines to which EN 12279 is applicable

10.6.1.1 National law/ Federal law

— Law XL of 2008: Natural Gas Supply (Gas Act)

— Government Law Decree 19/2009 (I. 30.): On the implementation of provisions of Law XL of 2008

— 11/2004. (II. 13.) GKM rendelet a gáz csatlakozó vezetékekre és fogyasztói berendezésekre vonatkozó műszaki-biztonsági előírásokról (GKM (Ministry of Economy and Transport) Decree 11/2004))

10.6.1.2 NSB National Functional standards

The National Standardization Body of Hungary (MSZT) has adopted the above-mentioned EN standards without any alterations.

10.6.1.3 Technical rules – (Detailed) Code of practice

None.

10.6.2 More restrictive requirements in Hungarian legislation/regulations

10.6.2.1 General

None.

10.6.2.2 Clauses to note regarding EN 12279

None.

10.7 Page for Ireland (EN 12279)

10.7.1 Relevant Irish legislation/regulations for gas pressure regulation to which EN 12279 is applicable

10.7.1.1 National law

10.7.1.1.1 Energy

— Energy (Miscellaneous Provisions) Act 2006;

— Gas Act 1976 (No. 30 of 1976);

— S.I. No. 283 of 1987. (Gas [amendment] act, [section 2 order 1987]).

— S.I. No. 196 of 2003. (Gas (Amendment) Act 1987 (Section 2) (Distribution) Order 2003

Source of supply:

Irish Statute Book (http://www.irishstatutebook.ie/)

10.7.1.1.2 Health and safety

— Safety, Health and Welfare at work Act 2005 (No.10 of 2005), as amended.

Source of supply:

Irish Statute Book (http://www.irishstatutebook.ie/)

10.7.1.2 NSB National standards

— I.S. 265 - Installation of Gas Service Pipes - Parts 1 and 2 (Fourth Edition)

10.7.2 More restrictive requirements in Irish legislation/regulations

10.7.2.1 General

None.

10.7.2.2 Clauses to note regarding EN 12279

None.

10.8 Page for Italy (EN 12279)

10.8.1 Relevant Italian legislation/regulations for gas pressure regulating installations on service lines to which EN 12279 is applicable

10.8.1.1 National law/ Federal law

— Legge 6 dicembre 1971, n. 1083, Norme per la sicurezza dell'impiego del gas combustibile (Law 06/12/1971 n. 1083 "Safety in the use of combustible gases");

— Decreto Ministeriale 16/04/08, Regola tecnica per la progettazione, costruzione, collaudo, esercizio e sorveglianza delle opere e dei sistemi di distribuzione e di linee dirette del gas naturale con densità non superiore a 0,8. (Ministry Decree 16/04/08 – Technical regulations for design, construction, testing, operation and surveillance of natural gas distribution networks);

— Decreto Ministeriale 17/04/08, Regola tecnica per la progettazione, costruzione, collaudo, esercizio e sorveglianza delle opere e degli impianti di trasporto del gas naturale con densità non superiore a 0,8. (Ministry Decree 17/04/08 – Technical regulations for design, construction, testing, operation and surveillance of natural gas transport networks);

— Decreto Ministeriale 01/12 2004, n. 329, Regolamento recante norme per la messa in servizio ed utilizzazione delle attrezzature a pressione e degli insiemi di cui all'articolo 19 del decreto legislativo 25 febbraio 2000, n. 93. (Ministerial Decree 01/12 2004, n. 329 Regulations for commissioning and use of pressure equipment and assemblies referred to in Article 19 of Legislative Decree 25 February 2000, n. 93)

— Ordinanza del Presidente del Consiglio dei Ministri 23 marzo 2003, n. 3274 “Primi elementi in materia di criteri generali per la classificazione sismica del territorio nazionale e di normative tecniche per le costruzioni in zona sismica.” (Decree 23 March 2003 of President Ministries Council “Main elements for general requirements for seismic classification of national territory and technical building standards for seismic zones”);

— Decreto Legge 31 dicembre 2007, n. 248, convertito con modificazioni dalla Legge 28 febbraio 2008, n. 31 (Decree 31 december 2007, n. 248 converted with modifications by law 28 february 2008; n. 31 about seismic requirements);

— Decreto Legislativo 9 aprile 2008 , n. 81, Attuazione dell'articolo 1 della legge 3 agosto 2007, n. 123, in materia di tutela della salute e della sicurezza nei luoghi di lavoro (Legislative Decree 9 April 2008 no. 81 Implementation of Article 1 of the Law of 3 August 2007, n. 123, concerning the protection of health and safety in the workplace.)

— Decreto del Presidente della Repubblica 1° agosto 2011 , n. 151, Regolamento recante semplificazione della disciplina dei procedimenti relativi alla prevenzione degli incendi, a norma dell’articolo 49, comma 4 -quater , del decreto-legge 31 maggio 2010, n. 78, convertito, con modificazioni, dalla legge 30 luglio 2010, n. 122 (Decree of the President of Republic 1 August 2011, n. 151, Regulation laying down simplified application of the rules on procedures relating to the prevention of fires, in accordance with Article 49, paragraph 4-c of the Decree-Law of 31 May 2010, n. 78, converted, with amendments by law of 30 July 2010, n. 122);

— Autorità per l’energia elettrica il gas e il sistema idrico (AEEGSI) - Deliberazione n. 574/2013/R/GAS - Regolazione della qualità dei servizi di distribuzione e misura del gas per il periodo di regolazione 2014-2019 - Parte I del testo unico della regolazione della qualità e delle tariffe dei servizi di distribuzione e misura del gas per il periodo di regolazione 2014-2019 (Regulatory Authority for Electricity, Gas and Water (AEEGSI) – Directive n. 574/2013, Regulation of the quality of distribution and measurement services for the regulatory period 2014-2019: Part I "Adjusting the quality and the pricing for the distribution and measurement services of natural gas for the period of adjustment 2014-2019).

— Autorità per l’energia elettrica e il gas e il sistema idrico (AEEGSI) - Deliberazione 602/2013/R/gas regolazione della qualità del servizio di trasporto del gas naturale per il periodo di regolazione 2014-2017 – Parte I del testo unico della regolazione della qualità e delle tariffe per i servizi di trasporto e dispacciamento del gas naturale per il periodo di regolazione 2014-2017 (Regulatory Authority for Electricity, Gas and Water (AEEGSI) – Directive n. 602/2013 Adjusting the quality of the transportation service of natural gas for the period of adjustment 2014-2017) - Part I Consolidated regulation of the quality and pricing of transport services and dispatching of natural gas for the regulatory period 2014-2017.

10.8.1.2 NSB National Functional standards

— UNI 10619 (series) Sistemi di controllo della pressione e/o impianti di misurazione del gas naturale funzionanti con pressione a monte massima di 12 bar per utilizzo industriale e civile - (Gas pressure control systems and/or gas measurements installations for inlet max pressure up to 12 bar for industrial and domestic use).

— UNI 10611, Rivestimenti isolanti di strutture metalliche interrate da associare alla protezione catodica. Criteri di progettazione e controllo (Insulating coatings for buried metal structures to be associated with cathodic protection. Design criteria and control);

— UNI 10702; Impianti di riduzione della pressione del gas funzionanti con pressione a monte compresa fra 0,04 e 12 bar. Conduzione e manutenzione + EC (Gas pressure regulating installations for inlet pressure between 0,04 and 12 bar – Operation and maintenance);

10.8.1.3 Technical rules – (Detailed) Code of practice

The technical rules when issued by ministerial decree are compulsory. The directives issued by Regulatory Authority for Electricity and Gas (Aeeg) are compulsory. The guidelines issued by CIG (Italian Gas Committee) support some requirements given in the Aeeg Directives.

CIG guidelines:

— Classificazione delle dispersioni di gas (Gas leaks – Classification)

— L'esecuzione delle attività di pronto intervento gas (Gas emergency – Activities in distribution networks)

— Linee guida per l'applicazione della normativa sismica nazionale alle attività di progettazione, costruzione e verifica dei sistemi di trasporto e distribuzione per gas combustibile (Seismic guidelines in gas supply)

— La gestione delle emergenze da gas combustibile (Gas emergency management in distribution networks)

— La gestione delle emergenze di servizio nei sistemi di trasporto del gas naturale (Gas emergency management in transport networks)

10.8.2 More restrictive requirements in in Italian legislation/regulations

10.8.2.1 General

Detailed specification needed.

10.8.2.2 Clauses to note regarding EN 12279

a) Clause 7.1 and clause 7.4: Shall be applied the relevant requirements contained in the listed, applicable decrees.

b) Clause 8.1: For Italian legislation the relation among MOP, OP, TOP and MIP is as follows:

Table 5 — Relation among MOP, OP, TOP and MIP according to Italian legislation

Maximum operating pressure MOP	Operating pressure OP	Temporary operating pressure TOP	Minimum incidental pressure MIP
MOP > 24 bar	OP $\leq$ 1,025 MOP	TOP $\leq$ 1,05 MOP	MIP $\leq$ 1,10 MOP
24 bar $\geq$ MOP > 5 bar	OP $\leq$ 1,025 MOP	TOP $\leq$ 1,10 MOP	MIP $\leq$ 1,15 MOP
5 bar $\geq$ MOP > 0,04 bar	OP $\leq$ 1,075 MOP	TOP $\leq$ 1,10 MOP	MIP $\leq$ 1,15 MOP
MOP $\leq$ 0,04 bar	OP $\leq$ 1,075 MOP	TOP = MIP $\leq$ 1,20 MOP	

10.9 Page for the Netherlands (EN 12279)

10.9.1 Relevant Dutch legislation/regulations for gas pressure regulating installations on service lines to which EN 12279 is applicable

10.9.1.1 National law/ Federal law

— GASWET, WET van 22 juni 2000, houdende regels omtrent het transport en de levering van gas (Gas Act 2000 (Management on quality aspects of gas distribution systems))

— Aansluit- en transportvoorwaarden Gas – RNB, onderdeel van de voorwaarden als bedoeld in artikel 12b van de Gaswet

— Meetvoorwaarden Gas – RNB, onderdeel van de voorwaarden als bedoeld in artikel 12b van de Gaswet

— Besluit van 28 november 2006, houdende regels met betrekking tot de registratie van gegevens externe veiligheid inrichtingen, transportroutes en buisleidingen (Registratiebesluit externe veiligheid)

— Activiteitenbesluit milieubeheer (Besluit algemene regels voor inrichtingen milieubeheer)

— Wet milieubeheer

— AMVB - Besluit van 27 oktober 2011 tot vaststelling van veiligheidseisen voor het transport van gas door buisleidingen bij een druk lager dan 16 bar (Besluit veiligheid lage druk gastransport)

— Bouwbesluit 2012

— ATEX ARBO richtlijnen 95 en 137 (Explosiegevaar)

— Activiteitenregeling milieubeheer (Regeling algemene regels voor inrichtingen milieubeheer)

10.9.1.2 NSB National Functional standards

— NEN 1059:2010, Nederlandse editie op basis van NEN-EN 12186 en NEN-EN 12279 — Gasvoorzieningsystemen - Gasdrukregel- en meetstations voor transport en distributie ((Dutch edition based on NEN-EN 12186 and NEN-EN 12279 — Gas supply systems – Gas pressure regulating stations for transmission and distribution);

— NEN 3650-1:2012, Eisen voor buisleidingsystemen - Deel 1:Algemene eisen (Requirements for pipeline systems - Part 1:General requirements);

— NEN 3650-2:2012, Eisen voor buisleidingsystemen - Deel 2:Aanvullende eisen voor leidingen van staal (Requirements for pipeline systems - Part 2:Additional specifications for steel pipelines);

— NEN 3650-3:2012, Eisen voor buisleidingsystemen - Deel 3:Aanvullende eisen voor leidingen van kunststof (Requirements for pipeline systems - Part 3:Additional specifications for plastic pipelines);

— NEN 3650-4:2012, Eisen voor buisleidingsystemen - Deel 4:Aanvullende eisen voor leidingen van beton (Requirements for pipeline systems - Part 4:Additional specifications for concrete pipelines);

— NEN 3650-5:2012, Eisen voor buisleidingsystemen - Deel 5:Aanvullende eisen voor leidingen van gietijzer (Requirements for pipeline systems - Part 5:Additional specifications for cast iron pipelines);

— NEN 3651:2012; Aanvullende eisen voor buisleidingen in of nabij belangrijke waterstaatswerken (Additional requirements for pipelines in or nearby important public works);

— NEN 3653;2009, Methoden voor de vaststelling van acceptatiecriteria voor defecten in rondlassen van pijpleidingen (Methods for the determination of NDE acceptance criteria for defects in pipeline girth welds);

10.9.1.3 Technical rules – (Detailed) Code of practice

— NTA 8120:2014, Assetmanagement - Eisen aan een veiligheids-, kwaliteits- en capaciteitsmanagementsysteem voor het elektriciteits- en gasnetbeheer (Asset management -

Requirements for a safety,quality and capacity management system for electricity and gas network operations);

— NTA 8000:2009, Specificatie voor een risicomanagementsysteem (RMS) voor risico's van buisleidingsystemen voor het transport van gevaarlijke stoffen in de beheerfase (Specification of a Risk Management System (RMS) for pipeline systems for the transport of hazardous substances during operations);

— NTA 8620:2006, Specificatie van een veiligheidsmanagementsysteem voor risico's van zware ongevallen (Specification of a safety management system for major accidents hazards);

— NPR 3659:1996/A1:2003/C1:2006, Ondergrondse pijpleidingen - Grondslagen voor de sterkteberekening (Underground pipelines. Basic principles for strenght calculation).

10.9.2 More restrictive requirements in Dutch legislation/regulations

10.9.2.1 General

No detailed specifications needed.

10.9.2.2 Clauses to note regarding EN 12279

No detailed specifications needed.

10.10 Page for Sweden (EN 12279)

10.10.1 Relevant legislation/regulations for gas pressure regulating installations on service lines to which EN 12279 is applicable

10.10.1.1 National law/ Federal law

— [Regulations on Natural Gas MSBFS 2009:7] Naturgasföreskrifter MSBFS 2009:7 Clause 2 kap 4§.

10.10.1.2 NSB National Functional standards

None.

10.10.1.3 Technical rules – (Detailed) Code of practice

The technical rules mentioned above are legislative requirements.

10.10.2 More restrictive requirements in in Swedish legislation/regulations

7.11 has to be changed so that the design factor is 0.5 or lower. See MSBFS 2009:7 clause 2 chapter 4

10.10.2.1 General

None.

10.10.2.2 Clauses to note regarding EN 12279

7.11.

10.11 Page for Spain (EN 12279)

10.11.1 Relevant Spanish legislation/regulations for gas pressure regulation to which EN 12279 is applicable

10.11.1.1 National law/ Federal law

— Ley del Sector de Hidrocarburos (Ley 34/1998, de 7 de octubre) y sus modificaciones (Hydrocarbons Sector Law and its subsequent amendments)

The Regulations below are applicable to the whole country. The regions (Comunidades Autónomas) may have additional requirements.

— Reglamento Técnico de Distribución y Utilización de Combustibles Gaseosos y sus instrucciones técnicas complementarias ICG 01 a 11 (Real Decreto 919/2006, de 28 de julio) (Gas Distribution and Utilization Technical Regulations)

  This “Reglamento” includes a number of applicable "Instrucciones Técnicas Complementarias" (Complementary Technical Instructions) or ITC:

  — ITC-ICG 01 Instalaciones de distribución de combustibles gaseosos por canalización (Gas Distribution Installations)

10.11.1.2 NSB National Functional standards

The standards listed below are mandatory:

— UNE 60402-1, Combustibles gaseosos. Reguladores de presión con presión máxima de operación (MOP) de entrada inferior o igual a 0,4 bar y MOP de salida inferior o igual a 0,05 bar. Parte 1: Reguladores con válvula de seguridad incorporada de disparo por mínima presión con caudal equivalente inferior o igual a 4,8 m3(n)/h de aire. (Gaseous fuels. Pressure regulator with an inlet MOP up to 0,4 bar and an outlet MOP up to 0,05 bar. Part 1: Regulators with an incorporated low pressure cut-off safety valve with an equivalent flow rate up to 4,8 m3 (n)/h of air.);

— UNE 60402-2, Combustibles gaseosos. Reguladores de presión con presión máxima de operación (MOP) de entrada inferior o igual a 0,4 bar y MOP de salida inferior o igual a 0,05 bar. Parte 2: Reguladores con MOP de entrada superior a 150 mbar, con válvula de seguridad incorporada de disparo por mínima presión, con válvula de seguridad incorporada de disparo por máxima presión y con caudal equivalente inferior o igual a 4,8 m3(n)/h de aire. (Gaseous fuels. Pressure regulator with an inlet MOP up to 0,4 bar and an oulet MOP up to 0,05 bar. Part 2: Regulator with a MOP greater than 150 mbar, with an incorporated minimum low pressure cut-off safety valve, with a maximum pressure safety valve and an equivalent flow rate up to 4,8 m3 (n)/h of air.);

— UNE 60403, Válvula de seguridad de interrupción por mínima presión para instalaciones receptoras de gases combustibles con caudal equivalente hasta 4,8 m3 (n)/h de aire (Shut-off safety valves on minimum pressure with an equivalent air flow rate up to 4,8 m3(n)/h for gas installations);

— UNE 60404-1, Combustibles gaseosos. Conjuntos de regulación de presión y/o medida, con presión máxima de operación (MOP) inferior o igual a 5 bar. Parte 1: Conjuntos para empotrar, adosar o situar en recintos con caudal nominal equivalente inferior o igual a 100 m³(n)/h de gas natural. (Gaseous fuels. Regulation pressure and/or measurement packages with a maximum operating pressure up to 5 bar. Part 1: Packages to built in, attach or place in enclosures with an equivalent nominal volume of flow up to 100 m3 (n)/h of natural gas.);

— UNE 60404-2, Combustibles gaseosos. Conjuntos de regulación de presión y/o medida con presión máxima de operación (MOP) inferior o igual a 5 bar. Parte 2: Conjuntos de regulación para situar en arqueta empotrable en vía pública con caudal nominal equivalente de inferior o igual a 50 m3 (n)/h de

gas natural. (Gaseous fuels. Regulation pressure and/or measurement packages with a maximum operating pressure up to 5 bar. Part 2: Regulation packages to place in small chest built in a public way with a nominal volume of flow equivalent up to 50 m3(n)/h of natural gas);

— UNE 60404-3, Combustibles gaseosos. Conjuntos de regulación de presión con o sin medida, con presión de entrada hasta MOP 5. Parte 3 : Conjuntos para adosar o situar en recintos, con caudal nominal superior equivalente a 100 m3(n)/h y hasta 250 m3(n)/h de gas natural. (Gaseous fuels. Regulation pressure and/or measurement packages with a maximum operating pressure up to 5 bar. Part 3: Packages to built in, attach or place in enclosures with an equivalent nominal volume of flow from 100 m3(n)/h to 250 m3(n)/h of natural gas.);

— UNE 60410, Conjuntos de regulación y medida con presión máxima de operación (MOP) de entrada hasta 0,4 bar situados en armarios para empotrar o adosar en muros con caudal nominal equivalente de hasta 10 m³(n)/h de gas natural. (Regulation and measurement packages with an inlet pressure in MOP up to 0,4 bar, placed in wardrobes to build in or to lean against walls with an equivalent nominal flow up to 10 m³(n)/h of natural gas.);

— UNE 60411, Combustibles gaseosos. Reguladores de presión con presión máxima de operación de entrada (MOPe) superior a 0,4 bar e inferior o igual a 5 bar y presión máxima de operación de salida (MOPs) inferior o igual a 0,4 bar. (Gaseous fuels. Pressure regulator with a maximum inlet pressure (MOPe) greater than 0,4 bar and up to 5 bar and a maximum outlet pressure (MOPs) up to 0,4 bar.);

— UNE 60620, Instalaciones receptoras de gas natural sumnistradas a presiones superiores a 5 bar. (Natural gas receiving installations with supply pressure over 5 bar)

  — Parte 1: Generalidades (General)

  — Parte 3: Estaciones de regulación y medida (Pressure Reducing and Metering Stations).

The following standard develops and has complementary requirements to the functional recommendations of UNE-EN 12186 and UNE-EN 12279:

— UNE 60312, Estaciones de regulación para canalizaciones de distribución de combustibles geseosos con presión de entrada no superior a 16 bar. (Gas pressure regulating stations for distribution of gaseous fuels with inlet pressure not greather than 16 bar).

10.11.1.3 Technical rules – (Detailed) Code of practice

None.

10.11.2 More restrictive requirements in Spanish legislation/regulations

10.11.2.1 General

There are not general comments.

10.11.2.2 Clauses to note regarding EN 12279

Clause 8.1: According to UNE 60402 and UNE 60404 the system to adjust the output pressure of regulators with inlet pressure up to 4 bar shall be factory-sealed to avoid manipulation by unauthorised personnel.

10.12 Page for UK

The UK gas safety legislation does not lend itself to the detailed breakdown given by other countries. If any interested party needs to understand the UK safety system the references given supply the latest information from the source of authority.

The United Kingdom Safety Regulator for Industry and Commerce is the: *Health and Safety Executive.* The principle UK Health and Safety Legislation is the *Health and Safety at Work Act 1974, as amended*. This Act has many branches with detailed regulations for the various sectors of Industry and Commerce.

http://www.hse.gov.uk/legislation/hswa.htm

The various Licenses issued by OFGEM for UK Gas Transport, Storage and Gas Supply etc. have a clause to ensure that the Licensee operates safely and securely. The HSE has a special website for *Gas* and a section for *Gas Supply.* This site describes the principle regulations governing gas supply and provides the related *Regulations* and the *Advisory Codes of Practice*:-

http://www.hse.gov.uk/gas/supply/legislation.htm

The UK safety legislation is *goal setting* and the *HSE* has worked for many years with the UK gas industry through the *Institution of Gas Engineers and Managers* to develop more detailed technical standards for the various elements of the gas infrastructure. These cover a range of topics, e.g.:

— Pipelines Safety Regulations;

— Pressure Systems Safety Regulations;

— Gas Safety (Management) Regulations;

— Gas Safety (Installation and Use) Regulations;

— Dangerous Substances and Explosive Atmospheres Regulations;

— Reporting of Injuries, Diseases and Dangerous Occurrences Regulations;

— Building Regulations;

— Health and Safety at Work etc. Act;

— Management of Health and Safety at Work Regulations;

— Pressure Equipment Regulations,

— Electricity at Work Regulations

The Full List of current IGEM standards and prices for January 2013 are at:-

http://www.igem.org.uk/media/227989/igem%20standards%20list%20january%202013.pdf

When the CEN TC 234 ENs were published first in 2000, IGEM brought its Standards into line with these ENs, e.g. as regards pressure range and the 16 bar limit for EN 1594 and EN 12007 series.

Under the UK Safety Legislation, Licensed gas transporters, distributors and storage operators etc. are subject to a *Safety Case Regime,* which requires specific approval of the detail in the *Safety Case* by the HSE before operations can commence. This detail includes technical requirements for the design, construction, testing commissioning and operation under both normal and emergency conditions. The *Safety Case* document also covers quality management processes to ensure safety and security of gas supply according to the approved Safety Case. For this purpose, many Licensed Operators of gas infrastructure have their own complete technical and safety management details documented fully as part of their *Safety Case*. This detail describes how their business intends to operate under its License in order to ensure safety of the public and of the workforce.

11 Relevant national legislation/ regulation and standards for pressure testing, commissioning and decommissioning procedures of gas infrastructure to which EN 12327 is applicable

11.1 Page for Austria (EN 12327)

11.1.1 Relevant Austrian legislation/regulations for gas pipelines for pressure testing, commissioning and decommissioning procedures of gas infrastructure to which EN 12327 is applicable

11.1.1.1 National law/ Federal law

— BGBl. I Nr. 107/2011 Gaswirtschaftsgesetz (National Gas Law)

— BGBl. II Nr.171/2012 Gas-Marktmodell-Verordnung 2012 (Natural gas market regulation)

— BGBl. II Nr. 172/2012 Gasnetzdienstleistungsqualitäts-Verordnung (Gasgrid service quality regulation)

— BGBl. II Nr. 309/2012 Gas-Systemnutzungsentgelte-Verordnung 2013 (Gas system usage fee regulation)

Source of supply:

Rechtsinformationssystem des Bundes (RIS)

www.ris.bka.gv.at

Energie-Control Austria

Rudolfsplatz 13a

A-1010 Wien

http://www.e-control.at/de/recht/bundesrecht/gas

11.1.1.2 NSB National Functional standards

None.

