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**EUROCODE 5 – DESIGN OF TIMBER
STRUCTURES – PART 1-1: GENERAL RULES
AND RULES FOR BUILDINGS**

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EUROPÄISCHE VORNORM

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Descriptors: Buildings, timber structures, computations, building codes, rules of calculation

English version

**Eurocode 5 - Design of timber structures - Part
1-1: General rules and rules for buildings**

Eurocode 5 - Calcul des structures en bois -
Partie 1-1: Règles générales et règles pour les
bâtiments

Eurocode 5 - Bemessung und Konstruktion von
Holzbauten - Teil 1-1: Allgemeine
Bemessungsregeln und Regeln für den Hochbau

This European Prestandard (ENV) was approved by CEN on 1992-11-20 as a prospective standard for provisional application. The period of validity of this ENV is limited initially to three years. After two years the members of CEN will be requested to submit their comments, particularly on the question whether the ENV can be converted into an European Standard (EN).

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CEN

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

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FOREWORD

01 OBJECTIVES OF THE EUROCODES

The Eurocodes constitute a group of standards for the structural and geotechnical design of building and civil engineering works. They will cover execution and control to the extent that it is necessary to indicate the quality of the construction products and the standard of workmanship needed on and off-site to comply with the assumptions of the design rules. While the necessary set of harmonised technical specifications for products and methods for testing their performance is not available, the Eurocodes may cover some of these aspects.

The Eurocodes are intended to serve as reference documents for the following purposes:

- (a) as a means to prove compliance of building and civil engineering works with the essential requirements of the Construction Products Directive;
- (b) as a framework for drawing up harmonized technical specifications for construction products.

02 BACKGROUND TO THE EUROCODE PROGRAMME

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

In 1990, after consulting their respective Member States, CEC and EFTA Secretariat transferred the work on further development, issue and updating of Eurocodes to CEN.

In CEN, Technical Committee CEN/TC 250 has overall responsibility for the Structural Eurocodes.

03 EUROCODE PROGRAMME

Work is in hand on the following Eurocodes each consisting of a number of parts:

- EC 1 : Basis of design and actions on structures
- EC 2 : Design of concrete structures
- EC 3 : Design of steel structures
- EC 4 : Design of composite steel and concrete structures
- EC 5 : Design of timber structures
- EC 7 : Geotechnics
- EC 8 : Design of structures in seismic regions
- EC 9 : Design of aluminium structures (subject to Mandate)

For each Eurocode listed above, CEN/TC 250 has formed a Sub-committee.

This part of Eurocode EC5 which had been finalised and approved for publication under the direction of CEC, is being issued by CEN as European Prestandard (ENV). It is intended for experimental practical application in the design of building and civil engineering works covered by the scope of the Prestandard as given in Clause 1.1.2.

Feedback and comments on this prestandard should be sent to the Secretariat of Sub-Committee SC5 at the following address:

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Drottning Kristinas väg 73
S-11428 STOCKHOLM

04 **NATIONAL APPLICATION DOCUMENTS**

In view of the responsibilities of Members of states for the safety health and other matters covered by the essential requirements, certain safety elements in this ENV have been assigned indicative values. The authorities in each Member state are expected to assign definitive values to these safety elements.

Many of the supporting standards, including those giving values for actions to be taken into account and measures required for fire protection, will not be available by the time this Prestandard is issued. It is therefore anticipated that a National Application Document giving definitive values for safety elements, referencing compatible supporting standards and giving national guidance on the application of this Prestandard will be issued by each Member State or its Standard Organisation. This Prestandard should be used in conjunction with the National Application Document valid in the country where the building and civil engineering work is to be constructed.

1 INTRODUCTION

1.1 SCOPE

1.1.1 SCOPE OF EUROCODE 5

- P(1) Eurocode 5 applies to the design of timber structures - i.e., structures made of timber (solid timber, sawn, planed or in pole form, and glued laminated timber) or wood-based panels jointed together with adhesives or mechanical fasteners. It is subdivided into various separate parts, see 1.1.2 and 1.1.3.
- P(2) Eurocode 5 is only concerned with the requirements for mechanical resistance, serviceability and durability of structures. Other requirements, e.g. concerning thermal or sound insulation, are not considered.
- P(3) Execution¹⁾ is covered to the extent that is necessary to indicate the quality of the construction materials and products which should be used and the standard of workmanship on site needed to comply with the assumptions of the design rules. Execution and workmanship are covered in Chapter 7, and are to be considered as minimum requirements which may have to be further developed for particular types of buildings and methods of construction¹⁾.
- P(4) Eurocode 5 does not cover the special requirements of seismic design. Provisions related to such requirements are given in Eurocode 8 "Design of Structures in Seismic Regions"²⁾ which complements Eurocode 5.
- P(5) Numerical values of the actions on buildings and civil engineering works to be taken into account in the design are not given in Eurocode 5. They are provided in Eurocode 1 "Basis of design and actions on structures"²⁾.

1.1.2 SCOPE OF PART 1-1 OF EUROCODE 5

- P(1) Part 1-1 of Eurocode 5 gives a general basis for the design of buildings and civil engineering works.
- P(2) In addition, Part 1-1 gives detailed rules which are mainly applicable to ordinary structures. The applicability of these rules may be limited for practical reasons or due to simplifications; their use and any limits of applicability are explained in the text where necessary.
- P(3) Chapters 1 and 2 are common to all Eurocodes, with the exception of some additional clauses which are required for timber structures.
- P(4) This Part 1-1 does not cover:
- the design of bridges,
- resistance to fire,

1) For the meaning of this term, see 1.4.1 (2)

2) At present at the draft stage

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