

National Standards Authority of Ireland

**IRISH STANDARD** 

### ENV 1996-2:1999

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EUROCODE 6: DESIGN OF MASONRY STRUCTURES - PART 2: DESIGN, SELECTION OF MATERIALS AND EXECUTION OF MASONRY

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# EUROPEAN PRESTANDARD PRÉNORME EUROPÉENNE EUROPÄISCHE VORNORM

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**English version** 

# Eurocode 6: Design of masonry structures - Part 2: Design, selection of materials and execution of masonry

Eurocode 6: Calcul des ouvrages en maçonnerie - Partie 2: Calcul, choix des matériaux et mise en oeuvre des maçonneries Eurocode 6: Bernessung und Konstruktion von Mauerwerksbauten - Teil 2: Plannung, Auswahl der Baustoffe und Ausführung von Mauerwerk

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

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# FOREWORD

#### **Objectives of the Eurocodes**

(1) The "Structural Eurocodes" comprise a group of standards for the structural and geotechnical design of buildings and civil engineering works.

(2) They cover execution and control only to the extent that is necessary to indicate the quality of the construction products, and the standard of the workmanship needed to comply with the assumptions of the design rules.

(3) Until the necessary set of harmonized technical specifications for products and for the methods of testing their performance is available, some of the Structural Eurocodes cover some of these aspects in informative Annexes.

#### **Background of the Eurocode Programme**

(4) The Commission of the European Communities (CEC) initiated the work of establishing a set of harmonized technical rules for the design of building and civil engineering works which would initially serve as an alternative to the different rules in force in the various Member States and would ultimately replace them. These technical rules became known as the "Structural Eurocodes".

(5) In 1990, after consulting their respective Member States, the CEC transferred the work of further development, issue and updating of the Structural Eurocodes to CEN, and the EFTA Secretariat agreed to support the CEN work.

(6) CEN Technical Committee CEN/TC250 is responsible for all Structural Eurocodes.

#### **Eurocode Programme**

(7) Work is in hand on the following Structural Eurocodes, each generally consisting of a number of parts:

EN 1991 Eurocode 1	Basis of design and actions on structures
EN 1992 Eurocode 2	Design of concrete structures
EN 1993 Eurocode 3	Design of steel structures
EN 1994 Eurocode 4	Design of composite steel and concrete structures
EN 1995 Eurocode 5	Design of timber structures
EN 1996 Eurocode 6	Design of masonry structures
EN 1997 Eurocode 7	Geotechnical design
EN 1998 Eurocode 8	Design provisions for earthquake resistance of structures
EN 1999 Eurocode 9	Design of aluminium alloy structures

(8) Separate sub-committees have been formed by CEN/TC250 for the various Eurocodes listed above.

(9) This part 2 of Eurocode 6 is being published as a European Prestandard (ENV) with an initial life of three years.

(10) This Prestandard is intended for experimental application and for the submission of comments.

(11) After approximately two years CEN members will be invited to submit formal comments to be taken into account in determining future actions.

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(12) Meanwhile feedback and comments on this Prestandard should be sent to the Secretariat of CEN/TC 250/SC6 at the following address:

DIN - NABau, Burggrafenstrasse 6, Postfach 1107 D107732 - BERLIN 30, Germany.

or to your national standards organization.

#### National Application Documents (NADs)

(13) In view of the responsibilities of authorities in member countries for safety, health and other matters covered by the essential requirements of the Construction Products Directive (CPD), certain safety elements in this ENV have been assigned indicative values which are identified by [] ("boxed values"). The authorities in each member country are expected to review the "boxed values" and <u>may</u> substitute alternative definitive values for these safety elements for use in national application.

(14) Some of the supporting European or International standards might not be available by the time this Prestandard is issued. It is therefore anticipated that a National Application Document (NAD) giving any substitute definitive values for safety elements, referencing compatible supporting standards and providing guidance on the national application of this Prestandard, will be issued by each member country or its Standards Organization.

(15) It is intended that this Prestandard is used in conjunction with the NAD valid in the country where the building or civil engineering works is located.

#### Matters specific to this Prestandard

(16) The scope of Eurocode 6 is defined in ENV 1996-1-1, and this includes information on the other Parts of Eurocode 6 and the further Parts which are planned.

(17) The scope of this Part of Eurocode 6 is defined in its clause 1.1.

(18) This Part 2 of Eurocode 6 replaces all of Section 6 of ENV 1996-1-1. Section 6 will eventually be omitted from ENV 1996-1-1.

# 1 GENERAL

#### 1.1 Scope

(1)P The scope of Eurocode 6 for Masonry Structures as given in **1.1.1** of ENV 1996-1-1 applies also to this Part 2.

(2)P This Part 2 provides the necessary Principles and Application Rules for masonry to be designed and constructed satisfactorily in order to comply with the design assumptions of the other Parts of Eurocode 6. Except for the items as given in 1.1(3)P, it deals with ordinary aspects of masonry design and construction including:

- the selection of materials;

- methods of combining masonry materials and of incorporating other materials required to give functional performance;

- factors affecting the performance and durability of masonry;
- resistance of buildings to moisture penetration;
- storage, preparation and use of materials on site;
- the erection of walls and the connection of walls to walls and to other elements of structure;
- protective procedures during construction.
- (3)P This Part 2 does not cover the following items:
  - those aspects of masonry covered in other Parts of Eurocode 6;
  - applied wall finishes;
  - safety aspects of how masonry is erected;

- the environmental effects of masonry buildings, civil engineering works and structures on their surroundings.

#### **1.2** Distinction between Principles and Application Rules

(1)P Depending on the character of the individual paragraphs, a distinction is made in this Part between principles and application rules.

- (2)P The principles comprise:
  - general statements and definitions for which there is no alternative;
  - requirements for which no alternative is permitted unless specifically stated.
- (3) The Principles are identified by the letter P following the paragraph number.

(4)P The application rules are generally recognised rules that follow the principles and satisfy their requirements. Alternative rules different from the application rules given in this Part may be used



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