



DS/EN 1994-2 DK NA:2015 National Annex to **Eurocode 4: Design of composite steel and concrete structures Part 2: General rules and rules for bridges**

Preface

The implementation of Eurocodes has involved the preparation of

- National Annexes to the bridge-specific Eurocodes
- Addenda to National Annexes for bridge-specific sections in Eurocodes for loads.

Together with the basic Eurocodes, including the related national annexes, these constitute the codes of practices to be applied in the design of bridges in Denmark.

Scope

This National Annex sets out the conditions for implementation of EN 1994-2.

Contents

This National Annex contains the national choices that apply in Denmark.

The national choices may be in the form of current national values, a choice between several methods or addition of supplementary guidance.

In connection with the national choices, the national annexes may refer to Banedanmark's Railway Standards (e.g. BN1-59) or Danish Road Directorate's Road Standards.

Reference may also be made to the infrastructure manager (IF). IF is the authority which has ownership and/or holds maintenance responsibility for a road bridge or for a railway bridge. Examples of IFs include the Danish Road Directorate, local authorities, Banedanmark and regional railway providers.

In addition, the National Annex includes an overview of all the items where it has been possible to make a national choice.

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Items for which a national choice has been made

Page	Item	Subject	National choice
23	2.4.1.2 (5)P	Partial coefficient for shear	$\gamma_V = 1,35\gamma_3 \gamma_0$ is used.
		connection.	For accidental and seismic design situations $\gamma_{\rm V} = 1.00$ is used.
40	6.2.1.5 (9)	Elastic resistance to bending,	The methods specified in (7) and (8) shall be used.
		choice of methods.	
52	6.6.3.1 (1)	Partial coefficient for welded	$\gamma_{\rm V} = 1,35 \gamma_3 \gamma_0$ is used.
		headed shear studs.	In respect of γ_3 and γ_0 , reference is made to DS/EN 1994-1-1 DK NA.
			For accidental and seismic design situations $\gamma_{V=} 1.00$ is used.
			Note: Use of strict control requires independent 3rd party tests of materials
			and execution, see DS/EN 1990 DK NA.
72	6.8.2 (1)	Partial coefficients for fatigue	The values specified in national annexes are used:
		strengths.	Concrete: See 2.4.2.4 in DS/EN 1992-1-1 DK NA
			Steel: See 9.3 in DS/EN 1993-2 DK NA





Overview of possible national choices

The following overview shows the places where a national choice is possible and which informative annexes that apply/do not apply. Moreover, it is specified where a national choice has been made.

Page	Item	Subject	National choice
12	1.1.3 (3)	Type of shear connections other than welded headed studs	No national choice.
23	2.4.1.1 (1)	Partial coefficient for prestress introduced by imposed deformations	No national choice.
23	2.4.1.2 (5)P	Partial coefficient for shear connections	National choice specified.
23	2.4.1.2 (6)P	Partial coefficient for shear connections, fatigue	No national choice.
34	5.4.4 (1)	Combination of global and local action effects	No national choice.
40	6.2.1.5 (9)	Elastic resistance to bending, choice of methods	National choice specified.
41	6.2.2.5 (3)	Vertical shear in concrete flange	No national choice.
42	6.3.1 (1)	Rules for transverse filler beams	No national choice.
46	6.6.1.1 (13)	Assessment of bending across between steel flange and web and concrete slab as a result of the deformations of the concrete slab and/or steel member	No national choice.
52	6.6.3.1 (1)	Partial coefficient for welded headed shear studs	National choice specified.
72	6.8.1 (3)	Maximum shear force in shear stud for characteristic load combination	No national choice.
72	6.8.2 (1)	Partial coefficients for fatigue strengths	National choice specified.
81	7.4.1 (4)	Crack width limits wk	No national choice.
81	7.4.1 (6)	Temperature difference between concrete and steel in connection with hardening	No national choice.
85	8.4.3 (3)	Transverse reinforcement around shear connection	No national choice.

Note: No national choice implies that a recommendation in the code of practice is observed.

DISCLAIMER

The translation into English of Road Standards (Vejregler), Tender Specifications and National Annexes is to be regarded entirely as a service. In the event of any discrepancy or short-comings in the translation, the Danish version will prevail. At any time the Danish versions of Road Standards (Vejregler), Tender Specifications and National Annexes are those in force.