



National Standards Authority of Ireland

IRISH STANDARD

I.S. CLC/TS 50430

ICS 33.180.10

**OPTICAL FIBRE CABLES - GAS PIPE CABLES
- FAMILY SPECIFICATION FOR CABLES TO
BE INSTALLED IN HIGH PRESSURE GAS
PIPES**

National Standards
Authority of Ireland
Glasnevin, Dublin 9
Ireland

Tel: +353 1 807 3800
Fax: +353 1 807 3838
<http://www.nsai.ie>

Sales
<http://www.standards.ie>

*This Irish Standard was
published under the
authority of the National
Standards Authority of
Ireland
and comes into effect on:
March 2, 2005*

**NO COPYING WITHOUT NSAI
PERMISSION EXCEPT AS
PERMITTED BY COPYRIGHT
LAW**

© NSAI 0430

Price Code J

Údarás um Chaighdeáin Náisiúnta na hÉireann

TECHNICAL SPECIFICATION

CLC/TS 50430

SPECIFICATION TECHNIQUE

TECHNISCHE SPEZIFIKATION

February 2005

ICS 33.180.10

English version

**Optical fibre cables –
Gas pipe cables –
Family specification for cables to be installed
in high pressure gas pipes**

Lichtwellenleiterkabel –
Kabel für Gasleitungen –
Familienspezifikation für Kabel zu
Montage in Hochdruckgasleitungen

This Technical Specification was approved by CENELEC on 2004-09-11.

CENELEC members are required to announce the existence of this TS in the same way as for an EN and to make the TS available promptly at national level in an appropriate form. It is permissible to keep conflicting national standards in force.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

CENELEC

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

Foreword

This Technical Specification was prepared by the Technical Committee CENELEC TC 86A, Optical fibres and optical fibre cables.

The text of the draft was submitted to the vote and was approved by CENELEC as CLC/TS 50430 on 2004-09-11.

The following date was fixed:

- latest date by which the existence of the CLC/TS
has to be announced at national level (doa) 2005-03-11
-

Contents

		Page
1	Scope.....	5
2	Normative references.....	5
3	Symbols.....	6
4	Family specification for gas pipe cables and sub-ducts for installation by blowing and/or pulling/dragging in/into gas pipes (blank detail specification and minimum requirements)....	7
4.1	Construction.....	7
4.1.1	General.....	7
4.1.2	Sub-ducts.....	7
4.1.3	Gas pipe cables.....	7
4.2.	Product descriptions.....	8
4.2.1	Gas pipe cables description.....	8
4.2.1.1	Cable for installation within sub-ducts (previously installed into the gas pipe in between two adjacent I/O-ports).....	8
4.2.1.2	Cables for direct installation into the gas pipe.....	9
4.2.2	Sub-duct description.....	10
4.3	Optical fibres.....	11
4.3.1	Single-mode dispersion unshifted (B1.1) optical fibre.....	11
4.3.2	Single-mode dispersion shifted (B2) optical fibre.....	11
4.3.3	Single-mode non-zero dispersion (B4) optical fibre.....	11
4.3.4	Multimode fibres.....	12
4.4	High pressure gas pipe cable constructions.....	12
4.4.1	Cable for installation within sub-ducts (previously installed within high pressure gas pipe).....	12
4.4.2	Cable for direct installation within high pressure gas pipe.....	13
4.4.3	Sub-duct construction.....	14
4.5	Installation and operating conditions.....	14
4.5.1	Tests applicable to cables/cable elements.....	14
4.5.2	Installation conditions.....	14
4.6	Mechanical and environmental tests.....	15
4.6.1	Sub-ducts.....	15
4.6.1.1	Tests applicable.....	15
4.6.1.2	Details of family requirements and test conditions for sub-ducts.....	16
4.6.1.2.1	Pressure.....	16
4.6.1.2.2	Tensile performance.....	16
4.6.1.2.3	Kink.....	16
4.6.1.2.4	Crush.....	17
4.6.1.2.5	Impact.....	17
4.6.1.2.6	Flexibility.....	17
4.6.2	Cable for installation within sub-ducts (previously installed into the gas pipe).....	18
4.6.2.1	Tests applicable.....	18
4.6.2.2	Details of family requirements and test conditions for high pressure gas pipe cable tests.....	19
4.6.2.2.1	Tensile performance.....	19
4.6.2.2.2	Repeated bending.....	19
4.6.2.2.3	Torsion.....	20

4.6.2.2.4	Bend	20
4.6.2.2.5	Crush	20
4.6.2.2.6	Impact.....	21
4.6.2.2.7	Temperature cycling	21
4.6.2.3	Details of family requirements and test conditions for blowing performance of high pressure gas pipe cables to be installed in sub-ducts	22
4.6.3	Cables for direct installation into the high pressure gas pipe.....	23
4.6.3.1	Tests applicable.....	23
4.6.3.2	Details of family requirements and test conditions for high pressure gas pipe cables	24
4.6.3.2.1	Tensile performance	24
4.6.3.2.2	Repeated bending.....	24
4.6.3.2.3	Torsion.....	25
4.6.3.2.4	Bend	25
4.6.3.2.5	Crush	25
4.6.3.2.6	Impact.....	26
4.6.3.2.7	Temperature cycling	26
4.7	Examples of sub-ducts and high pressure gas pipe cables.....	27
4.7.1	Cables for installation in sub-ducts within gas pipes.....	27
4.7.2	Cables for direct installation into the high pressure gas pipes	28
4.7.2.1	High pressure gas pipe cables	28
4.8	Examples for installation schemes of cables in high pressure gas pipes (Fiber-in-Gas)	29
4.8.1	Steel gas pipes	29
4.8.2	PE gas pipes.....	30
Annex A (informative) – O.F. cables for high pressure gas pipes		31

This is a free preview. Purchase the entire publication at the link below:

[Product Page](#)

-
- [Looking for additional Standards? Visit Intertek Inform Infostore](#)
 - [Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation](#)
-