

# *Geregistreeerde Belgische norm*

**NBN EN 1995-2**

1e uitg., januari 2005

**Normklasse: B 03**

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## **Eurocode 5: Ontwerp en berekening van houtconstructies - Deel 2: Bruggen**

Eurocode 5: Conception et calcul des structures bois - Partie 2: Ponts

Eurocode 5: Design of timber structures - Part 2: Bridges

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### **Toelating tot publicatie: 15 december 2004**

Vervangt NBN ENV 1995-2 (1997).

Deze Europese norm EN 1995-2:2004 heeft de status van een Belgische norm.

Deze Europese norm bestaat in drie officiële versies (Duits, Engels, Frans).

Er is bij het NBN ook een Nederlandstalige versie beschikbaar, die dezelfde status heeft als de officiële versies.

Deze norm mag in België slechts samen met zijn nationale bijlage (ANB) worden toegepast. Deze laatste legt hoofdzakelijk de waarden van de parameters vast die op nationaal vlak worden bepaald.

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*norme belge  
enregistrée*

**NBN EN 1995-2**

1e éd., janvier 2005

**Indice de classement: B 03**

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## **Eurocode 5: Conception et calcul des structures bois - Partie 2: Ponts**

Eurocode 5: Ontwerp en berekening van houtconstructies - Deel 2: Bruggen

Eurocode 5: Design of timber structures - Part 2: Bridges

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### **Autorisation de publication: 15 décembre 2004**

Remplace NBN ENV 1995-2 (1997).

La présente norme européenne EN 1995-2:2004 a le statut d'une norme belge.

La présente norme européenne existe en trois versions officielles (allemand, anglais, français).

Une version en néerlandais, ayant le même statut que les versions officielles, est également disponible au NBN.

Cette norme ne peut être utilisée en Belgique qu'en combinaison avec son annexe nationale (ANB) qui fixe principalement la valeur des paramètres à déterminer au niveau national.

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# NATIONAAL VOORWOORD

## van NBN EN 1995-2:2005

1. De norm NBN EN 1995-2:2005 «Eurocode 5 – Ontwerp en berekening van houtconstructies – Deel 2: Bruggen» omvat de nationale bijlage NBN EN 1995-2 ANB:2012 met een normatief karakter in België. Hij vervangt vanaf de datum van de publicatie in het Belgische Staatsblad van de bekrachtiging van de norm NBN EN 1995-2 ANB:2012 de volgende norm:

NBN ENV 1995-2:1997 “Eurocode 5: Ontwerp van houten draagsystemen - Deel 2: Bruggen”

2. De Nederlandstalige versie van EN 1995-2 is tot stand gekomen op basis van een voorkeurterminologie die in samenwerking tussen het NBN en het NEN is opgesteld. Daarbij werd voor elk begrip een unieke woordkeuze gemaakt. Dit heeft als gevolg dat in de norm uitdrukkingen voorkomen die in één van de twee landen minder gebruikelijk zijn. Hierna volgt een lijst met synoniemen

Oorspronkelijke term (Engels)	Verplichte term (Nederlands)	Synoniem (B);(NL)
accidental design situation	buitengewone ontwerpsituatie, buitengewone ontwerptoestand	bijzondere toestand (N)
civil engineering work	civieltechnisch werk (kunstwerk)	werk van burgerlijke bouwkunde (B)
construction work	bouwwerk	werk (B)
shear modulus	glijdingsmodulus [buiten Eurocode 5]	afschuivingsmodulus [bij Eurocode 5]
bay	veld, vak	liggerveld
road bridge	wegverkeersbrug	verkeersbrug (N); wegbrug (B)

# AVANT-PROPOS NATIONAL À LA NBN EN 1995-2:2005

1. La norme NBN EN 1995-2:2005 "Eurocode 5: Conception et calcul des structures en bois – Partie 2 : Ponts" comprend l'annexe nationale NBN EN 1995-2 ANB:2012 qui a un caractère normatif en Belgique. Elle remplace à partir de la date de publication au Moniteur Belge de l'homologation de la norme NBN EN 1995-2 ANB:2012 la norme suivante :

NBN ENV 1995-2:1997 «Eurocode 5 - Calcul des structures en bois – Partie 2: Ponts».

2. La version de langue française de l'EN 1995-2 de 2004 a été rédigée en France par l'AFNOR. En conséquence, on y rencontre certaines expressions d'usage moins courant en Belgique.

Une liste de termes équivalents en Belgique est donnée ci-après :

<b>Terme de l'EN 1995-2</b>	<b>Equivalent en Belgique</b>
client	le maître de l'ouvrage assisté de ses bureaux d'architectes, d'ingénierie et de consultance
poteau	colonne

EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**EN 1995-2**

November 2004

ICS 91.010.30; 91.080.20; 93.040

Supersedes ENV 1995-2:1997

English version

## Eurocode 5: Design of timber structures - Part 2: Bridges

Eurocode 5: Conception et calcul des structures bois -  
Partie 2: Ponts

Eurocode 5: Bemessung und Konstruktion von Holzbauten  
- Teil 2: Brücken

This European Standard was approved by CEN on 26 August 2004.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

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 Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies 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.



