



National Standards Authority of Ireland

IRISH STANDARD

I.S. EN 12716:2001

ICS 93.020

**EXECUTION OF SPECIAL GEOTECHNICAL  
WORKS - JET GROUTING**

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*This Irish Standard was  
published under the  
authority of the National  
Standards Authority of  
Ireland  
and comes into effect on  
October 26, 2001*

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EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**EN 12716**

May 2001

ICS 93.020

English version

## Execution of special geotechnical works - Jet grouting

Exécution des travaux géotechniques spéciaux - Colonnes,  
panneaux et structures de sol-ciment réalisés par jet

Ausführung von besonderen geotechnischen Arbeiten  
(Spezialtiefbau) - Dusenstrahlverfahren  
(Hochdruckinjektion, Hochdruckbodenvermortelung,  
Jetting)

This European Standard was approved by CEN on 16 April 2001.

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

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.



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## Foreword

This European Standard has been prepared by Technical Committee CEN/TC 288, "Execution of special geotechnical works", the secretariat of which is held by AFNOR.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by November 2001, and conflicting national standards shall be withdrawn at the latest by November 2001.

Annex A is normative, and the annexes B, C, D and E are informative.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

## 1 Scope

This Standard is applicable to the execution, testing and monitoring of jet grouting works. Design considerations, strictly related to jet grouting works only, are given in clause 7. More general requirements that could be included in, or substituted by clauses of future editions of Eurocode 7 are listed in Annex A.

NOTE The jet grouting processes should be distinguished from the grouting processes covered by EN 12715.

## 2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

ENV 197-1:1992, *Cement - Composition, specifications and conformity criteria - Part 1: Common cements*

prEN 1008:1997, *Mixing water for concrete - Specification for sampling, testing and assessing the suitability of water, including wash water from recycling installations in the concrete industry, as mixing water for concrete*

ENV 1992-1-1:1991, *Eurocode 2: Design of concrete structures - Part 1: General rules and rules for buildings*

ENV 1997-1:1994, *Eurocode 7: Geotechnical design - Part 1: General rules*

## 3 Terms and definitions

For the purposes of this European Standard, the following terms and definitions apply:

### 3.1

#### **jet grouting**

the jet grouting process consists of the disaggregation of the soil or weak rock and its mixing with, and partial replacement by, a cementing agent; the disaggregation is achieved by means of a high energy jet of a fluid which can be the cementing agent itself

### 3.2

#### **jet grouted element**

a volume of soil treated through a single borehole. The most common elements are :

- jet grouted column : a cylindrical jet grouted element (Fig.1 a) ;
- jet grouted panel : a planar jet grouted element (Fig.1 b).

### 3.3

#### **jet grouted structure**

an assembly of jet grouted elements which are partially or fully interlocked. The most common structures formed are :

- jet grouted diaphragm : a wall structure (Fig.2 a) ;
- jet grouted slab : a horizontal structure formed by essentially vertical jet grouting (Fig.2 b) ;
- jet grouted canopy : a structure formed by horizontal jet grouting – see 3.8 below (Fig.2 c) ;
- jet grouted block : a three-dimensional structure.

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