NSAI Standards

Irish National Annex
NA TO I.S. EN 1995-1-2:2004

Irish National Annex to Eurocode 5: Design of timber structures - Part 1-2: General - Structural fire design

NA to I.S. EN 1995-1-2:2004

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Údarás um Chaighdeáin Náisiúnta na hÉireann

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(informative)

Irish National Annex to Eurocode 5: Design of timber structures – Part 1-2: General – Structural fire design

Introduction

This National Annex has been prepared by the NSAI Timber Standards Consultative Committee (TSCC) through the Eurocode 5 Task Group and in Ireland is to be used in conjunction with I.S. EN 1995-1-2:2005+AC:2009.

I.S. EN 1995-1-2:2005 describes the principles, requirements and rules for the structural design of buildings exposed to fire, including safety in the event of fire and the design procedures of the prescriptive approach, using nominal fire classification systems or the performance based approach using fire safety engineering.

I.S. EN 1995-1-2:2005 stipulates the procedures, values and recommendations indicating where national choices may be required to be made. This national annex contains all Nationally Determined Parameters (NDP's) which are to be used for the design of buildings and civil engineering works to be constructed in Ireland. I.S. EN 1995-1-2:2005 is intended to be used in conjunction with I.S. EN 1990 (Eurocode – Basis of structural design) and I.S. EN 1991–1-2:2002 (Eurocode – Actions on Structures) together with their respective Irish national annexes.

NA.1 Scope

This National Annex gives:

a) The Irish decisions on the choices permitted to be made in I.S. EN 1995-1-2:2005+AC:2009 for Nationally Determined Parameters are identified through the following subclauses:

- 2.1.3(2)
- 2.3.1(P)
- 2.3.2(P)
- 2.4.2(3)
- 4.2.1(1)

b) Irish decisions on the use of informative annexes A, B, C, D, E and F.

NA.2Nationally Determined Parameters

NA.2.1 Subclause 2.1.3(2) - Maximum temperature rise for separating function in parametric fire exposure

The recommended temperatures of 140 K and 180 K as given in this subclause should be used nationally.

NA.2.2 Subclause 2.3(1)P - Partial factor for material properties

The recommended modification factor for fire in respect of strength and stiffness properties, namely values of $k_{mod,fi}$ given in the relevant clauses should be used nationally.

The recommended partial safety factor for material properties in fire and for mechanical resistance in fire, namely the value of $\gamma_{M,fi} = 1{,}0$ should be used nationally where design is based on standard fire exposure.

NA.2.3 Subclause 2.3(2)P - Partial factor for material properties

The recommended partial safety factor for mechanical resistance in fire, namely the value of $\gamma_{M,fi} = 1{,}0$ should be used nationally where design is based on standard fire exposure.

NA.2.4 Subclause 2.4.2(3) - Reduction factor for combination of actions

The reduction factor η_{fi} for load combinations should be calculated using Expression (2.9) or Expressions (2.9a) and (2.9b) as given for the national choice in the Irish national annex to I.S. EN 1991-1-2:2002.

Except for category E imposed loads referenced in I.S. EN 1991-2-1:2002, the recommended value of $\eta_{fi} = 0{,}6$ may be used nationally. For category E imposed loads not referenced in I.S. EN 1991-2-1:2002, the recommended value of $\eta_{fi} = 0{,}7$ may be used nationally.

NA.2.5 Subclause 4.2.1(1) - Method of determining cross-sectional properties

The recommended procedure for determining cross-sectional properties, namely the method given in subclause 4.2.2, based on reduced cross-section should be used nationally.

NA.3 Guidance on the use of informative annexes A, B, C, D, E and F

No additional national guidance, thus all annexes may be used.

NA.3.1 Annex A [informative] - Parametric fire exposure

Annex A may be used as there is no further national guidance.

NA.3.2 Annex B [informative] - Advanced calculation methods

Annex B may be used as there is no further national guidance.

NA.3.3 Annex C [informative] - Load-bearing floor joists and wall studs in assemblies whose cavities are completely filled with insulation

Annex C may be used as there is no further national guidance.

NA.3.4 Annex D [informative] - Charring of members in wall and floor assemblies with void cavities

Annex D may be used as there is no further national guidance.

NA.3.5 Annex E [informative] - Analysis of the separating function of wall and floor assemblies

Annex E may be used as there is no further national guidance.

NA.3.6 Annex F [informative] - Guidance for users of this Eurocode Part

Annex F may be used as there is no further national guidance.