11.1.1.3 Technical rules – (Detailed) Code of practice

— ÖVGW G E100: Erdgasleitungen (Natural gas pipelines)

— ÖVGW G E101: Druckprüfung von Erdgasleitungen (Pressure Testing of natural gas pipelines)

— ÖVGW G E110: Erdgasleitungen aus PE (Natural gas pipelines made of PE)

— ÖVGW G E120: Erdgasleitungen aus Stahl (Natural gas pipelines made of steel)

— ÖVGW G E130: Grabenlose Verfahren (Trenchless piping techniques)

— ÖVGW G B111: In- und Außerbetriebnahme von Erdgasleitungen und Erdgasanlagen (Commissioning and decommissioning of natural gas pipelines and stations)

— ÖVGW G B140: Organisation und Behandlung von Störfällen (Organization and handling of disturbances)

— ÖVGW G B300: Instandhaltung von Erdgasleitungsanlagen (Maintenance of natural gas pipeline facilities)

— ÖVGW G B310: Instandhaltung von Erdgasleitungen: (Maintenance of natural gas pipelines)

— ÖVGW G B430: Abstände von Erdgasleitungsanlagen zu elektrischen Anlagen (Distances between natural gas pipeline facilities and electric installations)

— ÖVGW G O310: Personalqualifikation, Aus- und Weiterbildung (Personnel qualification, training and further education)

— ÖVGW G O322: Ausbildung und Prüfung von Kunststoffrohrlegern (Training and examination of plastic tube fitters)

— ÖVGW G 20: Kathodischer Korrosionsschutz - Planung und Errichtung (Cathodic corrosion protection – Planning and construction)

— ÖVGW G 21: Kathodischer Korrosionsschutz Inbetriebnahme und Überwachung (Cathodic corrosion protection Commissioning and surveillance)

— ÖVGW G 24: Elektrische Trennstellen (Electric insulation spots)

— ÖVGW G 25: Passiver Korrosionsschutz (Passive protection against corrosion)

— ÖVGW G 52/1: Bau von Rohrleitungen aus Kunststoff – Teil 1: Rohre aus PVC – hart (Construction of gas mains from plastics – Part 1: Pipes of PVC hard)

— ÖVGW G 54: Bau von Gasrohrleitungen aus duktilen Gußrohren (Construction of gas mains from ductile cast iron)

— ÖVGW GW 10: Maßnahmen zum Schutz von Versorgungsanlagen bei Bauarbeiten (Measures for the protection of supplying units during construction works)

Source of supply:
Österreichische Vereinigung für das Gas- und Wasserfach
Schubertring 14
1010 Wien
Austria
www.ovgw.at

11.1.2 More restrictive requirements in Austrian legislation/ regulations

More detailed requirements are specified in the above mentioned technical rules.

11.2 Page for Finland (EN 12327)

11.2.1 Relevant Finnish legislation/regulations for pressure testing, commissioning and decommissioning procedures to which EN 12327 is applicable

11.2.1.1 National law/ Federal law

— **Laki vaarallisten kemikaalien ja räjähteiden käsittelyn turvallisuudesta 390/2005** (Act on the Safe Handling and Storage of Dangerous Chemicals and Explosives (390/2005))

— **Valtioneuvoston asetus maakaasun käsittelyn turvallisuudesta 551/2009** (Government Decree on Natural Gas Safety)

— Valtioneuvoston asetus maakaasu-, nestekaasu- ja öljylämmityslaitteistojen asennus- ja huoltotoimintaa sekä maanalaisten öljysäiliöiden tarkastusta harjoittavien hyväksymisestä 558/**2012 (Government Decree on approval of installation and maintenance companies)**

11.2.1.2 NSB National Functional standards

— SFS 2897 **Maakaasuputkisto. Painekoe** (Natural gas pipeline - Pressure test, 1987-05-18)

11.2.1.3 Technical rules – (Detailed) Code of practice

— **Maakaasukäsikirja, Suomen Kaasuyhdistys, Marraskuu 2010** (Natural gas - Codes of practise, Finnish Gas Association, November 2010)

These codes of practice include additional useful information.

11.2.2 More restrictive requirements in Finnish legislation/ regulations

11.2.2.1 General

As a result of circumstances in Finland there is some restrictive legislation concerning the gas infrastructure. These regulations are stated in annex 1 and annex 2 in *Valtioneuvoston asetus maakaasun käsittelyn turvallisuudesta 551/2009* (Government Decree on Natural Gas Safety).

11.2.2.2 Clauses to note regarding and EN 12327

Annex 2 in Valtioneuvoston asetus maakaasun käsittelyn turvallisuudesta 551/2009 (Government Decree on Natural Gas Safety)

11.3 Page for France (EN 12327)

11.3.1 Relevant French legislation/regulations for pressure testing, commissioning and decommissioning procedures to which EN 12327 is applicable

11.3.1.1 National law

— Décret du 18 janvier 1943 relatif au règlement sur les appareils à pression de gaz

— Loi du 19 juillet 1976 relative aux installations classées pour la protection de l'environnement

— Arrêté du 2 août 1977 modifié relatif aux règles techniques et de sécurité applicables aux installations de gaz combustible et d'hydrocarbures liquéfiés situées à l'intérieur des bâtiments d'habitation ou de leurs dépendances

— Loi du 22 juillet 1987 relative aux organisations de la sécurité civile, protection de la forêt contre l'incendie, protection des risques majeurs

— Décret du 6 mai 1988 relatif aux plans d'urgence pris en application de la loi du 22 juillet 1987

— Loi du 22 juin 1989 relative au code de la voirie routière

— Arrêté du 13 juillet 2000 modifié portant règlement de sécurité de la distribution de gaz combustible par canalisations

— Décret du 24 janvier 2003 relatif à la coordination en matière de sécurité et de protection de la santé lors des opérations de bâtiment ou de génie civil et modifiant le code du travail

— Décret n° 2004-555 du 15 juin 2004 relatif aux prescriptions techniques applicables aux canalisations et raccordements des installations de transport, de distribution et de stockage de gaz

— Arrêté du 5 mars 2014 portant règlement de sécurité des canalisations de transport de gaz combustibles, d'hydrocarbures liquides ou liquéfiés et de produits chimiques— Décret n° 2007-684 du 4 mai 2007 relatif à l'agrément des distributeurs de gaz par réseaux publics

— Arrêté du 15 février 2012 modifié relatif à l'exécution de travaux à proximité des réseaux.

Source of supply:

Direction des Journaux Officiels
26 rue Desaix
F - 75727 PARIS Cedex 15.

11.3.1.2 Detaled codes of practice

Technical specifications (« cahiers des charges ») supporting the above listed regulation 'arrêtédu 13 juillet 2000':

— RSDG1, Règles techniques et essais;

— RSDG2, Capacité technique et compétence des opérateurs de réseau de distribution de gaz combustibles:

— RSDG3-1, Soudage des canalisations et branchements en acier;

— RSDG3-2, Soudage des canalisations et branchements en polyéthylène (PE);

— RSDG3-3, Canalisations et branchements en cuivre;

— RSDG4, Voisinage des réseaux de distribution de gaz avec les autres ouvrages;

— RSDG5, Canalisations à l'air libre ou dans les passages couverts, ouverts sur l'extérieur;

— RSDG6, Organes de coupure et sectionnement des réseaux;

— RSDG7, Organes de protection de branchement;

— RSDG8, Cartographie des réseaux de distribution de gaz;

— RSDG9, Intervention de sécurité en cas d'incident ou d'accident mettant en cause la sécurité;

— RSDG10Rev1, Odeur du gaz distribué;

— RSDG11, Travaux en charge;

— RSDG12, Identification in situ des canalisations de distribution de gaz;

— RSDG13-1Rev1, Protection cathodique des canalisations en acier;

— RSDG13-2, Canalisations en acier non protégées cathodiquement;

— RSDG14Rev1, Surveillance et maintenance des réseaux de distribution de gaz combustibles;

— RSDG15Rev1, Mise hors exploitation et abandon des équipements de réseau;

— RSDG 16.1, relatif aux réseaux de distribution de gaz de 2ème catégorie;

— RSDG 16.2, relatif aux réseaux de distribution de gaz de 3ème catégorie.

Source of supply:

AFG, Association Française du gaz
8 rue de l'Hotel de ville
F-92200 Neuilly-sur-Seine
Phone: +33 1 80 21 08 00
Fax: +33 1 46 37 19 55

11.4 Page for Germany (EN 12327)

11.4.1 Relevant German legislation/regulations for pressure testing, commissioning and decommissioning procedures to EN 12327 is applicable

11.4.1.1 National law/ Federal law

— Gesetz über die Elektrizitäts- und Gasversorgung (Energiewirtschaftsgesetz - EnWG) vom 07. Juli 2005 (BGBl. I, S. 1970 (3621)), zuletzt geändert durch Art. 2 G v. (16. Januar 2012 (BGBI. I S. 74) (Energy Industry Act);

— Arbeitsschutzgesetz (ASG) (Occupational Health and Safety Act);

— Verordnung über Sicherheit und Gesundheitsschutz bei der Bereitstellung von Arbeitsmitteln und deren Benutzung bei der Arbeit, über Sicherheit beim Betrieb überwachungsbedürftiger Anlagen und über die Organisation des betrieblichen Arbeitsschutzes (Betriebssicherheitsverordnung – Ordinance concerning the protection of safety and health in the provision of work equipment and its use at work, concerning safety when operating installations suject to monitoring and concerning the organisation of industrial safety and health at work (Ordinance on Industrial Safety and Health – BetrSichV)

— Lärm-Vibrations-Arbeitsschutzverordnung (LärmVibrationsArbSchV) (Ordinance on noise and vibrations related to occupational health and safety)

— Persönliche Schutzausrüstung – Benutzungsverordnung (PSA-BV) (Personal protective equipment – Ordninance on the use)

— Vorschriften der Berufsgenossenschaft, BGV für Sicherheit und Gesundheit bei der Arbeit BGV A1, "Allgemeine Vorschriften" (Health and safety regulations of the professional association for occupational health and safety on safety and health at work, BGV A1, "General regulations").

Source of supply:

Bundesanzeiger Verlagsges. mbH Bonn
Bundesgesetzblatt
Postfach 13 20
D – 53003 Bonn
Germany

11.4.1.2 NSB National Functional standards

There are no national functional standards in addition to EN 12327.

In Germany, there exists an agreement between DVGW and DIN. Whilst the DIN is responsible for national product standards, the DVGW is responsible for the setting of functional technical rules.

All European standards, including the functional standards, are published as DIN EN standards. DVGW technical rules are aligned to DIN/DIN EN standards, where applicable.

The DIN standards related to gas are taken into account by DVGW and are part of the so called DVGW Set of Codes of practice.

11.4.1.3 Technical rules – (Detailed) Code of practice

— DVGW-Arbeitsblatt G 469 "Druckprüfverfahren für Gastransport und Gasverteilung" (Pressure testing for gas transport and gas distribution)

Source of supply:

Wirtschafts- und Verlagsgesellschaft Gas und Wasser mbh
Postfach 14 01 51
D – 53056 Bonn
Germany

11.4.1.4 Health and safety

— Berufsgenossenschaftliche Regeln für Sicherheit und Gesundheit bei der Arbeit; BGR 500/Teil 2 Kapitel 2.31, Arbeiten an Gasleitungen (Regulations of professional association for occupational health and safety at work, Part 2, clause 2.31, "Working on Gas pipeworks");

— TRBS 1112 Teil 1, Explosionsgefährdungen bei und durch Instandhaltungsarbeiten - Beurteilungen und Schutzmaßnahmen (Technical rules on Industrial Safety and Health);

— TRBS 2152 Teil 3, Gefährliche explosionsfähige Atmosphäre - Vermeidung der Entzündung gefährlicher explosionsfähiger Atmosphäre (Technical rules on Industrial Safety and Health);

— TRBS 2153, Vermeidung von Zündgefahren infolge elektrostatischer Aufladungen (Technical rules on Industrial Safety and Health);

— TRGS 555, Betriebsanweisung und Information der Beschäftigten (Technical rules on Industrial Safety and Health);

— TRGS 500, Schutzmaßnahmen (Technical rules on Industrial Safety and Health).

Source of supply:

Carl Heymanns Verlag KG
Luxemburger Straße 449
D – 50939 Köln
Germany

11.4.2 More restrictive requirements in German legislation/ regulations

11.4.2.1 General

More detailed requirements are specified in the above mentioned codes of practice.

11.4.2.2 Clauses to note regarding EN 12327

More detailed requirements are specified in the above mentioned codes of practice.

11.5 Page for Greece (EN 12327)

11.5.1 Relevant Greek legislation/**regulations** for pressure testing, commissioning and decommissioning procedures to which **EN 12327** is applicable

11.5.1.1 National law/ Federal law

— Ministerial Decision “Technical code for steel distribution grids with DP 19 bar” Governmental Gazette 1552B/24.10.2006. “Κανονισμός χαλύβδινων δικτύων διανομής φυσικού αερίου με πίεση σχεδιασμού 19 bar” (Ministerial Decision “Technical code for PE distribution grids with MOP 4 bar” Governmental Gazette 1530B/19.10.2006. “Κανονισμός δικτύων πολυαιθυλενίου διανομής φυσικού αερίου με μέγιστη πίεση λειτουργίας 4 bar”)

11.6 Page for Hungary (EN 12327)

11.6.1 Relevant Hungarian legislation/regulations for pressure testing, commissioning and decommissioning procedures to which EN 12327 is applicable

11.6.1.1 National law/ Federal law

— **Law XL of 2008**: Natural Gas Supply (Gas Act)

— **Government Law Decree 19/2009 (I. 30.)**: On the implementation of provisions of Law XL of 2008

— **GKM (Ministry of Economy and Transport) Decree 80/2005. (X. 11.)**: Safety requirements for gas supply pipelines and publishing the safety regulations for gas supply pipelines

— **Government Law Decree 53/2012. (III. 28.)**: Regulations on statutory procedures for specific buildings that belong to the scope of competence of the mining authority

11.6.1.2 NSB National Functional standards

The National Standardization Body of Hungary (MSZT) has adopted the above-mentioned EN standards without any alterations.

11.6.1.3 Technical rules – (Detailed) Code of practice

None.

11.6.2 More restrictive requirements in Hungarian legislation/ regulations

11.6.2.1 General

None.

11.6.2.2 Clauses to note regarding EN 12327

None.

11.7 Page for Ireland (EN 12327)

11.7.1 Relevant Irish legislation/regulations for for pressure testing, commissioning and decommissioning procedures to which EN 12327 is applicable

11.7.1.1 National law

11.7.1.1.1 Energy

— Energy (Miscellaneous Provisions) Act 2006;

— Gas Act 1976 (No. 30 of 1976);

— S.I. No. 283 of 1987. (Gas [amendment] act, [section 2 order 1987]).

— S.I. No. 196 of 2003. (Gas (Amendment) Act 1987 (section 2) (Distribution) Order 2003

Source of supply:

Irish Statute Book (http://www.irishstatutebook.ie/)

11.7.1.1.2 Health and safety

— Safety, Health and Welfare at work Act 2005 (No.10 of 2005), as amended.

Source of supply:

Irish Statute Book (http://www.irishstatutebook.ie/)

11.7.1.2 NSB National standards

— I.S. 329:2003, Gas distribution mains (edition 2)

— I.S. 265:2000, Installation of gas service pipes parts 1 and 2 (fourth edition)

— I.S. 370:2007, Colour code for buried plastics piping

11.7.1.3 Technical rules – (Detailed) Code of practice

Commission for Energy Regulation – Gas safety framework

www.cer.ie

11.7.2 More restrictive requirements in Irish legislation/ regulations

11.7.2.1 General

None.

11.7.2.2 Clauses to note regarding EN 12327

None.

11.8 Page for Italy (12327)

11.8.1 Relevant Italian legislation/regulations for gas pipelines for pressure testing, commissioning and decommissioning procedures to which EN 12327 is applicable

11.8.1.1 National law/ Federal law

— Legge 6 dicembre 1971, n. 1083, Norme per la sicurezza dell'impiego del gas combustibile (Law 06/12/1971 n. 1083 "Safety in the use of combustible gases")

— Decreto Ministeriale 16/04/08, Regola tecnica per la progettazione, costruzione, collaudo, esercizio e sorveglianza delle opere e dei sistemi di distribuzione e di linee dirette del gas naturale con densità non superiore a 0,8. (Ministry Decree 16/04/08 – Technical regulations for design , construction, ,testing, operation and surveillance of natural gas distribution networks)

— Decreto Ministeriale 17/04/08, Regola tecnica per la progettazione, costruzione, collaudo, esercizio e sorveglianza delle opere e degli impianti di trasporto del gas naturale con densità non superiore a 0,8. (Ministry Decree 17/04/08 – Technical regulations for design , construction, testing, operation and surveillance of natural gas transport networks)

— Decreto Ministeriale 4 aprile 2014, Norme tecniche per gli attraversamenti e per i parallelismi di condotte e canali convoglianti liquidi e gas con ferrovie ed altre linee di trasporto. (Ministry Decree 4 aprile 2014- Technical standards for crossing and parallelism of pipes and ducts carrying liquids and gas with railways and other transportation lines.)

— Decreto Ministeriale 01/12 2004, n. 329 Regolamento recante norme per la messa in servizio ed utilizzazione delle attrezzature a pressione e degli insiemi di cui all'articolo 19 del decreto legislativo 25 febbraio 2000, n. 93. Ministerial Decree 01/12 2004, n. 329 Regulations for commissioning and use of pressure equipment and assemblies referred to in Article 19 of Legislative Decree 25 February 2000, n. 93

— Ordinanza del Presidente del Consiglio dei Ministri 23 marzo 2003, n. 3274, "Primi elementi in materia di criteri generali per la classificazione sismica del territorio nazionale e di normative tecniche per le costruzioni in zona sismica." Decree 23 March 2003 of President Ministries Council "Main elements for general requirements for seismic classification of national territory and technical building standards for seismic zones"

— Decreto Legge 31 dicembre 2007, n. 248, convertito con modificazioni dalla Legge 28 febbraio 2008, n. 31 (Decree 31 december 2007, n. 248 converted with modifications by law 28 february 2008; n. 31 about seismic requirements)

— Decreto Legislativo 30 aprile 1992 n. 285, Testo coordinato ed aggiornato con le modifiche introdotte dal D.L. 27 giugno 2003, n. 151, dal D.Lgs. 23 febbraio 2006, n. 149, dal D.Lgs. 13 marzo 2006, n. 150, dalla Legge 21 febbraio 2006, n. 102, dal D.Lgs. 3 aprile 2006, n. 152, dalla Legge 26 novembre 2006, n. 286, dalla Legge 27 dicembre 2006, n. 296, dal Decreto Ministero Giustizia 29 dicembre 2006, dal Decreto legge 19 febbraio 2007, n. 14, dal Decreto Legge 03.08.2007, n. 117, dal Decreto Legge 23 maggio 2008, n. 92 e dal Decreto Ministero Giustizia 17 dicembre 2008. (D.lgs 30th April 1992 no. 285 - New Highway Code.) Text coordinate – Integrated and updated with law modifications until December 17th 2008.

— Decreto Legislativo 9 aprile 2008 , n. 81, Attuazione dell'articolo 1 della legge 3 agosto 2007, n. 123, in materia di tutela della salute e della sicurezza nei luoghi di lavoro. (Legislative Decree 9 April 2008 no. 81, Implementation of Article 1 of the Law of 3 August 2007, n. 123, concerning the protection of health and safety in the workplace.)

— Autorità per l'energia elettrica il gas e il sistema idrico (AEEGSI) - Deliberazione n. 574/2013/R/GAS - Regolazione della qualità dei servizi di distribuzione e misura del gas per il periodo di regolazione 2014-

2019 - Parte I del testo unico della regolazione della qualità e delle tariffe dei servizi di distribuzione e misura del gas per il periodo di regolazione 2014-2019 (Regulatory Authority for Electricity, Gas and Water (AEEGSI) – Directive n. 574/2013, Regulation of the quality of distribution and measurement services for the regulatory period 2014-2019: Part I "Adjusting the quality and the pricing for the distribution and measurement services of natural gas for the period of adjustment 2014-2019).

— Autorità per l'energia elettrica e il gas e il sistema idrico (AEEGSI) - Deliberazione 602/2013/R/gas regolazione della qualità del servizio di trasporto del gas naturale per il periodo di regolazione 2014-2017 – Parte I del testo unico della regolazione della qualità e delle tariffe per i servizi di trasporto e dispacciamento del gas naturale per il periodo di regolazione 2014-2017 (Regulatory Authority for Electricity, Gas and Water (AEEGSI) – Directive n. 602/2013 Adjusting the quality of the transportation service of natural gas for the period of adjustment 2014-2017) - Part I Consolidated regulation of the quality and pricing of transport services and dispatching of natural gas for the regulatory period 2014-2017.

11.8.1.2 NSB National Functional standards

— UNI 8827 — Impianti di riduzione finale della pressione del gas funzionanti con pressione a monte compresa fra 0,04 e 5 bar. Progettazione, costruzione e collaudo. + A1 (Final gas pressure regulating installations for inlet pressure between 0,04 and 5 bar – Design, construction and testing)

— UNI 9165, Reti di distribuzione del gas – Condotte con pressione massima di esercizio minore o uguale di 5 bar - Progettazione, costruzione, collaudo, conduzione, manutenzione e risanamento (Gas distribution networks - Pipelines with maximum operating pressure less than or equal to 5 bar - Design, construction, testing, operation, maintenance and rehabilitation)

— UNI 9167, Impianti di ricezione, prima riduzione e misura del gas naturale - Progettazione, costruzione e collaudo (Initial pressure reduction plants for natural gas - Design, construction and testing)

— UNI 9463-1, Impianti di odorizzazione e depositi di odorizzanti per gas combustibili impiegati in usi domestici o similari - Parte 1: Termini e definizioni (Ottobre 2012) (Odorisation plants and odorant storages for combustible gases employed in domestic of similar uses - Part 1: Term and definitions)

— UNI 9463-2, Impianti di odorizzazione e depositi di odorizzanti per gas combustibili impiegati in usi domestici o similari - Parte 2: Impianti di odorizzazione - Progettazione, costruzione, collaudo e sorveglianza (Odorisation plants and odorant storages for combustible gases employed in domestic of similar uses - Part 2: Odorisation plants - Design, construction, testing and surveillance)

— UNI 9463-3, Impianti di odorizzazione e depositi di odorizzanti per gas combustibili impiegati in usi domestici o similari - Parte 3: Depositi di odorizzanti - Progettazione, costruzione ed esercizio (Odorisation plants and odorant storages for combustible gases employed in domestic of similar uses - Part 3: Odorant storages - Design, construction and operating criteria)

— UNI 9463-4, Impianti di odorizzazione e depositi di odorizzanti per gas combustibili impiegati in usi domestici o similari - Parte 4: Modalità di fornitura di odorizzanti (Odorisation plants and odorant storages for combustible gases employed in domestic of similar uses Part 4: Odorant supply conditions)

— UNI 9571-1 Impianti di ricezione, prima riduzione e misura del gas naturale - Parte 1: Sorveglianza (Initial pressure reduction plants for natural gas – Part 1: Surveillance)

— UNI 9860 Impianti di derivazione di utenza del gas – Progettazione, costruzione, collaudo, conduzione, manutenzione e risanamento (Gas service pipes – Design, construction, testing, operation, maintenance and rehabilitation)

— UNI 10390, Impianti di riduzione finale della pressione del gas naturale funzionanti con pressione a monte massima compresa tra 5 e 12 bar. Progettazione, costruzione e collaudo. (Final natural gas

pressure-regulating installations for inlet pressure between 5 and 12 bar – Design, construction and testing)

— UNI 10619 (series) Sistemi di controllo della pressione e/o impianti di misurazione del gas naturale funzionanti con pressione a monte massima di 12 bar per utilizzo industriale e civile - (Gas pressure control systems and/or gas measurements installations for inlet max pressure up to 12 bar for industrial and domestic use)

— UNI 10611, Rivestimenti isolanti di strutture metalliche interrate da associare alla protezione catodica. Criteri di progettazione e controllo (Insulating coatings for buried metal structures to be associated with cathodic protection. Design criteria and control)

— UNI 10702, Impianti di riduzione della pressione del gas funzionanti con pressione a monte compresa fra 0,04 e 12 bar. Conduzione e manutenzione + EC (Gas pressure regulating installations for inlet pressure between 0,04 and 12 bar – Operation and maintenance)

— UNI/TR 11228, Opere di protezione per tubazioni gas interrate per interferenze con ferrovie, tranvie, strade, altri servizi interrati e fabbricati (Protecting structures for buried gas pipes for interferences with railways, tramways, roads, other buried utilities and buildings)

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11.8.1.3 Technical rules – (Detailed) Code of practice

The technical rules when issued by ministerial decree are compulsory. The directives issued by Regulatory Authority for Electricity and Gas (Aeeg) are compulsory. The guidelines issued by CIG (Italian Gas Committee) support some requirements given in the Aeeg Directives.

CIG Guidelines:

— La gestione delle emergenze da gas combustibile (Gas emergency management in distribution networks)

— Classificazione delle dispersioni di gas (Gas leaks – Classification)

— L'esecuzione delle attività di pronto intervento gas (Gas emergency – Activities in distribution networks)

— Linee guida per l'applicazione della normativa sismica nazionale alle attività di progettazione, costruzione e verifica dei sistemi di trasporto e distribuzione per gas combustibile (Seismic guidelines in gas supply)

— La gestione degli incidenti da gas combustibile (Gas accidents management in distribution networks)

— Esecuzione delle ispezioni programmate e localizzate delle dispersioni sulla rete di distribuzione per gas con densità < 0,8 e con densità > 0,8 (Settembre 2011) (Distribution networks – Gas leaks inspections)

— Le forniture di emergenza di gas naturale mediante carro bombolaio e/o veicolo cisterna (Gas transport - Emergency gas supplies by vehicles)

— La gestione delle emergenze di servizio nei sistemi di trasporto del gas naturale (Gas emergency management in transport networks)

11.8.2 More restrictive requirements in Italian legislation/ regulations

11.8.2.1 General

None.

11.8.2.2 Clauses to note regarding EN 12327

None.

