

# **EN 1995-1-2 DK NA:2007**

National Annex to

## **Eurocode 5: Design of timber structures - Part 1-2: General – Structural fire design**

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### **Foreword**

According to the provisions laid down in the Danish Building Regulations (BR07), the Regulations apply to all construction works, unless otherwise specified.

### **Scope**

This National Annex lays down the conditions for the implementation of the Eurocode.

### **Contents**

This National Annex specifies the national choices prescribed in Denmark.

The national choices may be in the form of nationally applicable values, an option between methods given in the Eurocode, or the addition of supplementary guidance.

This National Annex addresses:

- Clauses where national choices have been made;
- All clauses where national choices have been possible;
- Bibliography: Overview of all National Annexes prepared.

## **Clauses where national choices have been made**

### **2.1.3(2) Maximum temperature rise during parametric fire exposure**

For the second indent, the temperature rise should comply with the following:

- The average temperature rise of the unexposed side of the construction should be limited to 140° C and the maximum temperature rise of the unexposed side should not exceed 180° C during the decay phase.

### **2.3(1)P Partial factor $\gamma_M$ for strength and stiffness**

The recommended value of  $\gamma_M = 1,00$  has been chosen for Denmark.

### **2.3(2)P Partial factor $\gamma_M$ for mechanical resistances**

The recommended value of  $\gamma_M = 1,00$  has been chosen for Denmark.

### **2.4.2 Member analysis**

The expressions in 2.4.2 are not applicable for timber structures as they address the load effect only, and no account is taken of the effect of load duration which particularly applies to timber structures. Due to the partial factors chosen in the example in Figure 2.1, the example is not applicable in Denmark.

### **4.2.1(1) Procedure for determining cross-sectional properties**

Advanced calculation methods may be applied if they are well-documented, both by theory and by experiments.

## Overview of possible national choices

The list below identifies the clauses where national choices are possible and the applicable/not applicable informative annexes.

Furthermore, this National Annex refers to additional (non-conflicting) information that may be of assistance to the user of the Eurocode.

Clause	Comment
2.1.3(2)	Maximum temperature rise during parametric fire exposure
2.3(1)P	Partial factor $\gamma_M$ for strength and stiffness
2.3(2)P	Partial factor $\gamma_M$ for mechanical resistances
2.4.2(3)	
4.2.1(1)	Method for determining cross-sectional properties

# Bibliography

## List of all National Annexes

EN 1990 DK NA:2007	National Annex to Eurocode 0 – Basis of structural design
EN 1991-1-1 DK NA:2007	National Annex to Eurocode 1: Actions on structures – Part 1-1: General actions – Densities, self-weight, imposed loads for buildings
EN 1991-1-2 DK NA:2007	National Annex to Eurocode 1: Actions on structures – Part 1-2: General actions – Actions on structures exposed to fire
EN 1991-1-3 DK NA:2007	National Annex to Eurocode 1: Actions on structures – Part 1-3: General actions – Snow loads
EN 1991-1-4 DK NA:2007	National Annex to Eurocode 1: Actions on structures – Part 1-4: General actions – Wind actions
EN 1991-1-5 DK NA:2007	National Annex to Eurocode 1: Actions on structures – Part 1-5: General actions – Thermal actions
EN 1991-1-6 DK NA:2007	National Annex to Eurocode 1: Actions on structures – Part 1-6: General actions – Actions during execution
EN 1991-1-7 DK NA:2007	National Annex to Eurocode 1: Actions on structures – Part 1-7: General actions – Accidental actions
EN 1992-1-1 DK NA:2007	National Annex to Eurocode 2: Design of concrete structures - Part 1-1: General rules and rules for buildings
EN 1992-1-2 DK NA:2007	National Annex to Eurocode 2: Design of concrete structures - Part 1-2: General rules – Structural fire design
EN 1993-1-1 DK NA:2007	National Annex to Eurocode 3: Design of steel structures - Part 1-1: General rules and rules for buildings
EN 1993-1-2 DK NA:2007	National Annex to Eurocode 3: Design of steel structures - Part 1-2: General rules – Structural fire design
EN 1993-1-3 DK NA:2007	National Annex to Eurocode 3: Design of steel structures - Part 1-3: General rules - Supplementary rules for cold-formed members and sheeting
EN 1993-1-4 DK NA:2007	National Annex to Eurocode 3: Design of steel structures - Part 1-4: General rules - Supplementary rules for stainless steels
EN 1993-1-5 DK NA:2007	National Annex to Eurocode 3: Design of steel structures - Part 1-5: Plated structural elements
EN 1993-1-6 DK NA:2007	National Annex to Eurocode 3: Design of steel structures - Part 1-6: Strength and stability of shell structures
EN 1993-1-7 DK NA:2007	National Annex to Eurocode 3: Design of steel structures - Part 1-7: Plated structures subject to out of plane loading
EN 1993-1-8 DK NA:2007	National Annex to Eurocode 3: Design of steel structures - Part 1-8: Joints
EN 1993-1-9 DK NA:2007	National Annex to Eurocode 3: Design of steel structures – Part 1-9: Fatigue
EN 1993-1-10 DK NA:2007	National Annex to Eurocode 3: Design of steel structures - Part 1-10: Material toughness and through-thickness properties
EN 1994-1-1 DK NA:2007	National Annex to Eurocode 4: Design of composite steel and concrete structures - Part 1-1: General rules and rules for buildings
EN 1994-1-2 DK NA:2007	National Annex to Eurocode 4: Design of composite steel and concrete structures - Part 1-2: General rules – Structural fire design
EN 1995-1-1 DK NA:2007	National Annex to Eurocode 5: Design of timber structures - Part 1-1: General - Common rules and rules for buildings
EN 1995-1-2 DK NA:2007	National Annex to Eurocode 5: Design of timber structures - Part 1-2: General – Structural fire design
EN 1996-1-1 DK NA:2007	National Annex to Eurocode 6: Design of masonry structures - Part 1-1: General rules for reinforced and unreinforced masonry structures
EN 1996-1-2 DK NA:2007	National Annex to Eurocode 6: Design of masonry structures - Part 1-2: General rules – Structural fire design
EN 1996-2 DK NA:2007	National Annex to Eurocode 6: Design of masonry structures - Part 2: Design considerations, selection of materials and execution of masonry
EN 1997-1 DK NA:2007	National Annex to Eurocode 7: Geotechnical design - Part 1: General rules
EN 1999-1-1 DK NA:2007	National Annex to Eurocode 9: Design of aluminium structures - Part 1-1: General rules
EN 1999-1-2 DK NA:2007	National Annex to Eurocode 9: Design of aluminium structures – Part 1-2: Structural fire design
EN 1999-1-3 DK NA:2007	National Annex to Eurocode 9: Design of aluminium structures – Part 1-3: Fatigue