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

<table>
<thead>
<tr>
<th>Clause</th>
<th>National choice</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.3(1)</td>
<td>The recommended value $\gamma_{M,fi} = 1$ should be applied.</td>
</tr>
<tr>
<td></td>
<td>It should be noted that the “effective yield strength” in Table 3.1 assumes a</td>
</tr>
<tr>
<td></td>
<td>strain of at least 2.0%. For full utilisation of the yield strength, the structure</td>
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<td></td>
<td>is required to be capable of resisting the considerable deformations caused by a</td>
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<td></td>
<td>strain of 2.0%. In this respect consideration should be given to the integrity of</td>
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<td></td>
<td>the fire protection material and fasteners, and the compressive deformation or</td>
</tr>
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<td></td>
<td>destruction of underlying fire separating walls etc.</td>
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<td></td>
<td>Simplified consideration of the deformations may consist in applying a yield</td>
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<td></td>
<td>strength of 0.2% for structural steels corresponding to the values in Table E.1.</td>
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<tr>
<td>4.1(2)</td>
<td>Advanced calculation methods may be applied if they are well-documented, both by</td>
</tr>
<tr>
<td></td>
<td>theory and by experiments.</td>
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<tr>
<td>4.2.4(2)</td>
<td>Critical temperatures should be determined using the expression (4.22).</td>
</tr>
</tbody>
</table>
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.

<table>
<thead>
<tr>
<th>Clause</th>
<th>Comment</th>
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</thead>
<tbody>
<tr>
<td>2.3(1)</td>
<td>Nationally applicable values</td>
</tr>
<tr>
<td>2.3(2)</td>
<td>No changes</td>
</tr>
<tr>
<td>4.1(2)</td>
<td>Additional information</td>
</tr>
<tr>
<td>4.2.3.6(1)</td>
<td>Additional information</td>
</tr>
<tr>
<td>4.2.4(2)</td>
<td>Additional information</td>
</tr>
</tbody>
</table>

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. $\eta_i$ 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