11.9 Page for the Netherlands (EN 12327)

11.9.1 Relevant Dutch legislation/regulations for pressure testing, commissioning and decommissioning procedures to which EN 12327 is applicable

11.9.1.1 National law/ Federal law

— Aansluit- en transportvoorwaarden Gas – RNB, onderdeel van de voorwaarden als bedoeld in artikel 12b van de Gaswet);

— Meetvoorwaarden Gas RNB;

— GASWET, WET van 22 juni 2000, houdende regels omtrent het transport en de levering van gas (Gas Act 2000 (Management on quality aspects of gas distribution systems));

— Wet Informatie-uitwisseling Ondergrondse Netten (WION; document uitgegeven door de Rijksoverheid, Den Haag;

— ATEX ARBO richtlijnen 95 en 137 (Explosiegevaar);

— Activiteitenbesluit milieubeheer (Besluit algemene regels voor inrichtingen milieubeheer);

— Wet milieubeheer;

— AMVB - Besluit van 27 oktober 2011 tot vaststelling van veiligheidseisen voor het transport van gas door buisleidingen bij een druk lager dan 16 bar (Besluit veiligheid lage druk gastransport);

— Bouwbesluit 2012

— Activiteitenregeling milieubeheer (Regeling algemene regels voor inrichtingen milieubeheer)

11.9.1.2 NSB National Functional standards

— NEN 7244-1:2003, Nederlandse editie op basis van NEN-EN 12007-1 — Gasvoorzieningsystemen – Leidingen voor maximale bedrijfsdruk tot en met 16 bar – Deel 1: Algemene functionele eisen (Dutch edition on base of NEN-EN 12007-1 — Gas supply systems - Pipelines for maximum operating pressure up to and including 16 bar - Part 1: General functional recommendations);

— Ontwerp NEN 7244-1: 2012, Gasvoorzieningssystemen – Leidingen voor maximale druk tot en met 16 bar - Deel 1: Algemene functionele aanbevelingen - Vertaalde editie van NEN-EN 12007-1 met Nederlandse Aanvullingen (Dutch edition on base of NEN-EN 12 007-1 — Gas supply systems -Pipelines for maximum operating pressure up to and including 16 bar -Part 1: General functional recommendations);

— NEN 7244-2:2004, Nederlandse editie op basis van NEN-EN 12007-2 — Gasvoorzieningsystemen – Leidingen voor maximale bedrijfsdruk tot en met 16 bar – Deel 2: Specifieke functionele eisen voor polyetheen (MOP tot en met 10 bar) (Dutch edition based on NEN-EN 12007-2 — Gas supply systems - Pipelines for maximum operating pressure up to and including 16 bar - Part 2: Specific functional requirements for polyethylene (MOP up to and including 10 bar));

— NEN 7244-3:2004, Nederlandse editie op basis van NEN-EN 12007-3 — Gasvoorzieningsystemen – Leidingen voor maximale bedrijfsdruk tot en met 16 bar – Deel 3: Specifieke functionele eisen voor staal (Dutch edition based on NEN-EN 12007-2 — Gas supply sustems - Pipelines for maximum operating pressure up to and including 16 bar - Part 2: Specific functional requirements for polyethylene (MOP up to and including 10 bar));

— NEN 7244-4:2004, Gasvoorzieningsystemen – Leidingen voor maximale bedrijfsdruk tot en met 16 bar – Deel 4: Specifieke functionele eisen voor nodulair gietijzeren leidingen met een maximale bedrijfsdruk van 8 bar (Gas supply systems - Pipelines for maximum operating pressure up to and including 16 bar - Part 6: Specific functional recommendations for ductile cast iron with a MOP of 8 bar);

— NEN 7244-5:2004, Gasvoorzieningsystemen – Leidingen voor maximale bedrijfsdruk tot en met 16 bar – Deel 5: Specifieke functionele eisen voor slagvaste PVC-leidingen met een maximale bedrijfsdruk van 200 mbar (Gas supply systems - Pipelines for maximum operating pressure up to and including 16 bar - Part 5: Specific functional recommendations for high impact PVC with a MOP of 200 mbar);

— NEN 7244-7:2005, Nederlandse editie op basis van NEN-EN 12327 — Gasvoorzieningsystemen – Leidingen voor maximale bedrijfsdruk tot en met 16 bar – Deel 7: Specifieke functionele eisen voor sterkte- en dichtheidsbeproeving en voor het in bedrijf en buiten bedrijf stellen van gasdistributieleidingen (Dutch edition on base of NEN-EN 12327 — Gas supply systems – Pipelines for maximum operating pressure up to and including 16 bar – Part 7: Specific functional requirements for strength- and tightness testing and for commissioning and decommissioning of gasdistribution pipelines);

— NEN 7244-7/A1:2009, Nederlandse editie op basis van NEN-EN 12327 — Gasvoorzieningsystemen – Leidingen voor maximale bedrijfsdruk tot en met 16 bar – Deel 7: Specifieke functionele eisen voor sterkte- en dichtheidsbeproeving en voor het in bedrijf en buiten bedrijf stellen van gasdistributieleidingen (Dutch edition on base of NEN-EN 12327 — Gas supply systems – Pipelines for maximum operating pressure up to and including 16 bar – Part 7: Specific functional requirements for strength- and tightness testing and for commissioning and decommissioning of gasdistribution pipelines);

— NEN 7244-9:2008, Gasvoorzieningsystemen – Leidingen voor maximale bedrijfsdruk tot en met 16 bar – Deel 9: Specifieke functionele eisen voor de afhandeling van gasmeldingen en periodiek gaslek zoeken (Gas supply systems - Pipelines for maximum operating pressure up to and including 16 bar - Part 9: Specific functional requirements for processing of reported gas leaks and gas leakage survey);

NEN 7244-2:2013 Ontw. nl, Nederlandse editie op basis van NEN-EN 12007-2 - Gasvoorzieningsystemen - Leidingen voor maximale druk tot en met 16 bar - Deel 2: Specifieke functionele eisen voor polyetheen (MOP tot en met 10 bar)) (Dutch edition based on NEN-EN 12007-2 — Gas supply systems - Pipelines for maximum operating pressure up to and including 16 bar - Part 2: Specific functional requirements for polyethylene (MOP up to and including 10 bar));

NEN 7244-4:2013 Ontw. nl, Gasvoorzieningsystemen - Leidingen voor maximale druk tot en met 16 bar - Deel 4: Specifieke functionele eisen voor nodulair gietijzeren leidingen met een maximale bedrijfsdruk van 8 bar (Gas supply systems - Pipelines for maximum operating pressure up to and including 16 bar - Part 6: Specific functional recommendations for ductile cast iron with a MOP of 8 bar);

NEN 7244-5:2013 Ontw. nl , Gasvoorzieningsystemen - Leidingen voor maximale druk tot en met 16 bar - Deel 5: Specifieke functionele eisen voor slagvaste PVC-leidingen met een maximale bedrijfsdruk van 200 mbar (Gas supply systems - Pipelines for maximum operating pressure up to and including 16 bar - Part 5: Specific functional recommendations for high impact PVC with a MOP of 200 mbar).

11.9.1.3 Technical rules – (Detailed) Code of practice

— NTA 8120:2014, Assetmanagement - Eisen aan een veiligheids-, kwaliteits- en capaciteitsmanagementsysteem voor het elektriciteits- en gasnetbeheer (Asset management -

Requirements for a safety, quality and capacity management system for electricity and gas network operations)

11.9.2 More restrictive requirements in Dutch legislation/regulations

11.9.2.1 General

No detailed specifications needed.

11.9.2.2 Clauses to note regarding EN 12327

No detailed specifcations needed.

11.10 Page for România (EN 12327)

11.10.1 Relevant Românian legislation/regulations for gas pipelines for pressure testing, commissioning and decommissioning procedures to which EN 12327 is applicable

11.10.1.1 National law/ Federal law

None.

11.10.1.2 NSB National Functional standards – ASRO

— SR EN 12327:2012**,** Infrastructuri de gaze. Încercări de presiune, proceduri de dare în exploatare şi scoatere din exploatare a reţelelor. Cerinţe funcţionale

11.10.1.3 Technical rules – (Detailed) Code of practice

— Norme tehnice pentru proiectarea şi execuţia conductelor de transport gaze naturale (**Technical norms for desing and execution natural gas** transmission **system)**

11.10.2 More restrictive requirements in Romanian legislation/ regulation

11.10.2.1 General

None

11.10.2.2 Clauses to note regarding EN 12327

None.

11.11 Page for Sweden (EN 12327)

11.11.1 Relevant Swedish legislation/regulations for pressure testing, commissioning and decommissioning procedures to which EN 12327 is applicable

11.11.1.1 National law/ Federal law

— [Regulations on Natural Gas MSBFS 2009:7] Naturgasföreskrifter MSBFS 2009:7 Clauses 10 kap 7§, 10 kap 8§

11.11.1.2 NSB National Functional standards

None.

11.11.1.3 Technical rules – (Detailed) Code of practice

The technical rules mentioned above are legislative requirements.

11.11.2 More restrictive requirements in Swedish legislation/ regulations

11.11.2.1 General

No specification

11.11.2.2 Clauses to note regarding EN 12327:2012

a) 4.1.8 have to be changed so that the strength test is at least 1.5 of MOP. See MSBFS 2009:7, clause 10 chapter 7.

b) 5.13 have to be changed so that re-commission may only take place after strength test and leak test. See MSBFS 2009:7 clause 10 chapter 8.

c) 5.13 have to be changed so that direct purging is deleted. See MSBFS 2009:7 clause 10 chapter 8.

11.12 Page for Spain (EN 12327)

11.12.1 Relevant Spanish legislation/regulations for pressure testing, commissioning and decommissioning procedures to which EN 12327 is applicable

11.12.1.1 National law/ Federal law

— Ley del Sector de Hidrocarburos (Ley 34/1998, de 7 de octubre) y sus modificaciones

— (Hydrocarbons Sector Law and its subsequent amendments)

The Regulations below are applicable to the whole country. The regions (Comunidades Autónomas) may have additional requirements.

— Reglamento General del Servicio Público de Gases Combustibles (Decreto 2913/1973 de 26 de octubre) (Gaseous Fuels Public Supply Service General Regulations)

— Reglamento de la actividad de distribución de gases licuados del petróleo (Decreto 1085/1992) (LPG Distribution Regulations)

— Real Decreto por el que se regula el acceso de terceros a las instalaciones gasistas y se establece un sistema económico integrado del sector de gas natural (Real Decreto 949/2001, de 3 de agosto) (Regulations on third party access to gas installations and establishment of an integrated economic system for the natural gas sector)

— Real Decreto por el que se regulan las actividades de transporte, distribución, comercialización, suministro y procedimientos de autorización de instalaciones de gas natural (Real Decreto 1434/2002, de 27 de diciembre) (Regulations on Transmisión, Distribution, Trading, and Supply activities, as well as permit granting procedures of natural gas infrastructures)

— Reglamento Técnico de Distribución y Utilización de Combustibles Gaseosos y sus instrucciones técnicas complementarias ICG 01 a 11 (Real Decreto 919/2006, de 28 de julio) (Gas Distribution and Utilization Technical Regulations)

  This “Reglamento” includes a number of applicable "Instrucciones Técnicas Complementarias" (Complementary Technical Instructions) or ITC:

— ITC-ICG 01 Instalaciones de distribución de combustibles gaseosos por canalización (Gas Distribution Installations)

— ITC-IGC 04 Plantas Satélite de gas natural licuado (LNG Satellite Plants)

— ITC-IGC 07 Instalaciones Receptoras de combustibles gaseosos (Gas Receiving Installations)

— ITC-IGC 09 Instaladores y Empresas Instaladoras (Gas Installers and Gas Installation Businesses)

— ITC-ICG 11 Relación de normas UNE de referencia (List of reference UNE Standards)

11.12.1.2 NSB National Functional standards

The following standards are declared mandatory by the Fuel Gas Mains and Services Regulations:

— UNE-EN 437, Gases de ensayo. Presiones de ensayo. Categorías de los aparatos (Test gases - Test pressures - Appliance categories);

— UNE 60302, Canalizaciones para combustibles gaseosos. Emplazamiento (Fuel Gas pipelines. Location);

— UNE 60305, Canalizaciones en acero para combustibles gaseosos. Zonas de seguridad y coeficientes de cálculo según el emplazamiento (Steel Pipelines for Fuel Gas. Safety Zones and Design Factors according to Location);

— UNE 60309, Canalizaciones para combustibles gaseosos. Espesores mínimos para tuberías de acero (Fuel Gas Pipelines. Minimum Wall Thicknesses for Steel Pipelines).

The following standards develop and have complementary requirements to the functional recommendations of EN 12007.

— UNE 60310, Canalizaciones de distribución de combustibles gaseosos con presión máxima de operación superior a 5 bar y hasta 16 bar. (Gas Supply Systems. Pipelines for maximum operating pressure greather than 5 bar and up to 16 bar);

— UNE 60311, Canalizaciones de distribución de combustibles gaseosos con presión máxima de operación hasta 5 bar. (Gas Supply Systems. Pipelines for maximum operating pressure up to 5 bar).

11.12.1.3 Technical rules – (Detailed) Code of practice

SEDIGAS recommendations (of the national gas sector):

— RS-D-01, Detección y clasificación de fugas de canalizaciones subterráneas de gas en servicio (Leak detection and classification in buried gas distribution networks in service);

— RS-D-02, Conservación y mantenimiento de las canalizaciones subterráneas de gas en servicio (Conservation and maintenance of buried gas distribution networks in service);

— RS-D-07, Puesta en servicio de una red de distribución de gas después de una interrupción de servicio en una zona (Commissioning of a gas distribution network after a service interruption in a zone);

— RS-D-08, Ubicación de las redes y acometidas de gas respecto a otros servicios, (Location of gas networks and service lines respect to other services);

— RS-S-02, Operativa de seguridad en roturas o afecciones con escape de gas en canalizaciones (Operational safety conditions in breaks or damages with gas leakage in pipelines);

— RS-S-04, Acciones preventivas para evitar daños que puedan ocasionar terceros en instalaciones de gas (Preventive actions in gas installations to avoid damage caused by third party interferences).

11.12.2 More restrictive requirements inSpanish legislation/ regulations

11.12.2.1 General

The minimum burial depth is set by UNE 60310 and UNE 60311.

UNE 60310 and UNE 60311 define distances to other utilities, both in parallel or in crossings.

The network leaktightness will be checked, at least, once every two years in urban areas and once every four years in rural areas. In addition, different kind of mandatory surveillances are defined for gas distribution mains with MOP > 5 bar (UNE 60310).

The cathodic protection devices shall be revised every three months.

11.12.2.2 Clauses to note regarding EN 12327

None.

11.13 Page for UK

The UK gas safety legislation does not lend itself to the detailed breakdown given by other countries. If any interested party needs to understand the UK safety system the references given supply the latest information from the source of authority.

The United Kingdom Safety Regulator for Industry and Commerce is the: *Health and Safety Executive.* The principle UK Health and Safety Legislation is the *Health and Safety at Work Act 1974, as amended*. This Act has many branches with detailed regulations for the various sectors of Industry and Commerce.

http://www.hse.gov.uk/legislation/hswa.htm

The various Licenses issued by OFGEM for UK Gas Transport, Storage and Gas Supply etc. have a clause to ensure that the Licensee operates safely and securely. The HSE has a special website for *Gas* and a section for *Gas Supply.* This site describes the principle regulations governing gas supply and provides the related *Regulations* and the *Advisory Codes of Practice*:-

http://www.hse.gov.uk/gas/supply/legislation.htm

The UK safety legislation is *goal setting* and the *HSE* has worked for many years with the UK gas industry through the *Institution of Gas Engineers and Managers* to develop more detailed technical standards for the various elements of the gas infrastructure. These cover a range of topics, e.g.:-

— Pipelines Safety Regulations;

— Pressure Systems Safety Regulations;

— Gas Safety (Management) Regulations;

— Gas Safety (Installation and Use) Regulations;

— Dangerous Substances and Explosive Atmospheres Regulations;

— Reporting of Injuries, Diseases and Dangerous Occurrences Regulations;

— Building Regulations;

— Health and Safety at Work etc. Act;

— Management of Health and Safety at Work Regulations;

— Pressure Equipment Regulations,

— Electricity at Work Regulations

The Full List of current IGEM standards and prices for January 2013 are at:-

http://www.igem.org.uk/media/227989/igem%20standards%20list%20january%202013.pdf

When the CEN TC 234 ENs were published first in 2000, IGEM brought its Standards into line with these ENs, e.g. as regards pressure range and the 16 bar limit for EN 1594 and EN 12007 series.

Under the UK Safety Legislation, Licensed gas transporters, distributors and storage operators etc. are subject to a *Safety Case Regime,* which requires specific approval of the detail in the *Safety Case* by the HSE before operations can commence. This detail includes technical requirements for the design, construction, testing commissioning and operation under both normal and emergency conditions. The *Safety Case* document also covers quality management processes to ensure safety and security of gas supply according to the approved Safety Case. For this purpose, many Licensed Operators of gas infrastructure have their own complete technical and safety management details documented fully as part of their *Safety Case*. This detail describes how their business intends to operate under its License in order to ensure safety of the public and of the workforce.

12 Relevant national legislation/ regulation for gas compression to which EN 12583 is applicable

12.1 Page for Austria (EN 12583)

12.1.1 Relevant Austrian legislation/regulations for gas compression to which EN 12583 is applicable

12.1.1.1 National law/ Federal law

— BGBl. I Nr. 107/2011 Gaswirtschaftsgesetz (National gas law)

— BGBl. I Nr. 38/1999 Mineralrohstoffgesetz (Mineral resource law)

— BGBl. II Nr.171/2012 Gas-Marktmodell-Verordnung 2012 (Natural gas market regulation)

— BGBl. II Nr. 172/2012 Gasnetzdienstleistungsqualitäts-Verordnung (Gasgrid service quality regulation)

— BGBl. II Nr. 309/2012 Gas-Systemnutzungsentgelte-Verordnung 2013 (Gas system usage fee regulation)

— BGBl. II Nr. 439/2011 Sonstige Transporte-Gas-Systemnutzungstarife Verordnung Novelle 2012 (Additional transport gas system usage regulation amendment 2012)

Source of supply:

Rechtsinformationssystem des Bundes (RIS)

www.ris.bka.gv.at

Energie-Control Austria

Rudolfsplatz 13a

A-1010 Wien

http://www.e-control.at/de/recht/bundesrecht/gasn

12.1.2 More restrictive requirements in Austrian legislation/regulation

12.1.2.1 General

No detailed specification needed.

12.1.3 Clauses to note regarding EN 12583:2014

No detailed specification needed.

12.2 Page for Finland (EN 12583)

12.2.1 Relevant Finnish legislation/regulations for gas compression to which EN 12583 is applicable

12.2.1.1 National law/ Federal law

— **Laki vaarallisten kemikaalien ja räjähteiden käsittelyn turvallisuudesta 390/2005** (Act on the Safe Handling and Storage of Dangerous Chemicals and Explosives (390/2005));

— **Valtioneuvoston asetus maakaasun käsittelyn turvallisuudesta 551/2009** (Government Decree on Natural Gas Safety);

— Valtioneuvoston asetus maakaasu-, nestekaasu- ja öljylämmityslaitteistojen asennus- ja huoltotoimintaa sekä maanalaisten öljysäiliöiden tarkastusta harjoittavien hyväksymisestä 558/2012 **(Government Decree on approval of installation and maintenance companies)**.

12.2.1.2 NSB National Functional standards

— SFS 2897 **Maakaasuputkisto. Painekoe** (Natural gas pipeline - Pressure test, 1987-05-18);

— SFS 5717 **Maakaasun siirtoputkiston sijoittaminensuurjännitejohdon tai -kytkinlaitoksen läheisyyteen** (Placing of the natural gas transmission pipeline close to a high-voltage line or substation, 1992-01-28).

12.2.1.3 Technical rules – (Detailed) Code of practice

— Maakaasukäsikirja, Suomen Kaasuyhdistys, Marraskuu 2010 (Natural gas - Codes of practise, Finnish Gas Association, November 2010)

12.2.2 More restrictive requirements in Finnish legislation/regulation

12.2.2.1 General

As a result of circumstances in Finland there is some restrictive legislation concerning the gas infrastructure. These regulations are stated in Annex 1 and Annex 2 in *Valtioneuvoston asetus maakaasun käsittelyn turvallisuudesta 551/2009* (Government Decree on Natural Gas Safety).

12.2.3 Clauses to note regarding EN 12583

— Annex 1 and 2 in Valtioneuvoston asetus maakaasun käsittelyn turvallisuudesta 551/2009 (Government Decree on Natural Gas Safety)

12.3 Page for France (EN 12583)

12.3.1 Relevant french legislation/regulations for gas compression to which EN 12583 (Stations de compression - Prescriptions fonctionnelles) is applicable

12.3.1.1 National law and regulations

— Loi n° 76-663 du 19 juillet 1976 relative aux Installations Classées pour la Protection de l'Environnement.

— Décret n° 99-1220 du 28 décembre 1999 modifiant la nomenclature des Installations Classées.

— Arrêté du 2 février 1998 relatif aux prélèvements et à la consommation d'eau ainsi qu'aux émissions de toute nature des ICPE.

— Arrêté du 02/02/1998 Prélèvements, consommation d'eau et émissions de toute nature (applicable à toute installation ICPE soumise à autorisation / utilisé pour la réadtion des arrêtés pref.)

— Arrêté du 29/07/05 fixant le formulaire du bordereau de suivi de déchets dangereux

— Décret du 30/05/05 relatif au contrôle des circuits de traitement des déchets

— Arrêté du 22 juin 1998 relatif aux réservoirs enterrés de liquides inflammables et à leurs équipements annexes.

— Arrêté du 2 février 1998 relatif aux prélèvements et à la consommation d'eau ainsi qu'aux émissions de toute nature des installations classées pour la protection de l'environnement soumises à autorisation

— Arrêté du 23 janvier 1997 relatif à la limitation des bruits émis dans l'environnement par les installations classées pour la protection de l'environnement

— Arrêté du 10 mai 1993 fixant les règles parasismiques applicables aux installations soumises à la législation sur les installations classées

— Arrêté et circulaire du 28 janvier 1993 concernant la protection contre la foudre de certaines installations classées

— Arrêté du 10 juillet 1990 modifié relatif à l'interdiction des rejets de certaines substances dans les eaux souterraines

— Arrêté du 31 mars 1980 relatif à la réglementation des installations électriques des établissements réglementés au titre de la législation sur les ICPE et susceptibles de présenter des risques d'explosion

Source of supply:

Direction des Journaux Officiels
26 rue Desaix
F - 75727 PARIS Cedex 15.

12.3.1.2 National standards

No national standards in this area.

12.3.2 More restrictive requirements in French legislation/regulation

12.3.2.1 General

No detailed specification needed.

12.3.3 Clauses to note regarding EN 12583

No detailed specification needed.

12.4 Page for Germany (EN 12583)

12.4.1 Relevant German legislation/regulations for gas compression to which EN 12583 is applicable

12.4.1.1 National law/Federal law

12.4.1.1.1 National law

— Gesetz über die Elektrizitäts- und Gasversorgung (Energiewirtschaftsgesetz - EnWG) vom 07. Juli 2005 (BGBl. I, S. 1970 (3621)), zuletzt geändert durch Art. 2 G v. (16. Januar 2012 (BGBI. I S. 74) (Energy Industry Act)

— Verordnung über Gashochdruckleitungen (Gashochdruckleitungsverordnung - GasHDrLtgV) 18.05.2011 (BGBl. I S. 928) (Ordinance on high pressure gas pipelines (High pressure gas pipeline ordinance - GasHDrLtgV)

— Bundes-Immissionsschutzgesetz (BImSchG) vom 26.09.2002 (BGBl. I S. 3830) zuletzt geändert durch Art. 1 G vom 23.10.2007 (BGBl. I S. 2470) (Federal Law on air pollution control)

— Vierte Verordnung zur Durchführung des Bundes-Immissionsschutzgesetzes (Verordnung über genehmigungsbedürftige Anlagen – 4. BImSchV)) vom 14.03.1997 (BGBl. I S. 504) zuletzt geändert durch Art. 3 G v. 23.10.2007 (BGBl. I S. 2470) (Fourth Decree for the implementation of the Federal Law on air pollution control - Decree on stations requiring official approval)

— Arbeitsschutzgesetz ASG (Occupational health and safety regulations)

— Arbeitsstättenverordnung ArbStättV (Work places ordinance)

— Verordnung über Sicherheit und Gesundheitsschutz bei der Bereitstellung von Arbeitsmitteln und deren Benutzung bei der Arbeit, über Sicherheit beim Betrieb überwachungsbedürftiger Anlagen und über die Organisation des betrieblichen Arbeitsschutzes (Betriebssicherheitsverordnung – Ordinance concerning the protection of safety and health in the provision of work equipment and its use at work, concerning safety when operating installations suject to monitoring and concerning the organisation of industrial safety and health at work (Ordinance on Industrial Safety and Health – BetrSichV)

— Verordnung zum Schutz vor Gefahrstoffen (Gefahrstoffverordnung – GefStoffV) (Ordinance to protect against hazardous materials – Hazardous materials ordinance)

— Vorschrift der Berufsgenossenschaft, BGV A1, "Allgemeine Vorschriften" (Regulations of professional association for occupational health and safety BGV A1, "General regulations")

— Vorschrift der Berufsgenossenschaft,BGV A3 "Elektrische Anlagen und Betriebsmittel" (Regulations of professional association for occupational health and safety "Electrical appliances/stations and means of production")

12.4.1.1.2 Law of the Federal States

— Bauordnungen der Länder (Construction ordinances of the German federal states)

Source of supply:

Bundesanzeiger Verlagsges. mbH Bonn
Bundesgesetzblatt
Postfach 13 20
D – 53003 Bonn
Germany

12.4.1.2 NSB National Functional standards

There are no national functional standards in addition to EN 12583.