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

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## Foreword

This European Standard EN 1995-2 has been prepared by Technical Committee CEN/TC250 “Structural Eurocodes”, the Secretariat of which is held by BSI.

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 May 2005, and conflicting national standards shall be withdrawn at the latest by March 2010.

This European Standard supersedes ENV 1995-2:1997.

CEN/TC250 is responsible for all Structural Eurocodes.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: 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.

## Background of the Eurocode programme

In 1975, the Commission of the European Community decided on an action programme in the field of construction, based on article 95 of the Treaty. The objective of the programme was the elimination of technical obstacles to trade and the harmonisation of technical specifications.

Within this action programme, the Commission took the initiative to establish a set of harmonised technical rules for the design of construction works which, in a first stage, would serve as an alternative to the national rules in force in the Member States and, ultimately, would replace them.

For fifteen years, the Commission, with the help of a Steering Committee with Representatives of Member States, conducted the development of the Eurocodes programme, which led to the first generation of European codes in the 1980s.

In 1989, the Commission and the Member States of the EU and EFTA decided, on the basis of an agreement<sup>1</sup> between the Commission and CEN, to transfer the preparation and the publication of the Eurocodes to CEN through a series of Mandates, in order to provide them with a future status of European Standard (EN). This links de facto the Eurocodes with the provisions of all the Council's Directives and/or Commission's Decisions dealing with European standards (e.g. the Council Directive 89/106/EEC on construction products – CPD – and Council Directives 93/37/EEC, 92/50/EEC and 89/440/EEC on public works and services and equivalent EFTA Directives initiated in pursuit of setting up the internal market).

The Structural Eurocode programme comprises the following standards, generally consisting of a number of Parts:

EN 1990:2002	Eurocode: Basis of Structural Design
EN 1991	Eurocode 1: 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

<sup>1</sup> Agreement between the Commission of the European Communities and the European Committee for Standardisation (CEN) concerning the work on EUROCODES for the design of building and civil engineering works (BC/CEN/03/89).

## EN 1995-2:2004 (E)

EN 1998 Eurocode 8: Design of structures for earthquake resistance  
 EN 1999 Eurocode 9: Design of aluminium structures

Eurocode standards recognise the responsibility of regulatory authorities in each Member State and have safeguarded their right to determine values related to regulatory safety matters at national level where these continue to vary from State to State.

### Status and field of application of Eurocodes

The Member States of the EU and EFTA recognise that Eurocodes serve as reference documents for the following purposes:

- as a means to prove compliance of building and civil engineering works with the essential requirements of Council Directive 89/106/EEC, particularly Essential Requirement N°1 – Mechanical resistance and stability – and Essential Requirement N°2 – Safety in case of fire;
- as a basis for specifying contracts for construction works and related engineering services ;
- as a framework for drawing up harmonised technical specifications for construction products (ENs and ETAs)

The Eurocodes, as far as they concern the construction works themselves, have a direct relationship with the Interpretative Documents<sup>2</sup> referred to in Article 12 of the CPD, although they are of a different nature from harmonised product standards<sup>3</sup>. Therefore, technical aspects arising from the Eurocodes work need to be adequately considered by CEN Technical Committees and/or EOTA Working Groups working on product standards with a view to achieving full compatibility of these technical specifications with the Eurocodes.

The Eurocode standards provide common structural design rules for everyday use for the design of whole structures and component products of both a traditional and an innovative nature. Unusual forms of construction or design conditions are not specifically covered and additional expert consideration will be required by the designer in such cases.

### National Standards implementing Eurocodes

The National Standards implementing Eurocodes will comprise the full text of the Eurocode (including any annexes), as published by CEN, which may be preceded by a National title page and National foreword, and may be followed by a National annex.

The National annex may only contain information on those parameters which are left open in the Eurocode for national choice, known as Nationally Determined Parameters, to be used for the design of buildings and civil engineering works to be constructed in the country concerned, i.e.:

- values and/or classes where alternatives are given in the Eurocode;
- values to be used where a symbol only is given in the Eurocode;
- country specific data (geographical, climatic, etc.), e.g. snow map;
- the procedure to be used where alternative procedures are given in the Eurocode;

<sup>2</sup> According to Art. 3.3 of the CPD, the essential requirements (ERs) shall be given concrete form in interpretative documents for the creation of the necessary links between the essential requirements and the mandates for harmonised ENs and ETAGs/ETAs.

<sup>3</sup> According to Art. 12 of the CPD the interpretative documents shall :  
 give concrete form to the essential requirements by harmonising the terminology and the technical bases and indicating classes or levels for each requirement where necessary ;  
 indicate methods of correlating these classes or levels of requirement with the technical specifications, e.g. methods of calculation and of proof, technical rules for project design, etc. ;  
 serve as a reference for the establishment of harmonised standards and guidelines for European technical approvals.

The Eurocodes, *de facto*, play a similar role in the field of the ER 1 and a part of ER 2.