DS/EN 1994-1-2 DK NA:2011

National Annex to
**Eurocode 4: Design of composite steel and concrete structures
-
Part 1-2: Structural fire design**

Foreword

This national annex (NA) is a revision of EN 1994-1-2 DK NA:2007. The layout etc. has been changed to correspond to that of more recent Danish National Annexes. Other changes relate to the contents of Annex H only.

This NA enters into force on 2011-07-01. From 2011-07-01 to 2012-09-01, this NA as well as EN 1994-1-2 DK NA:2007 may be applied.

Previous versions, addenda and an overview of all National Annexes can be found at www.eurocodes.dk

This NA lays down the conditions for the implementation in Denmark of this Eurocode for construction works in conformity with the Danish Building Act or the building legislation.

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

This National Annex includes:

- National choices and an overview of all clauses where national choices are allowed
- Descriptions of national choices
- Complementary (non-contradictory) information which may assist the user of the Eurocode.

The numbering refers to the clauses of the Eurocode where national choices are allowed and/or complementary information is given. The heading is identical to the heading of the clause, followed by a clarification, as appropriate.

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An overview of possible national choices and clauses containing complementary information

The overview below identifies the clauses where national choices are possible and the applicable/not applicable informative annexes. Furthermore, clauses giving complementary information are identified. Complementary information is given at the end of this document.

Clause	Subject	National choice	Complementary information
1.1(16)	Subject – Concrete strength classes	National choice	
2.1.3(2)	Parametric fire exposure	National choice	
2.3(1)P	Design values of material properties - mechanical	National choice	
2.3(2)P	Design values of material properties - thermal	National choice	
2.4.2(3)	Member analysis	National choice	
3.3.2(9)	Thermal properties - Normal weight concrete	National choice	
4.1(1)P	Design procedures	National choice	
4.3.5.1(10)	Composite columns – Structural behaviour	National choice	
Annex H	Simple calculation model for concrete filled hollow sections exposed to fire all around the column according to the standard temperature-time curve	National choice	

NOTE – Unchanged: No national choice is made and recommendations, if any, in the standard are followed.

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National choices

1.1(16) Subject – Concrete strength classes
No rules are given for Concrete Strength Classes higher than C50/60.

2.1.3(2) Parametric fire exposure
$\Delta\Theta_1 = 140$ K and $\Delta\Theta_2 = 180$ K.

2.3(1)P Design values of material properties - mechanical
Reference is made to the National Annexes to EN 1992-1-2 and EN 1993-1-2.

2.3(1)P Design values of material properties - thermal
Reference is made to the National Annexes to EN 1992-1-2 and EN 1993-1-2.

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

3.3.2(9) Thermal properties - Normal weight concrete
Reference is made to the Danish National Annex to EN 1992-1-2 for a recommended value of the thermal conductivity of concrete.

4.1(1)P Design procedures
Advanced calculation methods may be applied if they are well-documented, both by theory and by experiments.

4.3.5.1(10) Composite columns – Structural behaviour
Realistic static assessments of support conditions should be used for determining the buckling length.

Annex H Simple calculation model for concrete filled hollow sections exposed to fire all around the column according to the standard temperature-time curve
Annex H can be applied in Denmark if the following condition is fulfilled: the slenderness of the column λ shall be less than or equal to 0,5.

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Complementary (non-contradictory) information

None

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