In Germany, there exists an agreement between DVGW and DIN. Whilst the DIN is responsible for national product standards, the DVGW is responsible for the setting of functional technical rules.

All European standards, including functional standards, are published as DIN EN standards. DVGW technical rules are aligned to DIN/DIN EN standards, where applicable.

The DIN standards related to gas are taken into account by DVGW and are part of the so called DVGW Set of Codes of practice.

12.4.1.3 Technical rules – (Detailed) Code of practice

— G 496, Rohrleitungen in Verdichter- und Expansionsanlagen;

— DVGW G 497, Verdichteranlagen (Compressor stations);

— DVGW G 110, Ortsfeste Gaswarneinrichtungen (Stationary gas warning equipment)

— DVGW G 435, Konkretisierung der Anforderungen für MSR- Einrichtungen der DIN EN 954-1auf Verdichterstationen nach DIN EN 12583 und DVGW G497;

— DVGW G 440, Explosionsschutzdokument für Anlagen zur leitungsgebundenen Versorgung der Allgemeinheit mit Gas (Explosion protection document for plants and systems for public gas supply);

— DVGW G 442, Explosionsgefährdete Bereiche an Ausblaseöffnungen von Leitungen zur Atmosphäre an Gasanlagen (Hazardous areas at exhaust openings of vent lines at gas plants and systems);

— DVGW G 479, Planung, Errichtung und Betrieb von Gasanlagen in Hochwassergefährdungsbereichen (Design, construction and operation of gas plants and systems in flood hazardous areas);

— DVGW G 498, Durchleitungsdruckbehälter in Rohrleitungen und Anlagen zur leitungsgebundenen Versorgung der Allgemeinheit mit Gas (Gasversorgungsanlagen) (Non-storage pressure vessels in gas pipelines and systems for public gas supply);

— DVGW GW 22 Maßnahmen beim Bau und Betrieb von Rohrleitungen im Einflussbereich von Hochspannungs-Drehstromanlagen und Wechselstrom-Bahnanlagen.

12.4.1.4 Health and safety

— Berufsgenossenschaftliche Regeln für Sicherheit und Gesundheit bei der Arbeit (Health and safety rules of the professional association for occupational health and safety):

- BGR 104 "Regeln für die Sicherheit und Gesundheitsschutz bei der Arbeit - Explosionsschutzregeln (EX-RL)" (– "Explosion protection regulations")
- BGR 117-1 "Richtlinien für Arbeiten in Behältern und engen Räumen" (Guidelines for working in tanks and confined spaces"
- BGR 132 "Richtlinien zur Vermeidung von Zündgefahren infolge elektrostatischer Aufladung (Richtlinien "Statische Elektrizität“)" (Guidelines "Static electricity")
- BGR 134 "Regeln für die Sicherheit und Gesundheitsschutz bei der Arbeit – Einsatz von Feuerlöschanlagen mit sauerstoffverdrängenden Gasen" (Occupational safety and health regulations – fire-fighting systems with oxygen displacing gases)
- BGR 500 Kapitel 2-26 "Schweißen, Schneiden und verwandte Verfahren" (Welding, cutting and related procedures)
- BGR 500/Teil 2 Kapitel 2.31 "Arbeiten an Gasleitungen" (Part 2, clause 2.31, "Working on Gas pipeworks")
- BGR 500 Kapitel 2-39 "Anlagen für Gase der öffentlichen Gasversorgung" (Gas stations for the public gas supply)

- BGI 518 "Gaswarneinrichtungen für den Explosionsschutz – Einsatz und Betrieb" (Gas alarm systems for explosion protection – use and operation)
- ASR A1.3 „"Sicherheits- und Gesundheitsschutzkennzeichnung"
- TRBS 1112 Teil 1 "Explosionsgefährdungen bei und durch Instandhaltungsarbeiten - Beurteilungen und Schutzmaßnahmen"
- TRBS 2152 (TRGS 720) "Gefährliche explosionsfähige Atmosphäre – Allgemeines"
- TRBS 2152 Teil 1 (TRGS 721) "Gefährliche explosionsfähige Atmosphäre - Beurteilung der Explosionsgefährdung"
- TRBS 2152 Teil 2 (TRGS 722) "Vermeidung oder Einschränkung gefährlicher explosionsfähiger Atmosphäre"
- TRBS 2152 Teil 3 "Gefährliche explosionsfähige Atmosphäre - Vermeidung der Entzündung gefährlicher explosionsfähiger Atmosphäre"
- TRGS 555 "Betriebsanweisung und Information der Beschäftigten"

Source of supply:

Wirtschafts- und Verlagsgesellschaft Gas und Wasser mbh
Postfach 14 01 51
D – 53056 Bonn
Germany

12.4.2 More restrictive requirements in German legislation/regulation

12.4.2.1 General

None.

12.4.2.2 Clauses to note regarding EN 12583:2014

None.

12.5 Page for Greece (EN 12583)

12.5.1 Relevant Greek legislation/regulations for gas compression to which EN 12583 is applicable

12.5.1.1 National law/ Federal law

— Mimisterial Decision “Technical code for natural gas transmission systems with MOP over 16 bar” Governmental Gazette 603B/05.03.2012. “Τεχνικός Κανονισμός «Συστήματα μεταφοράς Φυσικού Αερίου με Μέγιστη Πίεση Λειτουργίας άνω των 16 bar”.

— Mimisterial Decision “Modifications on Technical code for natural gas transmission systems with MOP over 16 bar” Governmental Gazette 2101B/2012. “Τροποποίηση του 3/Α/οικ.4303/22-02-2012 Τεχνικού Κανονισμού «Συστήματα μεταφοράς Φυσικού Αερίου με Μέγιστη Πίεση Λειτουργίας άνω των 16 bar»”.

12.6 Page for Hungary (EN 12583)

12.6.1 Relevant Hungarian legislation/regulations for gas compression to which EN 12583 is applicable

12.6.1.1 National law/ Federal law

— **Law XL of 2008**: Natural Gas Supply (Gas Act)

— **Government Law Decree 19/2009 (I. 30.):** On the implementation of provisions of Law XL of 2008

12.6.1.2 NSB National Functional standards

The National Standardization Body of Hungary (MSZT) has adopted EN 12583 standard without any alterations.

12.6.1.3 Technical rules – (Detailed) Code of practice

None.

12.6.2 More restrictive requirements in Hungarian legislation/regulation

12.6.2.1 General

None.

12.6.3 Clauses to note regarding EN 12583

None.

12.7 Page for Ireland (EN 12583)

12.7.1 Relevant Irish legislation/regulations for gas compression to which EN 12583 is applicable

12.7.1.1 National law

— Safety, Health and Welfare at work Act 2005 (No.10 of 2005), as amended.

Source of supply:

Irish Statute Book (http://www.irishstatutebook.ie/)

12.7.1.2 NSB National standards

None.

12.7.2 More restrictive requirements in Irish legislation/regulation

12.7.2.1 General

None.

12.7.2.2 Clauses to note regarding EN 12583

None.

12.8 Page for Italy (EN 12583)

12.8.1 Relevant Italian legislation/regulations for gas compression to which EN 12583 is applicable

12.8.1.1 National law/ Federal law

— Decreto Ministeriale 17/04/08, Regola tecnica per la progettazione, costruzione, collaudo, esercizio e sorveglianza delle opere e degli impianti di trasporto del gas naturale con densità non superiore a 0,8 (Ministry Decree 17/04/08, Technical regulations for design, construction, testing, operation and surveillance of natural gas transport networks);

— Decreto Legislativo 9 aprile 2008, n. 81, Attuazione dell'articolo 1 della legge 3 agosto 2007, n. 123, in materia di tutela della salute e della sicurezza nei luoghi di lavoro (Legislative Decree 9 April 2008 no. 81, Implementation of Article 1 of the Law of 3 August 2007, n. 123, concerning the protection of health and safety in the workplace.);

— Decreto Ministeriale 01/12/2004, n. 329 Regolamento recante norme per la messa in servizio ed utilizzazione delle attrezzature a pressione e degli insiemi di cui all'articolo 19 del decreto legislativo 25 febbraio 2000, n. 93. (Ministerial Decree 01/12/2004, n. 329 Regulations for commissioning and use of pressure equipment and assemblies referred to in Article 19 of Legislative Decree 25 February 2000, n. 93);

— Decreto Legge 31 dicembre 2007, n. 248, convertito con modificazioni dalla Legge 28 febbraio 2008, n. 31 (Decree 31 december 2007, n. 248 converted with modifications by law 28 february 2008; n. 31 about seismic requirements).

12.8.1.2 NSB National Functional standards

No specific national standards exist. Ministry Decrees 16/04/08 and 17/04/08 considers EN 12583 as relevant.

12.8.1.3 Technical rules – (Detailed) Code of practice

The technical rules when issued by ministerial decree are compulsory.

12.8.2 More restrictive requirements in Italian legislation/regulation

12.8.2.1 General

No detailed specification needed.

12.8.2.2 Clauses to note regarding EN 12583:2014

No detailed specification needed.

12.9 Page for the Netherlands (EN 12583)

12.9.1 Relevant Dutch legislation/regulations for gas compression to which EN 12583 is applicable

12.9.1.1 National law/ Federal law

— Besluit van 27 mei 2004, houdende mileiukwaliteitseisen voor externe veiligheid van inrichtingen milieubeheer (Besluit externe veiligheid inrichtingen)

12.9.1.2 NSB National Functional standards

None.

12.9.1.3 Technical rules – (Detailed) Code of practice

None.

12.9.2 More restrictive requirements in Dutch legislation/regulation

12.9.2.1 General

No detailed specification needed.

12.9.2.2 Clauses to note regarding EN 12583:2014

No detailed specification needed.

12.10 Page for Spain (EN 12583)

12.10.1 Relevant Spanish legislation/regulations for gas compression to which EN 12583 is applicable

12.10.1.1 National law/ Federal law

— Ley del Sector de Hidrocarburos (Ley 34/1998, de 7 de octubre) y sus modificaciones (Hydrocarbons Sector Law and its subsequent amendments).

The Regulations below are applicable to the whole country. The regions (Comunidades Autónomas) may have additional requirements.

— Reglamento General del Servicio Público de Gases Combustibles (Decreto 2913/1973 de 26 de octubre) (Gaseous Fuels Public Supply Service General Regulations) (Regulations on Transmision, Distribution, Trading, and Supply activities, as well as permit granting procedures of natural gas infrastructures);

— Reglamento de Redes y Acometidas de Combustibles Gaseosos (Órdenes de 18 de Noviembre de 1974, 26 de Octubre de 1983 y 9 de Marzo de 1994) (Fuel Gas Mains and Services Regulations);

— ITC-MIG-R 8 Estaciones de compression (Compressor Stations).

12.10.1.2 NSB National Functional standards

None.

12.10.1.3 Technical rules – (Detailed) Code of practice

None.

12.10.2 More restrictive requirements in Spanish legislation/regulation

12.10.2.1 General

No detailed specification is needed.

12.10.2.2 Clauses to note regarding EN 12583:2014

No detailed specification is needed.

12.11 Page for UK

The UK gas safety legislation does not lend itself to the detailed breakdown given by other countries. If any interested party needs to understand the UK safety system the references given supply the latest information from the source of authority.

The United Kingdom Safety Regulator for Industry and Commerce is the: *Health and Safety Executive.* The principle UK Health and Safety Legislation is the *Health and Safety at Work Act 1974, as amended*. This Act has many branches with detailed regulations for the various sectors of Industry and Commerce.

http://www.hse.gov.uk/legislation/hswa.htm

The various Licenses issued by OFGEM for UK Gas Transport, Storage and Gas Supply etc. have a clause to ensure that the Licensee operates safely and securely. The HSE has a special website for *Gas* and a section for *Gas Supply.* This site describes the principle regulations governing gas supply and provides the related *Regulations* and the *Advisory Codes of Practice*:-

http://www.hse.gov.uk/gas/supply/legislation.htm

The UK safety legislation is *goal setting* and the *HSE* has worked for many years with the UK gas industry through the *Institution of Gas Engineers and Managers* to develop more detailed technical standards for the various elements of the gas infrastructure. These cover a range of topics, e.g.:-

— Pipelines Safety Regulations;

— Pressure Systems Safety Regulations;

— Gas Safety (Management) Regulations;

— Gas Safety (Installation and Use) Regulations;

— Dangerous Substances and Explosive Atmospheres Regulations;

— Reporting of Injuries, Diseases and Dangerous Occurrences Regulations;

— Building Regulations;

— Health and Safety at Work etc. Act;

— Management of Health and Safety at Work Regulations;

— Pressure Equipment Regulations,

— Electricity at Work Regulations

The Full List of current IGEM standards and prices for January 2013 are at:-

http://www.igem.org.uk/media/227989/igem%20standards%20list%20january%202013.pdf

When the CEN TC 234 ENs were published first in 2000, IGEM brought its Standards into line with these ENs, e.g. as regards pressure range and the 16 bar limit for EN 1594 and EN 12007 series.

Under the UK Safety Legislation, Licensed gas transporters, distributors and storage operators etc. are subject to a *Safety Case Regime,* which requires specific approval of the detail in the *Safety Case* by the HSE before operations can commence. This detail includes technical requirements for the design, construction, testing commissioning and operation under both normal and emergency conditions. The *Safety Case* document also covers quality management processes to ensure safety and security of gas supply according to the approved Safety Case. For this purpose, many Licensed Operators of gas infrastructure have their own complete technical and safety management details documented fully as part of their *Safety Case*. This detail describes how their business intends to operate under its License in order to ensure safety of the public and of the workforce.

13 Relevant national legislation/ regulation for welding of steel pipework to which EN 12732 is applicable

13.1 Page for Austria (EN 12732)

13.1.1 Relevant Austrian legislation/regulations for welding of steel pipework to which EN 12732 is applicable

13.1.1.1 National law/ Federal law

— BGBl. I Nr. 107/2011, Gaswirtschaftsgesetz (National gas law);

— BGBl. II Nr.171/2012, Gas-Marktmodell-Verordnung 2012 (Natural gas market regulation);

— BGBl. II Nr. 172/2012, Gasnetzdienstleistungsqualitäts-Verordnung (Gasgrid service quality regulation);

— BGBl. II Nr. 309/2012, Gas-Systemnutzungsentgelte-Verordnung 2013 (Gas system usage fee regulation);

— BGBl. II Nr. 439/2011, Sonstige Transporte-Gas-Systemnutzungstarife Verordnung Novelle 2012 (Additional transport gas system usage regulation amendment 2012);

Source of supply:

Rechtsinformationssystem des Bundes (RIS)

www.ris.bka.gv.at

Energie-Control Austria

Rudolfsplatz 13a

A-1010 Wien

http://www.e-control.at/de/recht/bundesrecht/gas

13.1.1.2 NSB National Functional Standards

None.

13.1.1.3 Technical rules – (Detailed) Code of practice

— ÖVGW G E100, Erdgasleitungen (Natural gas pipelines);

— ÖVGW G E120, Erdgasleitungen aus Stahl (Natural gas pipelines made of steel);

— ÖVGW G O310, Personalqualifikation, Aus- und Weiterbildung (Personnel qualification, training and further education).

Source of supply:
Österreichische Vereinigung für das Gas- und Wasserfach
Schubertring 14
1010 Wien
Austria

www.ovgw.at

13.1.2 More restrictive requirements in Austrian legislation/regulations

13.1.2.1 General

More detailed requirements are specified in the above mentioned technical rules.

13.1.2.2 Clauses to note regarding EN 12732

13.2 Page for Finland (EN 12732)

13.2.1 Relevant Finnish legislation/regulations for welding of steel pipework to which EN 12732 is applicable

13.2.1.1 National law/ Federal law

— **Laki vaarallisten kemikaalien ja räjähteiden käsittelyn turvallisuudesta 390/2005** (Act on the Safe Handling and Storage of Dangerous Chemicals and Explosives (390/2005));

— **Valtioneuvoston asetus maakaasun käsittelyn turvallisuudesta 551/2009** (Government Decree on Natural Gas Safety).

13.2.1.2 NSB National Functional Standards

— SFS 2897 **Maakaasuputkisto. Painekoe** (Natural gas pipeline - Pressure test, 1987-05-18)

— SFS 5717 **Maakaasun siirtoputkiston sijoittaminensuurjännitejohdon tai -kytkinlaitoksen läheisyyteen** (Placing of the natural gas transmission pipeline close to a high-voltage line or substation, 1992-01-28)

13.2.1.3 Technical rules – (Detailed) Code of practice

— **Maakaasukäsikirja, Suomen Kaasuyhdistys, Marraskuu 2010** (Natural gas - Codes of practise, Finnish Gas Association, November 2010)

These codes of practice include additional useful information.

13.2.2 More restrictive requirements in Finnish legislation/regulations

13.2.2.1 General

As a result of circumstances in Finland there is some restrictive legislation concerning the gas infrastructure. These regulations are stated in annex 1 and annex 2 in *Valtioneuvoston asetus maakaasun käsittelyn turvallisuudesta 551/2009* (Government Decree on Natural Gas Safety).

13.2.2.2 Clauses to note regarding EN 12732

— Annex 1 in Valtioneuvoston asetus maakaasun käsittelyn turvallisuudesta 551/2009 (Government Decree on Natural Gas Safety)

13.3 Page for France (EN 12732)

13.3.1 Relevant French legislation/re gulations for welding of steel pipework to which EN 12732 (Soudage des tuyauteries en acier) is applicable

13.3.1.1 National law

— Arrêté du 28 janvier 1981 relatif à la teneur en soufre et composés sulfurés des gaz naturels transportés par canalisations de transport

— Décret n°85-1108 du 15 octobre 1985 relatif au régime des transports de gaz combustibles par canalisations (article 36 abrogé par le décret 91-1147 du 14 octobre 1991), modifié par le décret n°95-494 du 25 avril 1995, et le décret n°2003-944 du 3 octobre 2003.

— Arrêté du 13 juillet 2000 modifié portant règlement de sécurité de la distribution de gaz combustible par canalisations modifié par l'arrêté du 29 janvier 2008.

— Décret n° 2004-555 du 15 juin 2004 relatif aux prescriptions techniques applicables aux canalisations et raccordements des installations de transport, de distribution et de stockage de gaz

— Arrêté du 5 mars 2014 portant règlement de sécurité des canalisations de transport de gaz combustibles, d'hydrocarbures liquides ou liquéfiés et de produits chimiques

— Arrêté du 15 février 2012 modifié relatif à l'exécution de travaux à proximité des réseaux.

Source of supply:

Direction des Journaux Officiels
26 rue Desaix
F - 75727 PARIS Cedex 15.

13.3.1.2 Detailed codes of practice

Recommended codes of practice concerning safety are the following:

— Guide GESIP n°2006/02: Mise en œuvre d'un Systéme d'Information Géographique

— Guide GESIP n°2007/01: Méthodologie pour la réalisation d'un plan de surveillance et d'intervention sur une canalisation de transport

— Guide GESIP n°2008/01: Guide méthodologique pour la réalisation d'une étude de sécurité concernant une canalisation de transport

Recommended codes of practice concerning design and construction are the following:

— Guide GESIP n°2007/02: Conditions de pose du dispositif avertisseur et mesures de substitution applicables

— Guide GESIP n°2006/04: Pose de canalisation à l'air libre

— Guide GESIP n°2006/05: Profondeurs d'enfouissement et les modalites particulieres de pose et de protection de canalisation a retenir en cas de difficultes techniques

— Guide GESIP n°2007/06: Epreuve initiale avant mise en service

— Guide GESIP n°20007/07: Accessoires non standards hors du champ du décret n°1046 d'application de la directive 97/23/ec

— Guide GESIP n°2008/02: Canalisations de transport: dispositions compensatoires

— Guide GESIP n°2010/01: Canalisations de surface projetée au sol ne dépassant pas 500 m2

Recommended codes of practice concerning maintenance are the following:

— Guides GESIP n° 2007/04 (méthodologie) et 2007/05 (modes opératoires), Surveillance, maintenance et réparations des canalisations de transport;

— Guide GESIP n°2006/03, Dispositions techniques relatives à l'arrêt temporaire ou définitif d'exploitation ou au transfert d'usage d''une canalisation de gaz.

Recommended codes of practice concerning normative references are the following:

— Document GESIP rapport n° 2007/09: Normes canalisations

Source of supply:
GESIP : 22, rue du Pont Neuf
BP 2722, 75027 Paris cedex 01 France

13.3.2 More restrictive requirements in French legislation/regulations

13.3.2.1 General

There is no contradiction between French regulation and the standard EN 12732.

13.3.2.2 Clauses to note EN 12732

None.

13.4 Page for Germany (EN 12732)

13.4.1 Relevant German legislation/regulations for welding of steel pipework to which EN 12732 is applicable

13.4.1.1 National law/ Federal law

— Gesetz über die Elektrizitäts- und Gasversorgung (Energiewirtschaftsgesetz - EnWG) vom 07. Juli 2005 (BGBl. I, S. 1970 (3621)), zuletzt geändert durch Art. 2 G v. (16. Januar 2012 (BGBl. I S. 74) (Energy Industry Act);

— Verordnung über Gashochdruckleitungen (Gashochdruckleitungsverordnung - GasHDrLtgV) 18.05.2011 (BGBl. I S. 928) (Ordinance on high pressure gas pipelines (High pressure gas pipeline ordinance - GasHDrLtgV);

— Verordnung zum Schutz vor Gefahrstoffen (Gefahrstoffverordnung – GefStoffV) (Ordinance to protect against hazardous materials – Hazardous materials ordinance);

— Vorschriften der Berufsgenossenschaft, BGV für Sicherheit und Gesundheit bei der Arbeit (Health and safety regulations of the professional association for occupational health and safety on safety and health at work):

— BGV A1, "Allgemeine Vorschriften" (, BGV A1, "General regulations"),

— BGV C 22 "Bauarbeiten" (Construction works).

Source of supply:

Bundesanzeiger Verlagsges. mbH Bonn
Bundesgesetzblatt
Postfach 13 20
D – 53003 Bonn
Germany

13.4.1.2 NSB National Functional Standards

There are no national functional standards in addition to EN 12732.

In Germany, there exists an agreement between DVGW and DIN. Whilst the DIN is responsible for national product standards, the DVGW is responsible for the setting of functional technical rules.

All European standards, including the functional standards, are published as DIN EN standards. DVGW technical rules are aligned to DIN/DIN EN standards, where applicable.

The DIN standards related to gas are taken into account by DVGW and are part of the so called DVGW Set of Codes of practice.

13.4.1.3 Technical rules – (Detailed) Code of practice

— DVGW-Arbeitsblatt GW 350 "Schweißverbindungen an Rohrleitungen aus Stahl in der Gas- und Wasserversorgung – Herstellung, Prüfung und Bewertung" (Welding joints for steel pipework in gas and water supply – production, testing and assessment)

Source of supply:

Wirtschafts- und Verlagsgesellschaft Gas und Wasser mbh

Postfach 14 01 51

D – 53056 Bonn

Germany

13.4.1.4 Health and safety

— Berufsgenossenschaftliche Regeln für Sicherheit und Gesundheit bei der Arbeit (Rules of professional association for occupational health and safety at work:

  — BGR 500 Abschnitt 2.26 "Schweißen, Schneiden und verwandte Verfahren" (Welding, cutting and related procedures);

  — BGR 500/Teil 2 Kapitel 2.31 "Arbeiten an Gasleitungen" (Regulations of professional association for occupational health and safety at work, Part 2, clause 2.31, "Working on Gas pipeworks");

  — BGR 500 Abschnitt 2.39 "Anlagen für Gase der öffentlichen Gasversorgung" (Gas stations for the public gas supply);

— TRGS 528 "Schweißtechnische Arbeiten" (Welding works).

Source of supply:

For TRBS and TRGS: BauA –
Bundesanstalt für Arbeitsschutz und Arbeitsmedizin
www.baua.de

For BGV and BGR: DGUV –
Deutsche Gesetzliche Unfallversicherung
www.dguv.de

13.4.2 More restrictive requirements in German legislation/regulations

13.4.2.1 General

More detailed requirements are specified in Federal Law and the above mentioned codes of practice.

13.4.2.2 Clauses to note regarding EN 12732

More detailed requirements are specified in Federal Law and the above mentioned codes of practice.

13.5 Page for Greece (EN 12732)

13.5.1 Relevant Greek legislation/regulations for welding of steel pipework to which EN 12732 is applicable

13.5.1.1 National law/ Federal law

— Mimisterial Decision “Technical code for natural gas transmission systems with MOP over 16 bar” Governmental Gazette 603B/05.03.2012 “Τεχνικός Κανονισμός «Συστήματα μεταφοράς Φυσικού Αερίου με Μέγιστη Πίεση Λειτουργίας άνω των 16 bar”;

— Mimisterial Decision “Modifications on Technical code for natural gas transmission systems with MOP over 16 bar” Governmental Gazette 2101B/2012 “Τροποποίηση του 3/Α/οικ.4303/22-02-2012 Τεχνικού Κανονισμού «Συστήματα μεταφοράς Φυσικού Αερίου με Μέγιστη Πίεση Λειτουργίας άνω των 16 bar»”.

