

EN 1993-1-2 DK NA:2007

National Annex to

Eurocode 3: Design of steel structures - Part 1-2: General rules – Structural fire design

Foreword

In connection with the incorporation of Eurocodes into Danish building legislation to replace the Danish structural codes of practice, this National Annex was prepared in 2006-2007 to implement Eurocode 3 in Denmark.

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

Clause	National choice
2.3(1)	<p>The recommended value $\gamma_{M,fi} = 1$ should be applied.</p> <p>It should be noted that the "effective yield strength" in Table 3.1 assumes a strain of at least 2,0%. For full utilisation of the yield strength, the structure is required to be capable of resisting the considerable deformations caused by a strain of 2,0%. In this respect consideration should be given to the integrity of the fire protection material and fasteners, and the compressive deformation or destruction of underlying fire separating walls etc.</p> <p>Simplified consideration of the deformations may consist in applying a yield strength of 0,2% for structural steels corresponding to the values in Table E.1.</p>
4.1(2)	<p>Advanced calculation methods may be applied if they are well-documented, both by theory and by experiments.</p>
4.2.4(2)	<p>Critical temperatures should be determined using the expression (4.22).</p>

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
2.3(1)	Nationally applicable values
2.3(2)	No changes
4.1(2)	Additional information
4.2.3.6(1)	Additional information
4.2.4(2)	Additional information

Additional (non-conflicting) information

- 2.4.2(3) Figure 2.1 and NOTE 2 are not applicable as partial factors in conflict with the Danish choices are used. η_{fi} should therefore be calculated for each case.

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