13.6 Page for Hungary

13.6.1 Relevant Hungarian legislation/regulations for welding of gas pipework to which EN 12732 is applicable

13.6.1.1 National law/ Federal law

— **Law XL of 2008**: Natural Gas Supply (Gas Act)

— **Government Law Decree 19/2009 (I. 30.)**: On the implementation of provisions of Law XL of 2008

— **GKM (Ministry of Economy and Transport) Decree 79/2005. (X. 11.)**: Safety requirements for hydrocarbon transportation pipelines and publishing the safety regulations for hydrocarbon transportation pipelines

— **11/2004. (II. 13.) GKM rendelet** a gáz csatlakozó vezetékekre és fogyasztói berendezésekre vonatkozó műszaki-biztonsági előírásokról (GKM (Ministry of Economy and Transport) Decree 11/2004.))

13.6.1.2 NSB National Functional Standards

The National Standardization Body of Hungary (MSZT) has adopted the above-mentioned EN standards without any alterations.

13.6.1.3 Technical rules – (Detailed) Code of practice

None.

13.6.2 More restrictive requirements in Hungarian legislation/regulations

13.6.2.1 General

None.

13.6.2.2 Clauses to note regarding EN 12732

None.

13.7 Page for Ireland (EN 12732)

13.7.1 Relevant Irish legislation/regulations for welding of gas pipework to which EN 12732 is applicable

13.7.1.1 National law

13.7.1.1.1 Energy

— Energy (Miscellaneous Provisions) Act 2006;

— Gas Act 1976 (No. 30 of 1976);

— S.I. No. 283 of 1987. (Gas [amendment] act, [section 2 order 1987]).

— S.I. No. 196 of 2003. (Gas (Amendment) Act 1987 (section 2) (Distribution) Order 2003

Source of supply:

Irish Statute Book (http://www.irishstatutebook.ie/)

13.7.1.1.2 Health and safety

— Safety, Health and Welfare at work Act 2005 (No.10 of 2005), as amended.

Source of supply:

Irish Statute Book (http://www.irishstatutebook.ie/)

13.7.1.2 NSB National Standards

None.

13.7.2 More restrictive requirements in Ireland legislation/regulations

13.7.2.1 General

None.

13.7.2.2 Clauses to note regarding EN 12732

None.

13.8 Page for Italy (EN 12732)

13.8.1 Relevant Italian legislation/regulations for gas pipework to which EN 12732 is applicable

13.8.1.1 National law/ Federal law

— Decreto Ministeriale 17/04/08, Regola tecnica per la progettazione, costruzione, collaudo, esercizio e sorveglianza delle opere e degli impianti di trasporto del gas naturale con densità non superiore a 0,8 (Ministry Decree 17/04/08 – Technical regulations for design , construction, testing, operation and surveillance of natural gas transport networks),

— Decreto Legislativo 9 aprile 2008, n. 81, Attuazione dell'articolo 1 della legge 3 agosto 2007, n. 123, in materia di tutela della salute e della sicurezza nei luoghi di lavoro (Legislative Decree 9 April 2008 no. 81, Implementation of Article 1 of the Law of 3 August 2007, n. 123, concerning the protection of health and safety in the workplace.),

— Decreto Ministeriale 16/04/08, Regola tecnica per la progettazione, costruzione, collaudo, esercizio e sorveglianza delle opere e dei sistemi di distribuzione e di linee dirette del gas naturale con densità non superiore a 0,8. (Ministry Decree 16/04/08 – Technical regulations for design, construction, testing, operation and surveillance of natural gas distribution networks).

13.8.1.2 NSB National Functional Standards

No national specific standards exist. Ministry Decrees 16/04/08 and 17/04/08 consider EN 12732 as relevant.

13.8.1.3 Technical rules – (Detailed) Code of practice

The technical rules when issued by ministerial decree are compulsory. The directives issued by Regulatory Authority for Electricity and Gas (Aeeg) are compulsory.

13.8.2 More restrictive requirements in Italian legislation/regulations

13.8.2.1 General

No detailed specification needed.

13.8.2.2 Clauses to note regarding EN 12732

No detailed specification needed.

13.9 Page for the Netherlands (EN 12372)

13.9.1 Relevant Dutch legislation/regulations for welding of gas pipework to which EN 12732 is applicable

13.9.1.1 National law/ Federal law

— Besluit van 28 november 2006, houdende regels met betrekking tot de registratie van gegevens externe veiligheid inrichtingen, transportroutes en buisleidingen (Registratiebesluit externe veiligheid);

— Besluit van 27 mei 2004, houdende milieukwaliteitseisen voor externe veiligheid van inrichtingen milieubeheer (Besluit externe veiligheid inrichtingen);

— Besluit van 24 juli 2010, houdende milieukwaliteitseisen externe veiligheid voor het vervoer van gevaarlijke stoffen door buisleidingen (Besluit externe veiligheid buisleidingen);

— Wet milieubeheer;

— Wet Informatie-uitwisseling Ondergrondse Netten (WION; document uitgegeven door de Rijksoverheid, Den Haag.;

— BESLUIT van 6 december 2002, houdende regels ter uitvoering van de Mijnbouwwet (Mijnbouwbesluit);

— GASWET, WET van 22 juni 2000, houdende regels omtrent het transport en de levering van gas (Gas Act 2000 (Management on quality aspects of gas distribution systems));

— Wet van 3 juli 1986, houdende regelen inzake bescherming van de bodem (Wet bodembescherming);

— Wet van 6 november 2008, houdende regels inzake een vergunningstelsel met betrekking tot activiteiten die van invloed zijn op de fysieke leefomgeving en inzake handhaving van regelingen op het gebied van de fysieke leefomgeving (Wet algemene bepalingen omgevingsrecht).

13.9.1.2 NSB National Functional Standards

— NEN 3650-1:2012, Eisen voor buisleidingsystemen - Deel 1:Algemene eisen (Requirements for pipeline systems - Part 1:General requirements);

— NEN 3650-2:2012, Eisen voor buisleidingsystemen - Deel 2:Aanvullende eisen voor leidingen van staal (Requirements for pipeline systems - Part 2:Additional specifications for steel pipelines);

— NEN 3650-3:2012, Eisen voor buisleidingsystemen - Deel 3:Aanvullende eisen voor leidingen van kunststof (Requirements for pipeline systems - Part 3:Additional specifications for plastic pipelines);

— NEN 3650-4:2012, Eisen voor buisleidingsystemen - Deel 4:Aanvullende eisen voor leidingen van beton (Requirements for pipeline systems - Part 4:Additional specifications for concrete pipelines);

— NEN 3650-5:2012, Eisen voor buisleidingsystemen - Deel 5:Aanvullende eisen voor leidingen van gietijzer (Requirements for pipeline systems - Part 5:Additional specifications for cast iron pipelines);

— NEN 3651:2012, Aanvullende eisen voor buisleidingen in of nabij belangrijke waterstaatswerken (Additional requirements for pipelines in or nearby important public works);

— NEN 3653;2009, Methoden voor de vaststelling van acceptatiecriteria voor defecten in rondlassen van pijpleidingen (Methods for the determination of NDE acceptance criteria for defects in pipeline girth welds).

13.9.1.3 Technical rules – (Detailed) Code of practice

— NTA 8000:2009, Specificatie voor een risicomanagementsysteem (RMS) voor risico's van buisleidingsystemen voor het transport van gevaarlijke stoffen in de beheerfase - Specification of a Risk Management System (RMS) for pipeline systems for the transport of hazardous substances during operations;

— NPR 3659:1996/A1:2003/C1:2006, Ondergrondse pijpleidingen - Grondslagen voor de sterkteberekening (Underground pipelines - Basic principles for strength calculation).

13.9.2 More restrictive requirements in Dutch legislation/regulations

13.9.2.1 General

No detailed specifications needed.

13.9.2.2 Clauses to note regarding EN 12732

No detailed specifications needed.

13.10 Page for România (EN 12732)

13.10.1 Relevant Românian legislation/regulations for welding of gas pipework to which EN 12732 is applicable

13.10.1.1 National law/ Federal law

None.

13.10.1.2 NSB National Functional Standards – ASRO

— SR EN 12732:2001**,** Sisteme de alimentare cu gaz. Sudarea conductelor de oţel. Prescripţii funcţionale

13.10.1.3 Technical rules – (Detailed) Code of practice

— Norme tehnice pentru proiectarea şi execuţia conductelor de transport gaze naturale (**Technical norms for desing and execution natural gas transmission system)**

13.10.2 More restrictive requirements in Romanian legislation/regulations

13.10.2.1 General

None.

13.10.2.2 Clauses to note regarding EN 12732

None.

13.11 Page for UK

The UK gas safety legislation does not lend itself to the detailed breakdown given by other countries. If any interested party needs to understand the UK safety system the references given supply the latest information from the source of authority.

The United Kingdom Safety Regulator for Industry and Commerce is the: *Health and Safety Executive.* The principle UK Health and Safety Legislation is the *Health and Safety at Work Act 1974, as amended*. This Act has many branches with detailed regulations for the various sectors of Industry and Commerce.

http://www.hse.gov.uk/legislation/hswa.htm

The various Licenses issued by OFGEM for UK Gas Transport, Storage and Gas Supply etc. have a clause to ensure that the Licensee operates safely and securely. The HSE has a special website for *Gas* and a section for *Gas Supply.* This site describes the principle regulations governing gas supply and provides the related *Regulations* and the *Advisory Codes of Practice*:-

http://www.hse.gov.uk/gas/supply/legislation.htm

The UK safety legislation is *goal setting* and the *HSE* has worked for many years with the UK gas industry through the *Institution of Gas Engineers and Managers* to develop more detailed technical standards for the various elements of the gas infrastructure. These cover a range of topics, e.g.:-

— Pipelines Safety Regulations;

— Pressure Systems Safety Regulations;

— Gas Safety (Management) Regulations;

— Gas Safety (Installation and Use) Regulations;

— Dangerous Substances and Explosive Atmospheres Regulations;

— Reporting of Injuries, Diseases and Dangerous Occurrences Regulations;

— Building Regulations;

— Health and Safety at Work etc. Act;

— Management of Health and Safety at Work Regulations;

— Pressure Equipment Regulations,

— Electricity at Work Regulations

The Full List of current IGEM standards and prices for January 2013 are at:-

http://www.igem.org.uk/media/227989/igem%20standards%20list%20january%202013.pdf

When the CEN TC 234 ENs were published first in 2000, IGEM brought its Standards into line with these ENs, e.g. as regards pressure range and the 16 bar limit for EN 1594 and EN 12007 series.

Under the UK Safety Legislation, Licensed gas transporters, distributors and storage operators etc. are subject to a *Safety Case Regime,* which requires specific approval of the detail in the *Safety Case* by the HSE before operations can commence. This detail includes technical requirements for the design, construction, testing commissioning and operation under both normal and emergency conditions. The *Safety Case* document also covers quality management processes to ensure safety and security of gas supply according to the approved Safety Case. For this purpose, many Licensed Operators of gas infrastructure have their own complete technical and safety management details documented fully as part of their *Safety Case*. This detail describes how their business intends to operate under its License in order to ensure safety of the public and of the workforce.

14 Relevant national legislation/ regulation and standards for industrial piping over 0,5 bar and gas installation and industrial piping over 5 bar to which EN 15001-1 and/or EN 15001-2 are applicable

14.1 General

NOTE For gas installations in buildings with maximum operating pressures less than and equal to 5 bar, consult EN 1775 (Clause 4).

14.2 Page for Austria (EN 15001-1 and EN 15001-2)

14.2.1 Relevant Austrian legislations/regulations for industrial gas piping and gas installation to which EN 15001-1 and EN 15001-2 are applicable

14.2.1.1 National law/ Federal law

— BGBl. Nr. 211/1992 Kesselgesetz (Vessel law)

— BGBl. II Nr. 426/1999 Druckgeräteverordnung (Pressure equipment regulation)

— BGBl. II Nr. 420/2004 Druckgeräteüberwachungsverordnung (Pressure equipment surveillance regulation)

Source of supply:

Rechtsinformationssystem des Bundes (RIS)

www.ris.bka.gv.at

14.2.1.2 NSB National Functional standards

None.

14.2.1.3 Technical rules – (Detailed) Code of practice

— ÖVGW G 6, Gas-Inneninstallationen für Betriebsdrücke über 100 mbar bis einschließlich 5 bar (Gas installations inside buildings for operating pressures above 100 mbar up to 5 bar);

— ÖVGW G 10, Technische Richtlinie für Betrieb und Instandhaltung von Gasanlagen (Technical rules for operation and maintenance of gas installations);

— ÖVGW G 3-1, Gasanlagen für Gewerbe und Industrie (Gasinstallations für handycraft and industry).

Source of supply:

Österreichische Vereinigung für das Gas- und Wasserfach
Schubertring 14
1010 Wien
Austria

www.ovgw.at

14.2.2 More restrictive requirements in Austrian legislation/regulations

14.2.2.1 General

More detailed requirements are specified in the above mentioned technical rules. .

14.2.2.2 Clauses to note regarding EN 15001-1 and EN 15001-2

None.

14.3 Page for Finland (EN 15001-1 and EN 15001-2)

14.3.1 Relevant Finnish legislations/regulations for industrial gas piping and gas installation to which EN 15001-1 and EN 15001-2 are applicable

14.3.1.1 National law/ Federal law

— Laki vaarallisten kemikaalien ja räjähteiden käsittelyn turvallisuudesta 390/2005 (Act on the Safe Handling and Storage of Dangerous Chemicals and Explosives (390/2005));

— Valtioneuvoston asetus maakaasun käsittelyn turvallisuudesta 551/2009 (Government Decree on Natural Gas Safety);

— Valtioneuvoston asetus maakaasu-, nestekaasu- ja öljylämmityslaitteistojen asennus- ja huoltotoimintaa sekä maanalaisten öljysäiliöiden tarkastusta harjoittavien hyväksymisestä 558/2012 (Government Decree on approval of installation and maintenance companies).

14.3.1.2 NSB National Functional standards

— SFS 2897 Maakaasuputkisto. Painekoe (Natural gas pipeline - Pressure test, 1987-05-18)

14.3.1.3 Technical rules – (Detailed) Code of practice

— Maakaasukäsikirja, Suomen Kaasuyhdistys, Marraskuu 2010 (Natural gas - Codes of practise, Finnish Gas Association, November 2010).

These codes of practice include additional useful information.

14.3.2 More restrictive requirements in Finnish legislation/regulations

14.3.2.1 General

As a result of circumstances in Finland there is some restrictive legislation concerning the gas infrastructure. These regulations are stated in annex 1 and annex 2 in Valtioneuvoston asetus maakaasun käsittelyn turvallisuudesta 551/2009 (Government Decree on Natural Gas Safety).

14.3.2.2 Clauses to note regarding EN 15001-1 and EN 15001-2

— Annex 2 in Valtioneuvoston asetus maakaasun käsittelyn turvallisuudesta 551/2009 (Government Decree on Natural Gas Safety)

14.4 Page for France (EN 15001-1 and EN 15001-2)

14.4.1 Relevant French legislations/regulations for industrial gas piping and gas installation to which EN 15001-1 and EN 15001-2 are applicable

14.4.1.1 National law

Part 1 is mainly complying with Décret n°99-1046 du 13 décembre 1999 relatif aux équipements sous pression (transposition de la Directive 97/23/CE).

Part 2 is mainly complying with Arrêté du 15 mars 2000 modifié relatif à l'exploitation des équipements sous pression.

Both parts comply with:

— Code du travail;

— Code de l'environnement;

— Arrêté du 15 janvier 1962 modifié relatif à la réglementation des canalisations d'usines;

— Décret no 62-608 du 23 mai 1962 fixant les règles techniques et de sécurité applicables aux installations de gaz combustible;

— Arrêté du 25 juillet 1997 modifié relatif aux prescriptions générales applicables aux installations classées pour la protection de l'environnement soumises à déclaration sous la rubrique n° 2910;

— Arrêté du 20 juin 2002 relatif aux chaudières présentes dans une installation nouvelle ou modifiée d'une puissance supérieure à 20 MWth;

— Arrêté du 30 juillet 2003 relatif aux chaudières présentes dans des installations existantes de combustion d'une puissance supérieure à 20 MWth;

— Arrêté du 23 juillet 2010 relatif aux chaudières présentes dans les installations de combustion d'une puissance thermique supérieure ou égale à 20 MWth autorisées ou modifiées à compter du 1er novembre 2010.

NOTE The Loi 76-663 du 19 juillet 1976 relative aux installations classées pour la protection de l'environnement was cancelled on 18th September 2000.

Source of supply:

Direction des Journaux Officiels
26 rue Desaix
F - 75727 PARIS Cedex 15.

14.4.1.2 Detailed codes of practice

— Guide de classification des modifications ou opérations de tuyauteries d'usine soumises à la réglementation française (2004)

— Reference document P 45 204NF DTU 61.1: 2006

— Document Technique Unifié no 61.1: Installations de gaz dans les locaux d'habitation.

Source of supply:

AFNOR Association Française de Normalisation
11 rue Francis de Pressensé
F – 93571 La Plaine Saint-Denis Cedex

14.4.1.3 More restrictive requirements in French legislation/regulations

14.4.1.4 General

No detailed specification needed.

14.4.1.5 Clauses to note regarding EN 15001-1 and EN 15001-2

No detailed specification needed.

14.5 Page for Germany (EN 15001-1 and EN 15001-2)

14.5.1 Relevant German legislations/regulations for industrial gas piping and gas installation to which EN 15001-1 is applicable

14.5.1.1 National law/ Federal law

14.5.1.1.1 National law

— Gesetz über die Elektrizitäts- und Gasversorgung (Energiewirtschaftsgesetz – EnWG) (Energy Industry Act);

— Verordnung über Allgemeine Bedingungen für den Netzanschluss und dessen Nutzung für die Gasversorgung in Niederdruck (Niederdruckanschlussverordnung - NDAV) (Ordinance on general conditions for net connection and use for gas supply at low pressure (Low pressure connection ordinance)

— Verordnung über Gashochdruckleitungen (Gashochdruckleitungsverordnung - GasHDrLtgV); (Ordinance on high pressure gas pipelines (High pressure gas pipeline ordinanceGasHDrLtgV) Arbeitsschutzgesetz – ASG; (Occupational health and safety act);

— Verordnung über Sicherheit und Gesundheitsschutz bei der Bereitstellung von Arbeitsmitteln und deren Benutzung bei der Arbeit, über Sicherheit beim Betrieb überwachungsbedürftiger Anlagen und über die Organisation des betrieblichen Arbeitsschutzes (Betriebssicherheitsverordnung – Ordinance concerning the protection of safety and health in the provision of work equipment and its use at work, concerning safety when operating installations suject to monitoring and concerning the organisation of industrial safety and health at work (Ordinance on Industrial Safety and Health – BetrSichV);

— Verordnung zum Schutz vor Gefahrstoffen (Gefahrstoffverordnung – GefStoffV); (Ordinance on hazardous substances).

— Vorschrift der Berufsgenossenschaft, BGV A1, "Allgemeine Vorschriften" (Regulations of professional association for occupational health and safety BGV A1, "General regulations")

Source of supply:

Bundesanzeiger Verlagsges. mbH Bonn
Bundesgesetzblatt

Postfach 13 20
D – 53003 Bonn
Germany

14.5.1.1.2 Law of the Federal States

— Bauordnungen der Länder (Construction ordinances of the German federal states);

— Feuerungsverordnungen der Länder (Combustion plant ordinances of the German federal states).

Source of supply:

Deutsches Institut für Bautechnik

Kolonnenstraße 3

10829 Berlin

Germany

— Richtlinien über brandschutztechnische Anforderungen an Leitungsanlagen der Länder (Leitungsanlagen-Richtlinie – LAR); (Regulations on fire protection requirements for installation pipework; to be implemented in the German federal states).

Source of supply for the model regulation:
Werner-Verlag GmbH
Karl Rudolf-Straße 172
D – 40215 Düsseldorf
Germany

14.5.1.2 NSB National Functional standards

There are no national functional standards in addition to EN 15001-1.

In Germany, there exists an agreement between DVGW and DIN. Whilst the DIN is responsible for national product standards, the DVGW is responsible for the setting of functional technical rules.

All European standards are published as DIN EN standards. DVGW technical rules are aligned to DIN/DIN EN standards, where applicable.

The DIN standards related to gas are taken into account by DVGW and are part of the so called DVGW Set of Codes of practice.

14.5.1.3 Technical rules – (Detailed) Code of practice

— DVGW-Arbeitsblatt G 459-1 “Gas-Hausanschlüsse für Betriebsdrücke bis 4 (5) bar; Planung und Errichtung”; (Gas service pipes for operating pressures up to 4 (5) bar – Design and construction)

— DVGW-Arbeitsblatt G 459-2 "Gas-Druckregelung mit Eingangsdrücken bis 5 bar in Anschlussleitungen“ (Gas pressure regulating systems with inlet pressures up to and including 5 bar for gasinstallations)

— DVGW-Arbeitsblatt G 462 "Errichtung von Gasleitungen aus Stahlrohren bis 16 bar Betriebsdruck" (Installation of gas steel pipelines with an operating pressure up to and including 16 bar; construction)

— DVGW-Arbeitsblatt G 463 "Gasleitungen aus Stahlrohren für einen Betriebsdruck > 16 bar – Errichtung"; (Gas steel pipelines with an operating pressure > 16 bar – construction)

— DVGW-Arbeitsblatt G 469 "Druckprüfverfahren für Gastransport und Gasverteilung"; (Pressure testing for gas transport and gas distribution)

— DVGW-Arbeitsblatt G 472 "Gasleitungen bis 10 bar Betriebsdruck aus Polyethylen (PE 80, PE 100 und PE-Xa); Errichtung" (Polyethylene gas pipelines with an operating pressure up to and including 10 bar (PE 80, PE 100 und PE-Xa) - Construction")

— DVGW-Arbeitsblatt G 491 "Gas-Druckregelanlagen für Eingangsdrücke bis einschließlich 100 bar; Planung, Fertigung, Errichtung, Prüfung, Inbetriebnahme und Betrieb" (Gas pressure regulating stations with inlet pressures up to and equal to 100 bar – design, manufacturing, construction, testing, commissioning and operating)

— DVGW-Arbeitsblatt G 492 "Gas-Messanlagen für einen Betriebsdruck bis einschließlich 100 bar; Planung, Fertigung, Errichtung, Prüfung, Inbetriebnahme, Betrieb und Instandhaltung)

— DVGW-Arbeitsblatt G 600 “Technische Regel für Gasinstallationen; DVGW-TRGI 2008; (Technical specification for gas installations; DVGW-TRGI 2008)

— DVGW-Arbeitsblatt G 614 "Freiverlegte Gasleitungen auf Werksgelände hinter der Übergabestelle" (Free laid gas pipework on commercial premises behind the point of delivery)

— DVGW-Arbeitsblatt GW 330 "Schweißen von Rohren und Rohrleitungsteilen aus Polyethylen (PE 80. PE 100 und PE-Xa) für Gas- und Wasserleitungen; Lehr- und Prüfplan" (Welding of pipes and pipe-line components made of polyethylene (PE 80, PE 100 and PE-Xa) for gas and water lines; training and examination schedule)

— DVGW-Arbeitsblatt GW 331 "Schweißaufsicht für Schweißarbeiten an Rohrleitungen aus PE-HD für Gas- und Wasserversorgung, Lehr- und Prüfplan" (Welding supervisor for weldings at PE-pipelines for gas and water supply; training and examination schedule)

— DVGW-Arbeitsblatt GW 350 „Schweißverbindungen an Rohrleitungen aus Stahl in der Gas- und Wasserversorgung – Herstellung, Prüfung und Bewertung“ (Welding joints for steel pipework in gas and water supply- production, testing and assessment)

Source of supply:

Wirtschafts- und Verlagsgesellschaft Gas und Wasser mbh
Postfach 14 01 51
D – 53056 Bonn
Germany

14.5.1.4 Health and safety

— Berufsgenossenschaftliche Regeln für Sicherheit und Gesundheit bei der Arbeit BGR 500/Teil 2 Kapitel 2.31 "Arbeiten an Gasleitungen" (Rules of professional association for occupational health and safety at work, Part 2, clause 2.31, "Working on Gas pipeworks");

— Technische Regeln für Betriebssicherheit TRBS 1111; "Gefährdungsbeurteilung und sicherheitstechnische Bewertung";

— Technische Regeln für Betriebssicherheit TRBS 2152, Teil 2; Technische Regeln für Gefahrstoffe TRGS 722 – "Vermeidung oder Einschränkung gefährlicher explosionsfähiger Atmosphäre".

Source of supply:
Carl Heymanns Verlag KG
Luxemburger Straße 449

D – 50939 Köln
Germany

14.5.2 More restrictive requirements in German legislation/regulations

14.5.2.1 General

More detailed requirements are specified in the above mentioned codes of practice.

14.5.2.2 Clauses to note regarding EN 15001-1

More detailed requirements are specified in the above mentioned codes of practice.

For gas pipelines with an operating pressure greater than 16 bar the requirements of the high pressure gas pipeline ordinance shall be applied.

14.5.3 Relevant German legislations/regulations for industrial gas piping and gas installations to which EN 15001-2 is applicable

14.5.3.1 National law/ Federal law

14.5.3.1.1 National law

— Gesetz über die Elektrizitäts- und Gasversorgung (Energiewirtschaftsgesetz – EnWG) vom 7. Juli 2005 (BGBl. I, S. 1970 (3621)), zuletzt geändert durch Art. 2 G v. (16. Januar 2012 (BGBI. I S. 74); (Energy Industry Act);

— Verordnung über die Allgemeinen Bedingungen für den Anschluss und dessen Nutzung für Gasversorgungen in Niederdruck (Niederdruckanschlussverordnung – NDAV) vom 1. November 2006 (BGBI. I S. 2477, 2485); (Ordinance on general conditions for connection and use of gas supplies in low pressure (Low pressure connection ordinance);

— Verordnung über Gashochdruckleitungen (Gashochdruckleitungsverordnung - GasHDrLtgV) 18.05.2011 (BGBl. I S. 928); (Ordinance on high pressure gas pipelines (High pressure gas pipeline ordinance - GasHDrLtgV);

— Arbeitsschutzgesetz ASG (Occupational health and safety act);

— Verordnung über Sicherheit und Gesundheitsschutz bei der Bereitstellung von Arbeitsmitteln und deren Benutzung bei der Arbeit, über Sicherheit beim Betrieb überwachungsbedürftiger Anlagen und über die Organisation des betrieblichen Arbeitsschutzes (Betriebssicherheitsverordnung – Ordinance concerning the protection of safety and health in the provision of work equipment and its use at work, concerning safety when operating installations suject to monitoring and concerning the organisation of industrial safety and health at work (Ordinance on Industrial Safety and Health – BetrSichV);

— Verordnung zum Schutz vor Gefahrstoffen (Gefahrstoffverordnung – GefStoffV) (Ordinance to protect against hazardous materials – Hazardous materials ordinance);

— Vorschrift der Berufsgenossenschaft, BGV A1, "Allgemeine Vorschriften" (Regulations of professional association for occupational health and safety BGV A1, "General regulations").

Source of supply:

Bundesanzeiger Verlagsges. mbH Bonn
Bundesgesetzblatt
Postfach 13 20
D – 53003 Bonn

Germany

14.5.3.1.2 Law of the Federal States

— Bauordnungen der Länder (Construction ordinances of the German federal states)

Source of supply:

Deutsches Institut für Bautechnik
Kolonnenstraße 30
D – 10829 Berlin
Germany

14.5.3.2 NSB National Functional standards

There are no national functional standards in addition to EN 15001-2.

In Germany, there exists an agreement between DVGW and DIN. Whilst the DIN is responsible for national product standards, the DVGW is responsible for the setting of functional technical rules.

All European standards are published as DIN EN standards. DVGW technical rules are aligned to DIN/DIN EN standards, where applicable.

The DIN standards related to gas are taken into account by DVGW and are part of the so called DVGW Set of Codes of practice.

14.5.3.3 Technical rules – (Detailed) Code of practice

— DVGW-Arbeitsblatt G 465-1 "Überprüfen von Gasrohrnetzen mit einem Betriebsdruck bis 4 (5) bar (Inspection of gas pipeline systems with an operating pressure up to 4 bar);

— DVGW-Arbeitsblatt G 465-2 "Gasleitungen mit einem Betriebsdruck bis 5 bar – Instandsetzung" (Gas pipeline systems with an operating pressure up to and including 5 bar - Maintenance);

— DVGW-Arbeitsblatt G 466-1 "Gasleitungen aus Stahlrohren für einen Betriebsdruck größer als 5 bar – Instandhaltung" (Steel gas pipework with an operating pressure over 5 bar – maintenance);

— DVGW-Arbeitsblatt G 491 "Gas-Druckregelanlagen für Eingangsdrücke bis einschließlich 100 bar; ; Planung, Fertigung, Errichtung, Prüfung, Inbetriebnahme und Betrieb" (Gas pressure regulating stations with inlet pressures up to and equal to 100 bar – design, manufacturing, construction, testing, commissioning and operating);

— DVGW-Arbeitsblatt G 492 "Gas-Messanlagen für einen Betriebsdruck bis einschließlich 100 bar; Planung, Fertigung, Errichtung, Prüfung, Inbetriebnahme, Betrieb und Instandhaltung);

— DVGW-Arbeitsblatt G 495 "Gasanlagen – Instandhaltung" (Gas regulation stations - Maintenance);

— DVGW-Arbeitsblatt G 600 “Technische Regel für Gasinstallationen; DVGW-TRGI 2008 (Technical specification for gas installations; DVGW-TRGI 2008);

— DVGW-Arbeitsblatt G 614 " Freiverlegte Gasleitungen auf Werksgelände hinter der Übergabestelle" (Free shifted gaspipework on premises behind the point of delivery).

Source of supply:

Wirtschafts- und Verlagsgesellschaft Gas und Wasser mbh
Postfach 14 01 51
D – 53056 Bonn

Germany

14.5.3.4 Health and safety

— Berufsgenossenschaftliche Regeln für Sicherheit und Gesundheit bei der Arbeit; BGR 500/Teil 2 Kapitel 2.31 "Arbeiten an Gasleitungen" (Rules of professional association for occupational health and safety at work, Part 2, Clause 2.31, "Working on Gas pipeworks");

— Technische Regeln für Betriebssicherheit, TRBS 1111 "Gefährdungsbeurteilung und sicherheitstechnische Bewertung" (Technical rules on industrial safety and health);

— Technische Regeln für Betriebssicherheit, TRBS 1112 Teil 1 "Explosionsgefährdungen bei und durch Instandhaltungsarbeiten - Beurteilungen und Schutzmaßnahmen" (Technical rules on industrial safety and health);

— Technische Regeln für Betriebssicherheit, TRBS 1201 "Prüfungen von Arbeitsmitteln und überwachungsbedürftigen Anlagen' (Technical rules on industrial safety and health);

— Technische Regeln für Betriebssicherheit, TRBS 1201 Teil 1 "Prüfung von Anlagen in explosionsgefährdeten Bereichen und Überprüfung von Arbeitsplätzen in explosionsgefährdeten Bereichen" (Technical rules on industrial safety and health);

— Technische Regeln für Betriebssicherheit, TRBS 2152 Teil 1, Gefährliche explosionsfähige Atmosphäre – Beurteilung der Explosionsgefährdung Technische Regeln für Betriebssicherheit TRBS 2152 Teil 2 /Technische Regeln für Gefahrstoffe TRGS 722 - Vermeidung oder Einschränkung gefährlicher explosionsfähiger Atmosphäre" (Technical rules on industrial safety and health);

— Technische Regeln für Betriebssicherheit TRBS 2152 Teil 3 "Gefährliche explosionsfähige Atmosphäre - Vermeidung der Entzündung gefährlicher explosionsfähiger Atmosphäre" (Technical rules on industrial safety and health);

— Berufsgenossenschaftliche Information, BGI 518 "Gaswarneinrichtungen für den Explosionsschutz';'

— Technische Regeln für Gefahrstoffe TRGS 555 "Betriebsanweisung und Information der Beschäftigten'.

Source of supply:

Carl Heymanns Verlag KG
Luxemburger Straße 449
D – 50939 Köln
Germany

14.5.4 More restrictive requirements in German legislation/regulations

14.5.4.1 General

More detailed requirements are specified in the above mentioned codes of practice.

14.5.4.2 Clauses to note regarding EN 15001-2

For gas pipelines with an operating pressure greater than 16 bar the requirements of the high pressure gas pipeline ordinance shall be applied.

14.6 Page for Greece (EN 15001-1 and EN 15001-2)

14.6.1 Relevant Greek legislations/regulations for industrial gas piping and gas installations to which EN 15001-1 and EN 15001-2 are applicable

14.6.1.1 Technical rules – (Detailed) Code of practice

— Technical Code for Internal Gas installations with OP above 50mbar. Governmental Gazzette 236B/26.03.1997 “ΤΕΧΝΙΚΟΣ ΚΑΝΟΝΙΣΜΟΣ ΕΣΩΤΕΡΙΚΩΝ ΕΓΚΑΤΑΣΤΑΣΕΩΝ ΦΑ ΜΕ ΠΙΕΣΗ ΛΕΙΤΟΥΡΓΙΑΣ ΑΝΩ ΤΩΝ 50MBAR”

NOTE Under preparation and completion is “Technical Code for Internal Gas installations with OP above 500mbar” which will repeal Governmental Gazzette 236B/26.03.1997

14.7 Page for Hungary (EN 15001-1 and EN 15001-2)

14.7.1 Relevant Hungary legislations/regulations for industrial gas piping and gas installations to which EN 15001-1 and EN 15001-2 are applicable

14.7.1.1 National law/ Federal law

— **Law XL of 2008**: Natural Gas Supply (Gas Act);

— **Government Law Decree 19/2009 (I. 30.)**: On the implementation of provisions of Law XL of 2008;

— **11/2004. (II. 13.) GKM rendelet** a gáz csatlakozó vezetékekre és fogyasztói berendezésekre vonatkozó műszaki-biztonsági előírásokról (GKM (Ministry of Economy and Transport) Decree 11/2004.)).

14.7.1.2 NSB National Functional standards

The National Standardization Body of Hungary (MSZT) has adopted the above-mentioned EN standards without any alterations.

14.7.1.3 Technical rules – (Detailed) Code of practice

None.

14.7.2 More restrictive requirements in Hungarian legislation/regulations

14.7.2.1 General

None.

14.7.2.2 Clauses to note regarding EN 1775:2007

None.

14.8 Page for Ireland (EN 15001-1 and EN 15001-2)

14.8.1 Relevant Irish legislations/regulations for gas installation to which EN 15001-1:2009 and EN 15001-2:2008 are applicable

14.8.1.1 National law

14.8.1.1.1 Buildings

Building Control Act 1990 as amended;

— Gas Act 1976 (No. 30 of 1976);

— Energy (Miscellaneous Provisions) Act 2006;

— S.I. No. 497 of 1997. (Building regulations);

— S.I. No. 496 of 1997. (Building control regulations);

— S.I. No. 198 of 1992. (Construction products regulations);

— S.I. No. 283 of 1987. (Gas [amendment] act, [section 2 order 1987]);

— S.I. No. 196 of 2003. (Gas (Amendment) Act 1987 (Section 2) (Distribution) Order 2003.

Source of supply:

Irish Statute Book (http://www.irishstatutebook.ie/)

14.8.1.1.2 Health and safety

— Safety, Health and Welfare at work Act 2005 (No.10 of 2005), as amended.

Source of supply:

Irish Statute Book (http://www.irishstatutebook.ie/)

14.8.1.2 NSB National standards

None.

14.8.2 More restrictive requirements in Irish legislation/regulations

14.8.2.1 General

None.

14.8.2.2 Clauses to note regarding EN 15001-1 and EN 15001-2

None.

14.9 Page for Italy (EN 15001-1 and EN 15001-2)

14.9.1 Relevant Italian legislations/regulations for industrial gas piping and gas installations to which EN 15001-1 and EN 15001-2 are applicable

14.9.1.1 National law/ Federal law

— Legge 6 dicembre 1971, n. 1083, Norme per la sicurezza dell'impiego del gas combustibile (Law 06/12/1971 n. 1083 "Safety in the use of combustible gases");

— Decreto 12 aprile 1996, Approvazione della regola tecnica di prevenzione incendi per la progettazione, la costruzione e l'esercizio degli impianti termici alimentati da combustibili gassosi (Decree of April 12, 1996 - Approval of technical rules of fire prevention for the design, construction and operation of thermal plants fuelled by gaseous fuels);

— Decreto del Ministero dello sviluppo economico 22/01/2008, n. 37, Regolamento concernente l'attuazione dell'art. 11-quaterdecies, comma 13, lettera a), della Legge n. 248 del 02/12/2005, recante riordino delle disposizioni in materia di attività di installazione degli impianti all'interno degli edifici. (Decree of the Ministry of Economic Development 22/01/2008, n. 37 "Regulation on the implementation of Article. 11-quaterdecies, paragraph 13, letter a) of Law no. 248 of 02/12/2005 laying down rules on reorganization of the activities of installation of the plants inside the building);

— Decreto Ministeriale 16/04/08, Regola tecnica per la progettazione, costruzione, collaudo, esercizio e sorveglianza delle opere e dei sistemi di distribuzione e di linee dirette del gas naturale con densità non superiore a 0,8. (Ministry Decree 16/04/08 – Technical regulations for design, construction, testing, operation and surveillance of natural gas distribution networks).Decreto Ministeriale 17/04/08 Regola tecnica per la progettazione, costruzione, collaudo, esercizio e sorveglianza delle opere e degli impianti di trasporto del gas naturale con densità non superiore a 0,8. (Ministry Decree 17/04/08 – Technical regulations for design, construction, testing, operation and surveillance of natural gas transport networks);

— Decreto Ministeriale 4 aprile 2014.Norme tecniche per gli attraversamenti e per i parallelismi di condotte e canali convoglianti liquidi e gas con ferrovie ed altre linee di trasporto. (Ministry Decree 4 aprile 2014.- Technical standards for crossing and parallelism of pipes and ducts carrying liquids and gas with railways and other transportation lines.). Decreto Ministeriale 01/12 2004, n. 329 Regolamento recante norme per la messa in servizio ed utilizzazione delle attrezzature a pressione e degli insiemi di cui all'articolo 19 del decreto legislativo 25 febbraio 2000, n. 93. Ministerial Decree 01/12 2004, n. 329 Regulations for commissioning and use of pressure equipment and assemblies referred to in Article 19 of Legislative Decree 25 February 2000, n. 93;

— Decreto del Presidente della Repubblica 1° agosto 2011, n. 151. Regolamento recante semplificazione della disciplina dei procedimenti relativi alla prevenzione degli incendi, a norma dell'articolo 49, comma 4 -quater , del decreto-legge 31 maggio 2010, n. 78, convertito, con modificazioni, dalla legge 30 luglio 2010, n. 122. (Decree of the President of Republic 1 August 2011, n. 151. Regulation laying down simplified application of the rules on procedures relating to the prevention of fires, in accordance with Article 49, paragraph 4-c of the Decree-Law of 31 May 2010, n. 78, converted, with amendments by law of 30 July 2010, n. 122);

— Lettera circolare n. 6181/2014 del Ministero dell'interno: "D.M. 12 aprile 1996 "Approvazione della regola tecnica di prevenzione incendi per la progettazione, la costruzione e l'esercizio degli impianti termici alimentati da combustibili gassosi"- Indicazioni applicative" (circular letter n. 6181/2014 of Ministry of Interior - Decree of April 12, 1996 - Approval of technical rules of fire prevention for the design, construction and operation of thermal plants fuelled by gaseous fuels – Application recommendations);

— Autorità per l'energia elettrica il gas e il sistema idrico (AEEGSI) - Delibera n. 40/2014/R/Gas – Disposizioni in materia di accertamenti della sicurezza degli impianti di utenza a gas (Regulatory Authority for Electricity Gas and Water (AEEGSI) – Directive n. 40/2014/R/Gas – Provisions for the activities of ascertainment of the safety of gas plants);

— Autorità per l'energia elettrica il gas e il sistema idrico (AEEGSI) - Deliberazione n. 574/2013/R/GAS - Regolazione della qualità dei servizi di distribuzione e misura del gas per il periodo di regolazione 2014-2019 - Parte I del testo unico della regolazione della qualità e delle tariffe dei servizi di distribuzione e misura del gas per il periodo di regolazione 2014-2019 (Regulatory Authority for Electricity, Gas and Water (AEEGSI) – Directive n. 574/2013, Regulation of the quality of distribution and measurement services for the regulatory period 2014-2019: Part I "Adjusting the quality and the pricing for the distribution and measurement services of natural gas for the period of adjustment 2014-2019);

— Autorità per l'energia elettrica e il gas e il sistema idrico (AEEGSI) - Deliberazione 602/2013/R/gas regolazione della qualità del servizio di trasporto del gas naturale per il periodo di regolazione 2014-2017 – Parte I del testo unico della regolazione della qualità e delle tariffe per i servizi di trasporto e dispacciamento del gas naturale per il periodo di regolazione 2014-2017 (Regulatory Authority for Electricity, Gas and Water (AEEGSI) – Directive n. 602/2013 Adjusting the quality of the transportation service of natural gas for the period of adjustment 2014-2017) - Part I Consolidated regulation of the quality and pricing of transport services and dispatching of natural gas for the regulatory period 2014-2017.

14.9.1.2 NSB National Functional standards

— UNI 9165, Reti di distribuzione del gas – Condotte con pressione massima di esercizio minore o uguale di 5 bar - Progettazione, costruzione, collaudo, conduzione, manutenzione e risanamento (Gas distribution networks - Pipelines with maximum operating pressure less than or equal to 5 bar - Design, construction, testing, operation, maintenance and rehabilitation);

— UNI 9167, Impianti di ricezione, prima riduzione e misura del gas naturale - Progettazione, costruzione e collaudo (Initial pressure reduction plants for natural gas - Design, construction and testing);

— UNI 9463-1, Impianti di odorizzazione e depositi di odorizzanti per gas combustibili impiegati in usi domestici o similari - Parte 1: Termini e definizioni (Ottobre 2012), (Odorisation plants and odorant storages for combustible gases employed in domestic of similar uses Part 1: Term and definitions);

— UNI 9463-2, Impianti di odorizzazione e depositi di odorizzanti per gas combustibili impiegati in usi domestici o similari - Parte 2: Impianti di odorizzazione - Progettazione, costruzione, collaudo e sorveglianza (Odorisation plants and odorant storages for combustible gases employed in domestic of similar uses - Part 2: Odorisation plants - Design, construction, testing and surveillance);

— UNI 9463-3, Impianti di odorizzazione e depositi di odorizzanti per gas combustibili impiegati in usi domestici o similari - Parte 3: Depositi di odorizzanti - Progettazione, costruzione ed esercizio (Odorisation plants and odorant storages for combustible gases employed in domestic of similar uses - Part 3: Odorant storages - Design, construction and operating criteria);

— UNI 9463-4 Impianti di odorizzazione e depositi di odorizzanti per gas combustibili impiegati in usi domestici o similari - Parte 4: Modalità di fornitura di odorizzanti (Odorisation plants and odorant storages for combustible gases employed in domestic of similar uses Part 4: Odorant supply conditions);

— UNI 9571-1 Impianti di ricezione, prima riduzione e misura del gas naturale - Parte 1: Sorveglianza (Initial pressure reduction plants for natural gas – Part 1: Surveillance);

— UNI 9860 Impianti di derivazione di utenza del gas – Progettazione, costruzione, collaudo, conduzione, manutenzione e risanamento (Gas service pipes – Design, construction, testing, operation, maintenance and rehabilitation);

— UNI 10576 Protezione delle tubazioni gas durante i lavori nel sottosuolo + EC (Gas pipelines protection during underground works);

— UNI 10619 Impianti di riduzione della pressione del gas naturale funzionanti con pressione a monte massima di 12 bar per utilizzo: industriale e assimilabile e per utilizzo civile con pressione a valle compresa tra 0,04 e 0,5 bar - Progettazione, costruzione, installazione e collaudo (Natural gas pressure reduction and metering plant with upstream maximum operating pressure of 12 bar for industrial uses and similar and for service lines with downstream pressure between 0,04 and 0,5 bar – Design, construction, installation and testing);

— UNI 10702 Impianti di riduzione della pressione del gas funzionanti con pressione a monte compresa fra 0,04 e 12 bar. Conduzione e manutenzione + EC (Gas pressure regulating installations for inlet pressure between 0,04 and 12 bar – Operation and maintenance);

— UNI/TR 11228 Opere di protezione per tubazioni gas interrate per interferenze con ferrovie, tranvie, strade, altri servizi interrati e fabbricati (Protecting structures for buried gas pipes for interferences with railways, tramways, roads, other buried utilities and buildings);

— UNI 11528 Impianti a gas di portata termica maggiore di 35 kW - Progettazione, installazione e messa in servizio (Gas plants over 35 kW - Design, installation and operation).

14.9.1.3 Technical rules – (Detailed) Code of practice

The technical rules when issued by ministerial decree are compulsory. The directives issued by Regulatory Authority for Electricity and Gas (Aeeg) are compulsory. The guidelines issued by CIG (Italian Gas Committee) support some requirements given in the Aeeg Directives.

CIG Guidelines:

— La gestione delle emergenze da gas combustibile (Gas emergency management in distribution networks);

— Classificazione delle dispersioni di gas (Gas leaks – Classification);

— L'esecuzione delle attività di pronto intervento gas (Gas emergency – Activities in distribution networks);

— Linee guida per l'applicazione della normativa sismica nazionale alle attività di progettazione, costruzione e verifica dei sistemi di trasporto e distribuzione per gas combustibile (Seismic guidelines in gas supply);

— La gestione degli incidenti da gas combustibile (Gas accidents management in distribution networks);

— Esecuzione delle ispezioni programmate e localizzate delle dispersioni sulla rete di distribuzione per gas con densità < 0,8 e con densità > 0,8 (Settembre 2011), (Distribution networks – Gas leaks inspections);

— Le forniture di emergenza di gas naturale mediante carro bombolaio e/o veicolo cisterna (Gas transport-Emergency gas supplies by vehicles);

— La gestione delle emergenze di servizio nei sistemi di trasporto del gas naturale (Marzo 2012), (Gas emergency management in transport networks).

14.9.2 More restrictive requirements in Italian legislation/regulations

No detailed specification needed

14.10 Page for the Netherlands (EN 15001-1 and EN 15001-2)

14.10.1 Relevant Dutch legislations/regulations for industrial gas piping and gas installations to which EN 15001-1 and EN 15001-2 are applicable

14.10.1.1 National law/ Federal law

— Woningwet (Building law);

— Bouwbesluit 2012 (Building Directive);

— ARBO-wet (Safety use of Buildings);

— **Besluit drukaparatuur (Staatsblad van het Koninkrijk der Nederlanden 311** Besluit van 5 juli 1999 tot vaststelling van een algemene maatregel van bestuur ter uitvoering van de Wet op de gevaarlijke werktuigen, de Brandweerwet 1985, de Mijnwet 1903, de Mijnwet continentaal plat, de Wet milieubeheer en de Stoomwet met betrekking tot drukapparatuur);

— **Staatsblad van het Koninkrijk der Nederlanden 339**; Besluit van 5 juli 2001 tot wijziging van het Besluit drukapparatuur houdende regels inzake de samenbouw van druksystemen en de ingebruikneming van drukapparatuur, samenstellen en druksystemen en tot wijziging van enige andere besluiten;

— Activiteitenbesluit milieubeheer (Besluit algemene regels voor inrichtingen milieubeheer);

— Wet milieubeheer;

— Activiteitenregeling milieubeheer (Regeling algemene regels voor inrichtingen milieubeheer).

14.10.1.2 NSB National Functional standards

— NEN 1078, Voorziening voor gas met een werkdruk tot en met 500 mbar - Prestatie-eisen – Nieuwbouw (Supply for gas with an operating pressure up to and including 500 mbar – Performance requirements - New estate);

— NEN 8078, Voorziening voor gas met een werkdruk tot en met 500 mbar - Prestatie-eisen – Bestaande bouw (Supply for gas with an operating pressure up to and including 500 mbar - Performance requirements - Existing estate);

— NEN 2078:1987; Voorschriften voor aardgasinstallaties GAVO (voor bestaande bouw, for existing estate);

— NEN 3028; Eisen voor verbrandingsinstallaties (Requirements for fuel combustion installations);

— NEN 1059:2010; Nederlandse editie op basis van NEN-EN 12186 en NEN-EN 12279 — Gasvoorzieningsystemen – Gasdrukregel- en meetstations voor transport en distributie (Dutch edition basied on NEN-EN 12186 and NEN-EN 12279 — Gas supply systems – Gas pressure regulating stations for transmission and distribution).

14.10.1.3 Technical rules – (Detailed) Code of practice

No additional information.

14.10.2 More restrictive requirements in Dutch legislation/regulations

14.10.2.1 General

Yes, as mentioned in 2.8.4.2.

14.10.2.2 Clauses to note regarding EN 15001-1 and EN 15001-2

Scope NEN-EN 15001-1 “This standard has been harmonised to address the essential safety requirements of the Pressure Equipment Directive (PED, 97/23/EC) relevant for the joining of gas installation pipework (assemblies) falling within the scope of the PED. These are listed in Annex ZA. However, “this Directive does not cover the assembly of pressure equipment on the site and under the responsibility of the user, as in the case of industrial installations” (PED, Preamble, 5th recital, last paragraph).”

The PED states that this Directive does not cover the assembly of pressure equipment on the site and under the responsibility of the user, as in the case of industrial installations. The Dutch government has published an amendment on the Dutch Decree Pressure equipment (Besluit van 5 juli 2001 tot wijziging van het Besluit drukapparatuur houdende regels inzake de samenbouw van druksystemen en de ingebruikneming van drukapparatuur, samenstellen en druksystemen en tot wijziging van enige andere besluiten) stating that also the assembly of pressure equipment on the site is covered under the Dutch Decree Pressure Equipment (Besluit van 5 juli 1999 tot vaststelling van een algemene maatregel van bestuur ter uitvoering van de Wet op de gevaarlijke werktuigen, de Brandweerwet 1985, de Mijnwet 1903, de Mijnwet continentaal plat, de Wet milieubeheer en de Stoomwet met betrekking tot drukapparatuur (Besluit drukapparatuur).

14.11 Page for România (EN 15001-1 and EN 15001-2)

14.11.1 Relevant Românian legislations/regulations for industrial gas piping and gas installations to which EN 15001-1 is applicable

14.11.1.1 National law/ Federal law

— HG 584/2004 privind stabilirea condiţiilor de introducere pe piaţă a echipamentelor sub presiune (GD 584/2004 establishing the conditions for the placing on the market of pressure equipment)

— HG 584/2004 privind stabilirea condiţiilor de introducere pe piaţă a echipamentelor sub presiune (GD 584/2004 establishing the conditions for the placing on the market of pressure equipment)

— O MECMA 1635/27.08.2012 pentru modificarea Listei cuprinzând standardele romane care adopta standardele europene armonizate (Order amending the List of Romanian standards adopting harmonized European standards)

14.11.1.2 NSB National Functional standards – ASRO

— SR EN 15001-1:2009, Sisteme de alimentare cu gaze. Conducte de gaz cu o presiune de lucru mai mare de 0,5 bar pentru instalaţii industriale şi mai mare de 5 bar pentru instalaţii industriale şi neindustriale. Partea 1: Cerinţe funcţionale detaliate pentru proiectare, materiale, construcţie, inspecţie şi încercări

— SR EN 15001-2:2009, Sisteme de alimentare cu gaz. Conducte pentru transportul gazului cu presiune de lucru mai mare de 0,5 bar pentru instalaţii industriale şi mai mare de 5 bar pentru instalaţii industriale şi neindustriale. Partea 2: Cerinţe funcţionale detaliate pentru punere în funcţiune, exploatare şi mentenanţă

14.11.1.3 Technical rules – (Detailed) Code of practice

None

14.11.2 More restrictive requirements in Romanian legislation/regulations

14.11.2.1 General

None.

14.11.2.2 Clauses to note regarding EN 15001-1 and EN 15001-2

None.

14.12 Page for Sweden (EN 15001-1 and EN 15001-2)

14.12.1 Relevant Swedish legislations/regulations for industrial gas piping and gas installations to which EN 15001-1 is applicable

14.12.1.1 National law/ Federal law

— [Regulations on tanks and pipe work for flammable gases SÄIFS 2000:4] Föreskrifter om cisterner, gasklockor, bergrum och rörledningar för brandfarlig gas SÄIFS 2000:4 clauses 3.4.1, 3.4.3, 4.4.2.

14.12.1.2 NSB National Functional standards

None.

14.12.1.3 Technical rules – (Detailed) Code of practice

The technical rules mentioned above are legislative requirements.

14.12.2 More restrictive requirements in Swedish legislation/regulations

a) 3.4.1: Pipework shall in regard to material, design, construction and equipment provide sufficient protection against fire and explosion. Pipework with an operating pressure not exceeding 4 bar for natural gas, LPG and biogas which complies with the requirements of EGN is supposed to fulfil the requirements in this regulation.

b) 3.4.3: Pipeline shall be fire resistant. Pipeline made of metal and buried pipeline made of PE (polyethylene) according to EGN is supposed to fulfil the requirement on fire resistance.

c) 4.4.2: Buried pipework shall have sufficient depth of cover and minimum distance to third party activities to protect it from external mechanical damage. Pipework with an operating pressure not exceeding 4 bar for natural gas, LPG and biogas which complies with the requirements of EGN is supposed to fulfil the requirements in this regulation.

14.12.2.1 Clauses to note regarding EN 15001-1:2009 and EN 15001-2:2008

— 6.6.4.2.1,

— 6.6.4.4,

— 5.2.1 Table 6,

— 6.2.2,

— 6.5.2.1 Figure 1 and 2,

— 6.6.7.1 Table 19,

— 6.6.7.3,

— 6.6.7.4.

14.13 Page for Spain (EN 15001-1 and EN 15001-2)

14.13.1 Relevant Spanish legislations/regulations for industrial gas piping and gas installations to which EN 15001-1 and EN 15001-2 are applicable

14.13.1.1 National law/ Federal law

— Ley del Sector de Hidrocarburos (Ley 34/1998, de 7 de octubre) y sus modificaciones (Hydrocarbons Sector Law and its subsequent amendments). The Regulations below are applicable to the whole country. The regions (Comunidades Autónomas) may have additional requirements;

— Reglamento General del Servicio Público de Gases Combustibles (Decreto 2913/1973 de 26 de octubre); (Gaseous Fuels Public Supply Service General Regulations);

— Reglamento de la actividad de distribución de gases licuados del petróleo (Decreto 1085/1992); (LPG Distribution Regulations);

— Real Decreto por el que se regula el acceso de terceros a las instalaciones gasistas y se establece un sistema económico integrado del sector de gas natural (Real Decreto 949/2001, de 3 de agosto); (Regulations on third party access to gas installations and establishment of an integrated economic system for the natural gas sector);

— Real Decreto por el que se regulan las actividades de transporte, distribución, comercialización, suministro y procedimientos de autorización de instalaciones de gas natural (Real Decreto 1434/2002, de 27 de diciembre); (Regulations on Transmisión, Distribution, Trading, and Supply activities, as well as permit granting procedures of natural gas infrastructures);

— Reglamento Técnico de Distribución y Utilización de Combustibles Gaseosos y sus instrucciones técnicas complementarias ICG 01 a 11 (Real Decreto 919/2006, de 28 de julio); (Gas Distribution and Utilization Technical Regulations). This “Reglamento” includes a number of applicable "Instrucciones Técnicas Complementarias" (Complementary Technical Instructions) or ITC:

  — ITC-ICG 07 Instalaciones receptoras de combustibles gaseosos (Gas receiving installations);

  — ITC-ICG 08 Aparatos de gas (Gas-fired appliances);

  — ITC-ICG 09 Instaladores y empresas instaladoras de gas (Gas installers and gas installation businesses);

  — ITC-ICG 10 Instalaciones de gases licuados del petróleo (GLP) de uso doméstico en caravanas y autocaravanas (LPG installations for domestic use in caravans and auto-caravans);

  — ITC-ICG 11 Relación de normas UNE de referencia (List of reference UNE standards).

14.13.1.2 NSB National Functional standards

The standards below are mandatory:

— UNE 60620, Instalaciones receptoras de gas natural suministradas a presiones superiores a 5 bar (Natural gas receiving installations with supply pressure over 5 bar),

  — Parte 1: Generalidades (General),

- Parte 2: Acometidas interiores (Internal pipework up to the pressure reducing and metering station),
- Parte 3: Estaciones de regulación y medida (Pressure reducing and metering stations),
- Parte 4: Líneas de distribución interior (Internal pipework up to the appliance regulators),
- Parte 5: Grupos de regulación (Appliance regulators),
- Parte 6: Criterios técnicos básicos para el control periódico de las instalaciones receptoras en servicio (Criteria for the periodic control in receiving intallations).

— UNE 60670, Instalaciones receptoras de gas suministradas a una presión máxima de operación (MOP) inferior o igual a 5 bar (Gas receiving installations supplied at maximum operating pressure (MOP) not greater than 5 bar),

- Parte 1: Generalidades (General),
- Parte 2: Terminología (Terminology),
- Parte 3: Tuberías, elementos, accesorios y sus uniones (Piping, components, fittings and joints),
- Parte 4: Diseño y construcción (Design and construction),
- Parte 5: Recintos destinados a la instalación de contadores de gas (Spaces for gas meter installation),
- Parte 6: Requisitos de configuración, ventilación y evacuación de los productos de la combustión en los locales destinados a contener los aparatos a gas (Configuration, ventilation and evacuation of the combustión products reqirements for the premises for gas appliances),
- Parte 7: Requisitos de instalación y conexión de los aparatos a gas (Installation and connection of appliances),
- Parte 8: Pruebas de estanquidad para la entrega de la instalación receptora (Tightness tests),
- Parte 9: Pruebas previas al suministro y puesta en servicio (Previous tests of the supply and commissioning),
- Parte 10: Verificación del mantenimiento de las condiciones de seguridad de los aparatos en su instalación (Verifying of maintain of the safety conditions of the appliances in their installation),
- Parte 11: Operaciones en instalaciones receptoras en servicio (Work on operating installations),
- Parte 12. Criterios técnicos básicos para el control periódico de las instalaciones receptoras en servicio. (Technical criteria for periodical control of the operating installations),
- Parte 13. Criterios técnicos básicos para el control periódico de los aparatos a gas de las instalaciones receptoras en servicio. (Technical criteria for periodical control of the gas appliances in operating installations).

The standards below are not mandatory:

— UNE-EN 15001-1

- Sistemas de suministro de gas natural. Tuberías de la instalación de gas alimentadas a una presiónde operación superior a 0,5 bar para instalaciones industriales y superior a 5 bar para instalaciones industriales y no industriales. Parte 1: Requisitos funcionales de detalle para el diseño,

materiales, construcción, inspección y prueba. (Gas Infrastructure - Gas installation pipework with an operating pressure greater than 0,5 bar for industrial installations and greater than 5 bar for industrial and non-industrial installations - Part 1: Detailed functional requirements for design, materials, construction, inspection and testing);

— UNE-EN 15001-2

  — Sistemas de suministro de gas natural. Tuberías de la instalación de gas alimentadas a una presión de operación superior a 0,5 bar para instalaciones industriales y superior a 5 bar para instalaciones industriales y no industriales. Parte 2: Requisitos funcionales detallados para la puesta en servicio, la operación y el mantenimiento. (Gas Infrastructure - Gas installation pipework with an operating pressure greater than 0,5 bar for industrial installations and greater than 5 bar for industrial and non-industrial installations - Part 2: Detailed functional requirements for commissioning, operation and maintenance).

14.13.1.3 Technical rules – (Detailed) Code of practice

SEDIGAS recommendations (of the national gas sector):

— RS-D-03 Actuación en avisos de presencia de gas en recintos cerrados (Performance when gas presence in indoor places is notified)

— RS-D-06 Ejecución de polietileno de tramos enterrados y conexión a conjuntos de regulación y medida de instalaciones receptoras (Performance with PE in buried sections and connection to groups of regulation and measure in gas receiving installations)

— RS-S-01 Operativa de seguridad en recintos confinados (Safety performance in indoor places).

14.13.2 More restrictive requirements in Spanish legislation/regulations

The European standards that cover the technical requirements for gas receiving installations are EN 1775 and EN 15001.

The Spanish relevant standards are UNE 60620 (installations supplied at over 5 bar) and UNE 60670 (installations supplied at less than or equal to 5 bar).

UNE 60670 applies to industrial and non-industrial installations supplied at less than or equal to 5 bar.

EN 1775 applies to domestic, collective or commercial premises supplied at less than or equal to 5 bar.

EN 15001 applies to industrial installations supplied at over 0,05 bar and to industrial and non-industrial installations supplied at over 5 bar.

It means that UNE 60620's and UNE 60670's scopes overlap with EN 15001 and different requirements shall be taken into account.

14.14 Page for UK

The UK gas safety legislation does not lend itself to the detailed breakdown given by other countries. If any interested party needs to understand the UK safety system the references given supply the latest information from the source of authority.

The United Kingdom Safety Regulator for Industry and Commerce is the: *Health and Safety Executive.* The principle UK Health and Safety Legislation is the *Health and Safety at Work Act 1974, as amended*. This Act has many branches with detailed regulations for the various sectors of Industry and Commerce.

http://www.hse.gov.uk/legislation/hswa.htm

The various Licenses issued by OFGEM for UK Gas Transport, Storage and Gas Supply etc. have a clause to ensure that the Licensee operates safely and securely. The HSE has a special website for *Gas* and a section for *Gas Supply.* This site describes the principle regulations governing gas supply and provides the related *Regulations* and the *Advisory Codes of Practice*:-

http://www.hse.gov.uk/gas/supply/legislation.htm

The UK safety legislation is *goal setting* and the *HSE* has worked for many years with the UK gas industry through the *Institution of Gas Engineers and Managers* to develop more detailed technical standards for the various elements of the gas infrastructure. These cover a range of topics, e.g.:-

— Pipelines Safety Regulations;

— Pressure Systems Safety Regulations;

— Gas Safety (Management) Regulations;

— Gas Safety (Installation and Use) Regulations;

— Dangerous Substances and Explosive Atmospheres Regulations;

— Reporting of Injuries, Diseases and Dangerous Occurrences Regulations;

— Building Regulations;

— Health and Safety at Work etc. Act;

— Management of Health and Safety at Work Regulations;

— Pressure Equipment Regulations,

— Electricity at Work Regulations

The Full List of current IGEM standards and prices for January 2013 are at:-

http://www.igem.org.uk/media/227989/igem%20standards%20list%20january%202013.pdf

When the CEN TC 234 ENs were published first in 2000, IGEM brought its Standards into line with these ENs, e.g. as regards pressure range and the 16 bar limit for EN 1594 and EN 12007 series.

Under the UK Safety Legislation, Licensed gas transporters, distributors and storage operators etc. are subject to a *Safety Case Regime,* which requires specific approval of the detail in the *Safety Case* by the HSE before operations can commence. This detail includes technical requirements for the design, construction, testing commissioning and operation under both normal and emergency conditions. The *Safety Case* document also covers quality management processes to ensure safety and security of gas supply according to the approved Safety Case. For this purpose, many Licensed Operators of gas infrastructure have their own complete technical and safety management details documented fully as part of their *Safety Case*. This detail describes how their business intends to operate under its License in order to ensure safety of the public and of the workforce.

15 Relevant national legislation/regulation for Safety Management System (SMS) for gas transmission infrastructure and Pipeline Integrity Management System (PIMS) for gas transmission pipelines to which EN 16348 is applicable

15.1 Page for Austria (EN 16348)

15.1.1 Relevant Austrian legislation/regulation for SMS and PIMs for gas transmission to which EN 16348 is applicable

15.1.1.1 National law/ Federal law

— BGBl. I Nr. 107/2011, Gaswirtschaftsgesetz (National gas law);

— BGBl. II Nr.171/2012; Gas-Marktmodell-Verordnung 2012 (Natural gas market regulation);

— BGBl. II Nr. 172/2012, Gasnetzdienstleistungsqualitäts-Verordnung (Gasgrid service quality regulation);

— BGBl. II Nr. 309/2012, Gas-Systemnutzungsentgelte-Verordnung 2013 (Gas system usage fee regulation);

— BGBl. II Nr. 439/2011, Sonstige Transporte-Gas-Systemnutzungstarife Verordnung Novelle 2012 (Additional transport gas system usage regulation amendment 2012).

Source of supply:

Rechtsinformationssystem des Bundes (RIS)

www.ris.bka.gv.at

Energie-Control Austria

Rudolfsplatz 13a

A-1010 Wien

http://www.e-control.at/de/recht/bundesrecht/gas

15.1.1.2 NSB National Functional standards

None.

15.1.1.3 Technical rules – (Detailed) Code of practice

— ÖVGW G 65: Sicherheitskonzept mit Sicherheitsbericht und Notfallplanung für Erdgasleitungsanlagen (Safety conept with safety report and emergency design for natural gas mains)

Source of supply:
Österreichische Vereinigung für das Gas- und Wasserfach
Schubertring 14
1010 Wien
Austria
www.ovgw.at

15.1.2 More restrictive requirements in Austrian legislation/ regulations

15.1.2.1 General

No detailed specification needed.

15.1.2.2 Clauses to note regarding EN 16348

No detailed specification needed.

15.2 Page for Finland (EN 16348)

15.2.1 Relevant Finnish legislation/regulation for SMS and PIMS in gas transmission to which EN 16348 is applicable

15.2.1.1 National law/ Federal law

— **Laki vaarallisten kemikaalien ja räjähteiden käsittelyn turvallisuudesta 390/2005** (Act on the Safe Handling and Storage of Dangerous Chemicals and Explosives (390/2005));

— **Valtioneuvoston asetus maakaasun käsittelyn turvallisuudesta 551/2009** (Government Decree on Natural Gas Safety);

— Valtioneuvoston asetus maakaasu-, nestekaasu- ja öljylämmityslaitteistojen asennus- ja huoltotoimintaa sekä maanalaisten öljysäiliöiden tarkastusta harjoittavien hyväksymisestä 558/2012 **(Government Decree on approval of installation and maintenance companies)**.

15.2.1.2 NSB National Functional standards

— SFS 2897 **Maakaasuputkisto. Painekoe** (Natural gas pipeline - Pressure test, 1987-05-18);

— SFS 5717 **Maakaasun siirtoputkiston sijoittaminensuurjännitejohdon tai -kytkinlaitoksen läheisyyteen** (Placing of the natural gas transmission pipeline close to a high-voltage line or substation, 1992-01-28).

15.2.1.3 Technical rules – (Detailed) Code of practice

— **Maakaasukäsikirja, Suomen Kaasuyhdistys, Marraskuu 2010** (Natural gas - Codes of practise, Finnish Gas Association, November 2010)

15.2.2 More restrictive requirements in Finnish legislation/ regulations

15.2.2.1 General

As a result of circumstances in Finland there is some restrictive legislation concerning the gas infrastructure. These regulations are stated in annex 1 and annex 2 in *Valtioneuvoston asetus maakaasun käsittelyn turvallisuudesta 551/2009* (Government Decree on Natural Gas Safety).

15.2.2.2 Clauses to note regarding EN 16348:2013

— Annex 1 and 2 in Valtioneuvoston asetus maakaasun käsittelyn turvallisuudesta 551/2009 (Government Decree on Natural Gas Safety)

15.3 Page for France (EN 16348)

15.3.1 Relevant French legislation/regulation for SMS and PIMS in gas transmission to which EN 16348 is applicable

15.3.1.1 National law

— Arrêté du 5 mars 2014 portant règlement de sécurité des canalisations de transport de gaz combustibles, d'hydrocarbures liquides ou liquéfiés et de produits chimiques

Source of supply:

Direction des Journaux Officiels
26 rue Desaix
F - 75727 PARIS Cedex 15.

15.3.1.2 Detailed code of practice

— Guide GESIP n°2008/01: Guide méthodologique pour la réalisation d'une étude de sécurité concernant une canalisation de transport

Source of supply:

GESIP : 22, rue du Pont Neuf
BP 2722, 75027 Paris cedex 01 France

15.3.2 More restrictive requirements in French legislation/regulations

15.3.2.1 General

No detailed specification needed.

15.3.2.2 Clauses to note regarding EN 16348

No detailed specification needed.

15.4 Page for Germany (EN 16348)

15.4.1 Relevant German legislation/regulation for SMS and PIMS for gas transmission to which EN 16348 is applicable

15.4.1.1 National law/ Federal law

— Gesetz über die Elektrizitäts- und Gasversorgung (Energiewirtschaftsgesetz - EnWG) vom 07. Juli 2005 (BGBl. I, S. 1970 (3621)), zuletzt geändert durch Art. 2 G v. 16.Januar 2012 (BGBl. I S. 74) (Energy Industry Act)

— Arbeitsschutzgesetz ASG (Occupational health and safety act)

— Vorschrift der Berufsgenossenschaft, BGV A1, "Allgemeine Vorschriften" (Regulations of professional association for occupational health and safety BGV A1, "General regulations")

Source of supply:

Bundesanzeiger Verlagsges. mbH Bonn
Bundesgesetzblatt

Postfach 13 20
D – 53003 Bonn
www.gesetze-im-internet.de

15.4.1.2 NSB National Functional standards

There are no national functional standards in addition to EN 16348.

In Germany, there exists an agreement between DVGW and DIN. Whilst the DIN is responsible for national product standards, the DVGW is responsible for the setting of functional technical rules.

All European standards, including functional standards, are published as DIN EN standards. DVGW technical rules are aligned to DIN/DIN EN standards, where applicable.

The DIN standards related to gas are taken into account by DVGW and are part of the so called DVGW Set of Codes of practice.

15.4.1.3 Technical rules – (Detailed) Code of practice

— DVGW G 1000, Anforderungen an die Qualifikation und die Organisation von Unternehmen für den Betrieb von Anlagen zur leitungsgebundenen Versorgung der Allgemeinheit mit Gas (Gasversorgungsanlagen) – (Requirements on the qualification and organisation of enterprises operating installations for the pipeline-bound supply of the general public with gas (gas supply installations)

— DVGW GW 1200, Grundsätze und Organisation des Bereitschaftsdienstes für Gas- und Wasserversorgungsunternehmen – (Principles and organisation for stand-by emergency operation of gas and water suppliers)

Source of supply:

Wirtschafts- und Verlagsgesellschaft Gas und Wasser mbh
Postfach 14 01 51
D – 53056 Bonn
Germany

15.4.2 More restrictive requirements in German legislation/ regulations

15.4.2.1 General

None.

15.4.2.2 Clauses to note regarding EN 16348

None.

15.5 Page for Hungary (EN 16348)

15.5.1 Relevant Hungarian legislation/regulation for SMS and PIM in gas transmission to which EN 16348 is applicable

15.5.1.1 National law/ Federal law

— **Law XL of 2008**: Natural Gas Supply (Gas Act)

— **Government Law Decree 19/2009 (I. 30.)**: On the implementation of provisions of Law XL of 2008

— **GKM (Ministry of Economy and Transport) Decree 79/2005. (X. 11.)**: Safety requirements for hydrocarbon transportation pipelines and publishing the safety regulations for hydrocarbon transportation pipelines

— **Government Law Decree 53/2012. (III. 28.)**: Regulations on statutory procedures for specific buildings that belong to the scope of competence of the mining authority

15.5.1.2 NSB National Functional standards

None.

15.5.1.3 Technical rules – (Detailed) Code of practice

None.

15.5.2 More restrictive requirements in Hungarian legislation/ regulations

15.5.2.1 General

None.

15.5.2.2 Clauses to note regarding EN 16348:2013

None.

15.6 Page for Ireland (EN 16348)

15.6.1 Relevant Irish legislation/regulation for SMS and PIMS in gas transmission to which EN 16348 is applicable

15.6.1.1 Energy

— Energy (Miscellaneous Provisions) Act 2006;

— Gas Act 1976 (No. 30 of 1976);

— S.I. No. 283 of 1987. (Gas [amendment] act, [section 2 order 1987]).

— S.I. No. 196 of 2003. (Gas (Amendment) Act 1987 (Section 2) (Distribution) Order 2003.

Source of supply:

Irish Statute Book (http://www.irishstatutebook.ie/)

15.7 Page for Italy (EN 16348)

15.7.1 Relevant Italian legislation/regulation for SMS and PIMS in gas transmission to which EN 16348 is applicable

No specific relevant legislation/regulation for safety management systems. However some requirements can be obtained from the decrees/directives listed in 6.1.1.1

15.7.1.1 National law/ Federal law

— Decreto Ministeriale 17/04/08, Regola tecnica per la progettazione, costruzione, collaudo, esercizio e sorveglianza delle opere e degli impianti di trasporto del gas naturale con densità non superiore a 0,8

(Ministry Decree 17/04/08 – Technical regulations for design , construction, testing, operation and surveillance of natural gas transport networks);

— Decreto Ministeriale 4 aprile 2014, Norme tecniche per gli attraversamenti e per i parallelismi di condotte e canali convoglianti liquidi e gas con ferrovie ed altre linee di trasporto (Ministry Decree 4 aprile 2014- Technical standards for crossing and parallelism of pipes and ducts carrying liquids and gas with railways and other transportation lines.);

— Decreto Legislativo 9 aprile 2008 , n. 81, Attuazione dell'articolo 1 della legge 3 agosto 2007, n. 123, in materia di tutela della salute e della sicurezza nei luoghi di lavoro. (Legislative Decree 9 April 2008 no. 81, Implementation of Article 1 of the Law of 3 August 2007, n. 123, concerning the protection of health and safety in the workplace.);

— Autorità per l'energia elettrica e il gas e il sistema idrico (AEEGSI) - Deliberazione 602/2013/R/gas regolazione della qualità del servizio di trasporto del gas naturale per il periodo di regolazione 2014-2017 – Parte I del testo unico della regolazione della qualità e delle tariffe per i servizi di trasporto e dispacciamento del gas naturale per il periodo di regolazione 2014-2017 (Regulatory Authority for Electricity, Gas and Water (AEEGSI) – Directive n. 602/2013 Adjusting the quality of the transportation service of natural gas for the period of adjustment 2014-2017) - Part I Consolidated regulation of the quality and pricing of transport services and dispatching of natural gas for the regulatory period 2014-2017.

15.7.1.2 NSB National Functional standards

No specific national standards exist.

15.7.1.3 Technical rules – (Detailed) Code of practice

The technical rules when issued by ministerial decree are compulsory. The directives issued by Regulatory Authority for Electricity and Gas (Aeeg) are compulsory. The guidelines issued by CIG (Italian Gas Committee) support some requirements given in the Aeeg Directives.

CIG Guidelines:

— Le forniture di emergenza di gas naturale mediante carro bombolaio e/o veicolo cisterna (Gas transport- Emergency gas supplies by vehicles);

— La gestione delle emergenze di servizio nei sistemi di trasporto del gas naturale (Gas emergency management in transport networks).

15.7.2 More restrictive requirements in Italian legislation/ regulations

15.7.2.1 General

No detailed specification needed.

15.7.2.2 Clauses to note regarding EN 16348:2013

No detailed specification needed.

15.8 Page for the Netherlands (EN 16348)

15.8.1 Relevant Dutch legislation/regulation for SMS and PIMS in gas transmission to which EN 16348 is applicable

15.8.1.1 National law/ Federal law

— AMVB - Besluit van 27 oktober 2011 tot vaststelling van veiligheidseisen voor het transport van gas door buisleidingen bij een druk lager dan 16 bar (Besluit veiligheid lage druk gastransport)

— GASWET, WET van 22 juni 2000, houdende regels omtrent het transport en de levering van gas (Gas Act 2000 (Management on quality aspects of gas distribution systems))

— Besluit van 28 november 2006, houdende regels met betrekking tot de registratie van gegevens externe veiligheid inrichtingen, transportroutes en buisleidingen (Registratiebesluit externe veiligheid)

15.8.1.2 NSB National Functional standards

None.

15.8.1.3 Technical rules – (Detailed) Code of practice

— NTA 8120:2014, Assetmanagement - Eisen aan een veiligheids-, kwaliteits- en capaciteitsmanagementsysteem voor het elektriciteits- en gasnetbeheer (Asset management - Requirements for a safety, quality and capacity management system for electricity and gas network operations);

— NTA 8000:2009, Specificatie voor een risicomanagementsysteem (RMS) voor risico's van buisleidingsystemen voor het transport van gevaarlijke stoffen in de beheerfase (Specification of a Risk Management System (RMS) for pipeline systems for the transport of hazardous substances during operations);

— NTA 8620:2006, Specificatie van een veiligheidsmanagementsysteem voor risico's van zware ongevallen (Specification of a safety management system for major accidents hazards).

15.8.2 More restrictive requirements in Dutch legislation/ regulations

15.8.2.1 General

No detailed specifications needed.

15.8.2.2 Clauses to note regarding EN 16348:2013

No detailed specifications needed.

15.9 Page for UK

The UK gas safety legislation does not lend itself to the detailed breakdown given by other countries. If any interested party needs to understand the UK safety system the references given supply the latest information from the source of authority.

The United Kingdom Safety Regulator for Industry and Commerce is the: *Health and Safety Executive.* The principle UK Health and Safety Legislation is the *Health and Safety at Work Act 1974, as amended*. This Act has many branches with detailed regulations for the various sectors of Industry and Commerce.

http://www.hse.gov.uk/legislation/hswa.htm

The various Licenses issued by OFGEM for UK Gas Transport, Storage and Gas Supply etc. have a clause to ensure that the Licensee operates safely and securely. The HSE has a special website for *Gas* and a section for *Gas Supply.* This site describes the principle regulations governing gas supply and provides the related *Regulations* and the *Advisory Codes of Practice*:-

http://www.hse.gov.uk/gas/supply/legislation.htm

The UK safety legislation is *goal setting* and the *HSE* has worked for many years with the UK gas industry through the *Institution of Gas Engineers and Managers* to develop more detailed technical standards for the various elements of the gas infrastructure. These cover a range of topics, e.g.:-

— Pipelines Safety Regulations;

— Pressure Systems Safety Regulations;

— Gas Safety (Management) Regulations;

— Gas Safety (Installation and Use) Regulations;

— Dangerous Substances and Explosive Atmospheres Regulations;

— Reporting of Injuries, Diseases and Dangerous Occurrences Regulations;

— Building Regulations;

— Health and Safety at Work etc. Act;

— Management of Health and Safety at Work Regulations;

— Pressure Equipment Regulations,

— Electricity at Work Regulations

The Full List of current IGEM standards and prices for January 2013 are at:-

http://www.igem.org.uk/media/227989/igem%20standards%20list%20january%202013.pdf

When the CEN TC 234 ENs were published first in 2000, IGEM brought its Standards into line with these ENs, e.g. as regards pressure range and the 16 bar limit for EN 1594 and EN 12007 series.

Under the UK Safety Legislation, Licensed gas transporters, distributors and storage operators etc. are subject to a *Safety Case Regime,* which requires specific approval of the detail in the *Safety Case* by the HSE before operations can commence. This detail includes technical requirements for the design, construction, testing commissioning and operation under both normal and emergency conditions. The *Safety Case* document also covers quality management processes to ensure safety and security of gas supply according to the approved Safety Case. For this purpose, many Licensed Operators of gas infrastructure have their own complete technical and safety management details documented fully as part of their *Safety Case*. This detail describes how their business intends to operate under its License in order to ensure safety of the public and of the workforce.

16 Relevant national legislation/regulation for safety management systems in distribution to which CEN/TS 15399:2007 is applicable

16.1 Page for Austria (CEN/TS 15399)

16.1.1 Relevant Austrian legislation/regulation for safety management systems for gas distribution network to which CEN/TS 15399:2007 is applicable

16.1.1.1 National law/ Federal law

— BGBl. I Nr. 107/2011, Gaswirtschaftsgesetz (National gas law);

— BGBl. II Nr.171/2012, Gas-Marktmodell-Verordnung 2012 (Natural gas market regulation);

— BGBl. II Nr. 172/2012, Gasnetzdienstleistungsqualitäts-Verordnung (Gasgrid service quality regulation);

— BGBl. II Nr. 309/2012, Gas-Systemnutzungsentgelte-Verordnung 2013 (Gas system usage fee regulation);

— BGBl. II Nr. 439/2011, Sonstige Transporte-Gas-Systemnutzungstarife Verordnung Novelle 2012 (Additional transport gas system usage regulation amendment 2012).

Source of supply:

Rechtsinformationssystem des Bundes (RIS)

www.ris.bka.gv.at

Energie-Control Austria

Rudolfsplatz 13a

A-1010 Wien

http://www.e-control.at/de/recht/bundesrecht/gas

16.1.1.2 NSB National Functional standards

None.

16.1.1.3 Technical rules – (detailed) Code of practice

— ÖVGW G 65: Sicherheitskonzept mit Sicherheitsbericht und Notfallplanung für Erdgasleitungsanlagen (Safety conept with safety report and emergency design for natural gas mains).

Source of supply:
Österreichische Vereinigung für das Gas- und Wasserfach
Schubertring 14
1010 Wien
Austria
www.ovgw.at

16.1.2 More restrictive requirements in Austrian legislation/ regulations

16.1.2.1 General

No detailed specification needed.

16.1.2.2 Clauses to note regarding CEN/TS 15399:2007

No detailed specification needed.

16.2 Page for Finland (CEN/TS 15399)

16.2.1 Relevant Finnish legislation/regulation for safety management systems in gas distribution to which CEN/TS 15399:2007 is applicable

16.2.1.1 National law/ Federal law

— **Laki vaarallisten kemikaalien ja räjähteiden käsittelyn turvallisuudesta 390/2005** (Act on the Safe Handling and Storage of Dangerous Chemicals and Explosives (390/2005));

— **Valtioneuvoston asetus maakaasun käsittelyn turvallisuudesta 551/2009** (Government Decree on Natural Gas Safety);

— Valtioneuvoston asetus maakaasu-, nestekaasu- ja öljylämmityslaitteistojen asennus- ja huoltotoimintaa sekä maanalaisten öljysäiliöiden tarkastusta harjoittavien hyväksymisestä 558/2012 **(Government Decree on approval of installation and maintenance companies)**

16.2.1.2 NSB National Functional standards

— SFS 2897 Maakaasuputkisto**. Painekoe** (Natural gas pipeline - Pressure test, 1987-05-18)

16.2.1.3 Technical rules – (detailed) Code of practice

— Maakaasukäsikirja, Suomen Kaasuyhdistys, Marraskuu 2010 (Natural gas - Codes of practise, Finnish Gas Association, November 2010)

16.2.2 More restrictive requirements in Finnish legislation/ regulations

16.2.2.1 General

As a result of circumstances in Finland there is some restrictive legislation concerning the gas infrastructure. These regulations are stated in annex 1 and annex 2 in Valtioneuvoston asetus maakaasun käsittelyn *turvallisuudesta 551/2009* (Government Decree on Natural Gas Safety).

16.2.2.2 Clauses to note regarding CEN/TS 15399:2007

— Annex 2 in Valtioneuvoston asetus maakaasun käsittelyn turvallisuudesta 551/2009 (Government Decree on Natural Gas Safety)

16.3 Page for France (CEN/TS 15399)

16.3.1 Relevant French legislation/regulation for safety management systems in gas distribution to which CEN/TS 15399:2007 is applicable

16.3.1.1 National law

— Arrêté du 13 juillet 2000 modifié, portant règlement de sécurité de la distribution de gaz combustible par canalisations

Source of supply:

Direction des Journaux Officiels
26 rue Desaix
F - 75727 PARIS Cedex 15.

16.3.1.2 Detailed code of practice

— RSDG2, Capacité technique et compétence des opérateurs de réseau de distribution de gaz combustibles.

Source of supply:

AFG, Association Française du gaz
8 rue de l'Hotel de ville
F-92200 Neuilly-sur-Seine
Phone: +33 1 80 21 08 00
Fax: +33 1 46 37 19 55

16.3.2 More restrictive requirements in French legislation/regulations

16.3.2.1 General

No detailed specification needed.

16.3.2.2 Clauses to note regarding CEN/TS 15399:2007

No detailed specification needed.

16.4 Page for Germany (CEN/TS 15399)

16.4.1 Relevant German legislation/regulation for safety management systems in gas distribution to which CEN/TS 15399:2007 is applicable

16.4.1.1 National law/ Federal law

— Gesetz über die Elektrizitäts- und Gasversorgung (Energiewirtschaftsgesetz - EnWG) vom 07. Juli 2005 (BGBl. I, S. 1970 (3621)), zuletzt geändert durch Art. 2 G v. 16. Januar 2012 (BGBI. I S. 74) (Energy Industry Act);

— Arbeitsschutzgesetz ASG, (Occupational health and safety act);

— Verordnung über Sicherheit und Gesundheitsschutz bei der Bereitstellung von Arbeitsmitteln und deren Benutzung bei der Arbeit, über Sicherheit beim Betrieb überwachungsbedürftiger Anlagen und über die Organisation des betrieblichen Arbeitsschutzes (Betriebssicherheitsverordnung – Ordinance concerning the protection of safety and health in the provision of work equipment and its use at work, concerning

safety when operating installations suject to monitoring and concerning the organisation of industrial safety and health at work (Ordinance on Industrial Safety and Health – BetrSichV);

— Vorschrift der Berufsgenossenschaft, BGV A1, "Allgemeine Vorschriften" (Regulations of professional association for occupational health and safety BGV A1, "General regulations").

Source of supply:

Bundesanzeiger Verlagsges. mbH Bonn
Bundesgesetzblatt
Postfach 13 20
D – 53003 Bonn
Germany

16.4.1.2 NSB National Functional standards

There are no national functional standards in addition to TS 15399.

In Germany, there exists an agreement between DVGW and DIN. Whilst the DIN is responsible for national product standards, the DVGW is responsible for the setting of functional technical rules.

All European standards, also the functional standards, are published as DIN EN standards. DVGW technical rules are aligned to DIN/DIN EN standards, where applicable.

The DIN standards related to gas are taken into account by DVGW and are part of the so called DVGW Set of Codes of practice.

16.4.1.3 Technical rules – (detailed) Code of practice

— DVGW G 1000, Anforderungen an die Qualifikation und die Organisation von Unternhehmen für den Betrieb von Anlagen zur leitungsgebundenen Versorgung der Allgemeinheit mit Gas (Gasversorgungsanlagen) – (Requirements on the qualification and organisation of enterprises operating installations for the pipeline-bound supply of the general public with gas (gas supply installations);

— DVGW GW 1200, Grundsätze und Organisation des Bereitschaftsdienstes für Gas- und Wasserversorgungsunternehmen – (Principles and organisation for stand-by emergency operation of gas and water suppliers).

Source of supply:

Wirtschafts- und Verlagsgesellschaft Gas und Wasser mbh
Postfach 14 01 51
D – 53056 Bonn
Germany

16.4.2 More restrictive requirements in German legislation/ regulations

16.4.2.1 General

More detailed requirements are specified in Federal Law and the above mentioned codes of practice./ No detailed specification is needed.

16.4.2.2 Clauses to note regarding CEN/TS 15399:2007

More detailed requirements are specified in Federal Law and the above mentioned codes of practice./ No detailed specification is needed.

16.5 Page for Greece (CEN/TS 15399)

16.5.1 Relevant Greek legislation/regulation for safety management systems in gas distribution to which CEN/TS 15399:2007 is applicable

16.5.1.1 National law/ Federal law

— Mimisterial Decision “Technical code for natural gas transmission systems with MOP over 16 bar” Governmental Gazette 603B/05.03.2012. “Τεχνικός Κανονισμός «Συστήματα μεταφοράς Φυσικού Αερίου με Μέγιστη Πίεση Λειτουργίας άνω των 16 bar”. (Ministerial Decision “Modifications on Technical code for natural gas transmission systems with MOP over 16 bar” Governmental Gazette 2101B/2012, “Τροποποίηση του 3/Α/οικ.4303/22-02-2012 Τεχνικού Κανονισμού «Συστήματα μεταφοράς Φυσικού Αερίου με Μέγιστη Πίεση Λειτουργίας άνω των 16 bar»”.

16.6 Page for Hungary (CEN/TS 15399)

16.6.1 Relevant Hungarian legislation/regulation for safety management systems in gas distribution to which CEN/TS 15399:2007 is applicable

16.6.1.1 National law/ Federal law

— **Law XL of 2008**: Natural Gas Supply (Gas Act)

— **Government Law Decree 19/2009 (I. 30.)**: On the implementation of provisions of Law XL of 2008

— **GKM (Ministry of Economy and Transport) Decree 80/2005. (X. 11.)**: Safety requirements for gas supply pipelines and publishing the safety regulations for gas supply pipelines

— **Government Law Decree 53/2012. (III. 28.)**: Regulations on statutory procedures for specific buildings that belong to the scope of competence of the mining authority

— **11/2004. (II. 13.) GKM rendelet** a gáz csatlakozó vezetékekre és fogyasztói berendezésekre vonatkozó műszaki-biztonsági előírásokról (GKM (Ministry of Economy and Transport) Decree 11/2004))

16.6.1.2 NSB National Functional standards

None.

16.6.1.3 Technical rules – (detailed) Code of practice

None.

16.6.2 More restrictive requirements in Hungarian legislation/ regulations

16.6.2.1 General

None.

16.6.2.2 Clauses to note regarding CEN/TS 15399:2007

None.

16.7 Page for Italy (CEN/TS 15399)

16.7.1 Relevant Italian legislation/regulation for safety management systems in gas distribution to which CEN/TS 15399:2007 is applicable

No specific relevant legislation/regulation for safety management systems. However some requirements can be obtained from the decrees/directives listed in 6.1.3.1

16.7.1.1 National law/ Federal law

— Legge 6 dicembre 1971, n. 1083, Norme per la sicurezza dell'impiego del gas combustibile (Law 06/12/1971 n. 1083 "Safety in the use of combustible gases");

— Decreto 12 aprile 1996, Approvazione della regola tecnica di prevenzione incendi per la progettazione, la costruzione e l'esercizio degli impianti termici alimentati da combustibili gassosi (Decree of April 12, 1996 - Approval of technical rules of fire prevention for the design, construction and operation of thermal plants fuelled by gaseous fuels);

— Decreto Ministeriale 16/04/08, Regola tecnica per la progettazione, costruzione, collaudo, esercizio e sorveglianza delle opere e dei sistemi di distribuzione e di linee dirette del gas naturale con densità non superiore a 0,8 (Ministry Decree 16/04/08 – Technical regulations for design , construction, ,testing, operation and surveillance of natural gas distribution networks);

— Decreto Ministeriale 17/04/08 Regola tecnica per la progettazione, costruzione, collaudo, esercizio e sorveglianza delle opere e degli impianti di trasporto del gas naturale con densità non superiore a 0,8 (Ministry Decree 17/04/08 – Technical regulations for design , construction, testing, operation and surveillance of natural gas transport networks);

— Decreto Ministeriale 4 aprile 2014Norme tecniche per gli attraversamenti e per i parallelismi di condotte e canali convoglianti liquidi e gas con ferrovie ed altre linee di trasporto. (Ministry Decree 4 aprile 2014- Technical standards for crossing and parallelism of pipes and ducts carrying liquids and gas with railways and other transportation lines.);

— Decreto Ministeriale 01/12 2004, n. 329 Regolamento recante norme per la messa in servizio ed utilizzazione delle attrezzature a pressione e degli insiemi di cui all'articolo 19 del decreto legislativo 25 febbraio 2000, n. 93. (Ministerial Decree 01/12 2004, n. 329 Regulations for commissioning and use of pressure equipment and assemblies referred to in Article 19 of Legislative Decree 25 February 2000, n. 93);

— Decreto Legislativo 9 aprile 2008 , n. 81, Attuazione dell'articolo 1 della legge 3 agosto 2007, n. 123, in materia di tutela della salute e della sicurezza nei luoghi di lavoro (Legislative Decree 9 April 2008 no. 81, Implementation of Article 1 of the Law of 3 August 2007, n. 123, concerning the protection of health and safety in the workplace;

— Lettera circolare n. 6181/2014 del Ministero dell'interno: "D.M. 12 aprile 1996 "Approvazione della regola tecnica di prevenzione incendi per la progettazione, la costruzione e l'esercizio degli impianti termici alimentati da combustibili gassosi"- Indicazioni applicative" (circular letter n. 6181/2014 of Ministry of Interior - Decree of April 12, 1996 - Approval of technical rules of fire prevention for the design, construction and operation of thermal plants fuelled by gaseous fuels – Application recommendations);

— Autorità per l'energia elettrica e il gas e il sistema idrico (AEEGSI) - Deliberazione 602/2013/R/gas regolazione della qualità del servizio di trasporto del gas naturale per il periodo di regolazione 2014-2017 – Parte I del testo unico della regolazione della qualità e delle tariffe per i servizi di trasporto e dispacciamento del gas naturale per il periodo di regolazione 2014-2017 (Regulatory Authority for Electricity, Gas and Water (AEEGSI) – Directive n. 602/2013 Adjusting the quality of the transportation service of natural gas for the period of adjustment 2014-2017) - Part I Consolidated regulation of the

quality and pricing of transport services and dispatching of natural gas for the regulatory period 2014-2017;

— Autorità per l'energia elettrica il gas e il sistema idrico (AEEGSI) - Deliberazione n. 574/2013/R/GAS - Regolazione della qualità dei servizi di distribuzione e misura del gas per il periodo di regolazione 2014-2019 - Parte I del testo unico della regolazione della qualità e delle tariffe dei servizi di distribuzione e misura del gas per il periodo di regolazione 2014-2019 (Regulatory Authority for Electricity, Gas and Water (AEEGSI) – Directive n. 574/2013, Regulation of the quality of distribution and measurement services for the regulatory period 2014-2019: Part I "Adjusting the quality and the pricing for the distribution and measurement services of natural gas for the period of adjustment 2014-2019).

16.7.1.2 NSB National Functional standards

No specific NSB National Functional standards for safety management systems exist.

16.7.1.3 Technical rules – (detailed) Code of practice

The technical rules when issued by ministerial decree are compulsory. The directives issued by Regulatory Authority for Electricity and Gas (Aeeg) are compulsory. The guidelines issued by CIG (Italian Gas Committee) support some requirements given in the Aeeg Directives.

CIG Guidelines:

— La gestione delle emergenze da gas combustibile (Gas emergency management in distribution networks)

— Classificazione delle dispersioni di gas (Gas leaks – Classification)

— L'esecuzione delle attività di pronto intervento gas (Gas emergency – Activities in distribution networks)

— Linee guida per l'applicazione della normativa sismica nazionale alle attività di progettazione, costruzione e verifica dei sistemi di trasporto e distribuzione per gas combustibile (Seismic guidelines in gas supply)

— La gestione degli incidenti da gas combustibile (Gas accidents management in distribution networks)

— Esecuzione delle ispezioni programmate e localizzate delle dispersioni sulla rete di distribuzione per gas con densità < 0,8 e con densità > 0,8 (Settembre 2011) (Distribution networks – Gas leaks inspections)

— Le forniture di emergenza di gas naturale mediante carro bombolaio e/o veicolo cisterna (Gas transport-Emergency gas supplies by vehicles)

16.7.2 More restrictive requirements in Italian legislation/ regulations

16.7.2.1 General

No detailed specification needed.

16.7.2.2 Clauses to note regarding CEN/TS 15399:2007

No detailed specification needed.

16.8 Page for the Netherlands (CEN/TS 15399)

16.8.1 More restrictive requirements in Dutch legislation/ regulations

16.8.1.1 General

No detailed specifications needed.

16.8.1.2 Clauses to note regarding EN 16348:2013

No detailed specifications needed.

16.8.2 Relevant Dutch legislation/regulation for safety management systems in gas distribution to which CEN/TS 15399:2007 is applicable

16.8.2.1 National law/ Federal law

— AMVB - Besluit van 27 oktober 2011 tot vaststelling van veiligheidseisen voor het transport van gas door buisleidingen bij een druk lager dan 16 bar (Besluit veiligheid lage druk gastransport);

— GASWET, WET van 22 juni 2000, houdende regels omtrent het transport en de levering van gas (Gas Act 2000 (Management on quality aspects of gas distribution systems));

— Besluit van 28 november 2006, houdende regels met betrekking tot de registratie van gegevens externe veiligheid inrichtingen, transportroutes en buisleidingen (Registratiebesluit externe veiligheid).

16.8.2.2 NSB National Functional standards

None.

16.8.2.3 Technical rules – (Detailed) Code of practice

— NTA 8120:2014, Assetmanagement - Eisen aan een veiligheids-, kwaliteits- en capaciteitsmanagementsysteem voor het elektriciteits- en gasnetbeheer (Asset management - Requirements for a safety, quality and capacity management system for electricity and gas network operations);

— NTA 8000:2009, Specificatie voor een risicomanagementsysteem (RMS) voor risico's van buisleidingsystemen voor het transport van gevaarlijke stoffen in de beheerfase (Specification of a Risk Management System (RMS) for pipeline systems for the transport of hazardous substances during operations);

— NTA 8620:2006, Specificatie van een veiligheidsmanagementsysteem voor risico's van zware ongevallen (Specification of a safety management system for major accidents hazards).

16.8.3 More restrictive requirements in Dutch legislation/ regulations

16.8.3.1 General

No detailed specifications needed.

16.8.3.2 Clauses to note regarding CEN/TS 15399:2007

No detailed specifications needed.

16.9 Page for UK

The UK gas safety legislation does not lend itself to the detailed breakdown given by other countries. If any interested party needs to understand the UK safety system the references given supply the latest information from the source of authority.

The United Kingdom Safety Regulator for Industry and Commerce is the: *Health and Safety Executive.* The principle UK Health and Safety Legislation is the *Health and Safety at Work Act 1974, as amended*. This Act has many branches with detailed regulations for the various sectors of Industry and Commerce.

http://www.hse.gov.uk/legislation/hswa.htm

The various Licenses issued by OFGEM for UK Gas Transport, Storage and Gas Supply etc. have a clause to ensure that the Licensee operates safely and securely. The HSE has a special website for *Gas* and a section for *Gas Supply.* This site describes the principle regulations governing gas supply and provides the related *Regulations* and the *Advisory Codes of Practice*:-

http://www.hse.gov.uk/gas/supply/legislation.htm

The UK safety legislation is *goal setting* and the *HSE* has worked for many years with the UK gas industry through the *Institution of Gas Engineers and Managers* to develop more detailed technical standards for the various elements of the gas infrastructure. These cover a range of topics, e.g.:-

— Pipelines Safety Regulations;

— Pressure Systems Safety Regulations;

— Gas Safety (Management) Regulations;

— Gas Safety (Installation and Use) Regulations;

— Dangerous Substances and Explosive Atmospheres Regulations;

— Reporting of Injuries, Diseases and Dangerous Occurrences Regulations;

— Building Regulations;

— Health and Safety at Work etc. Act;

— Management of Health and Safety at Work Regulations;

— Pressure Equipment Regulations;

— Electricity at Work Regulations.

The Full List of current IGEM standards and prices for January 2013 are at:

http://www.igem.org.uk/media/227989/igem%20standards%20list%20january%202013.pdf

When the CEN TC 234 ENs were published first in 2000, IGEM brought its Standards into line with these ENs, e.g. as regards pressure range and the 16 bar limit for EN 1594 and EN 12007 series.

Under the UK Safety Legislation, Licensed gas transporters, distributors and storage operators etc. are subject to a *Safety Case Regime,* which requires specific approval of the detail in the *Safety Case* by the HSE before operations can commence. This detail includes technical requirements for the design, construction, testing commissioning and operation under both normal and emergency conditions. The *Safety Case* document also covers quality management processes to ensure safety and security of gas supply according to the approved Safety Case. For this purpose, many Licensed Operators of gas infrastructure have their own complete technical and safety management details documented fully as part of their *Safety Case*. This detail describes how their business intends to operate under its License in order to ensure safety of the public and of the workforce.

17 Contact Points

17.1 Contact point for Italy

Comitato Italiano Gas (CIG)

Federated Body to UNI

Via Larga, 2

20122 Milano

Phone : + 33 02 – 724906

Fax :+ 33 02 – 72001646

Internet : www.cig.it

e.mail: francesco.castorina@cig.it

17.2 Contact point for France

Bureau de Normalisation du Gaz (BNG)

AFG, Association Française du gaz

8 rue de l'Hotel de ville

F-92200 Neuilly-sur-Seine

Phone: +33 1 80 21 08 00

Fax: +33 1 46 37 19 55

The Association Française de Normalisation (AFNOR) is official member of CEN.

17.3 Contact point for Germany

Normenausschuss Gastechnologie im DIN e.V.
DVGW e.V. – Deutscher Verein des Gas- und Wasserfaches e.V. – Technisch-wissenschaftlicher Verein
(German technical and scientific association for gas and water),
Josef-Wirmer-Str. 1-3
D-53123 Bonn
Mail: info@dvgw.de
www.dvgw.de

17.4 Contact point for the Netherlands

NEN - Netherlands Standardization Institute

P.O. Box 5059

2600 GB Delft

Vlinderweg 6

2623 AX Delft

Phone : + 31 15 – 2 690 390

Fax :+ 31 15 – 2 690 207

Internet : www.nen.nl

e.mail: info@nen.nl

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