

NATIONAL ANNEX
TO
CYS EN 1993-1-8:2005 Eurocode 3: Design of steel
structures
Part 1-8: Design of joints

Public Enquiry Draft

Period of Enquiry

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Readers are advised that this is a draft document and subject to change

Prepared by: Eurocodes Committee
Ministry of Interior / Technical Chamber of Cyprus

PUBLIC ENQUIRY DRAFT

National Annex to CYS EN 1993-1-8: 2005 Eurocode 3: Design of steel structures
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INTRODUCTION

This National Annex has been prepared by the Eurocodes Committee of the Technical Chamber of Cyprus which was commissioned by the Ministry of Interior of the Republic of Cyprus.

NA 1 SCOPE

This National Annex is to be used together with CYS EN 1993-1-8: 2005.

This National Annex gives:

- (a) Nationally determined parameters for the following clauses of CYS EN 1993-1-8: 2005 where National choice is allowed (see Section NA 2):
- 1.2.6(Group 6: Rivets)
 - 2.2(2)
 - 3.1.1(3)
 - 3.4
 - 5.2.1(2)
 - 6.2.7.2(9)
- (b) References to non-contradictory complementary information to assist the user to apply CYS EN 1993-1-8: 2005 (see Section NA 3).

NA 2 NATIONALLY DETERMINED PARAMETERS

NA 2.1 Clause 1.2.6 Reference Standards, Group 6: Rivets

No further information given.

NA 2.2 Clause 2.2(2) General Requirements

Partial safety factors γ_M for joints are given in Table 2.1 (CYS) which corresponds to Table 2.1 of CYS EN 1993-1-8: 2005.

Table 2.1 (CYS): Partial safety factors for joints

Resistance of members and cross-sections	γ_{M0} , γ_{M1} and γ_{M2} see CYS EN 1993-1-1
Resistance of bolts	γ_{M2}
Resistance of rivets	
Resistance of pins	
Resistance of welds	
Resistance of plates in bearing	γ_{M3} $\gamma_{M3,ser}$
Slip resistance - at ultimate limit state (Category C) - at serviceability limit state (Category B)	
Bearing resistance of an injection bolt	γ_{M4}

PUBLIC ENQUIRY DRAFT

National Annex to CYS EN 1993-1-8: 2005 Eurocode 3: Design of steel structures
Part 1-8: Design of joints

Resistance of joints in hollow section lattice girder	γ_{M5}
Resistance of pins at serviceability limit state	$\gamma_{M6,ser}$
Preload of high strength bolts	γ_{M7}
Resistance of concrete	γ_c see CYS EN 1992

NOTE: Partial safety factor values γ_M for joints shall be taken as follows: $\gamma_{M2} = 1,25$; $\gamma_{M3} = 1,25$ and $\gamma_{M3,ser} = 1,1$; $\gamma_{M4} = 1,0$; $\gamma_{M5} = 1,0$; $\gamma_{M6,ser} = 1,0$; $\gamma_{M7} = 1,1$.

NA 2.3 Clause 3.1.1(3) General

The yield strength f_{yb} and the ultimate tensile strength f_{ub} for bolt classes 4.6, 4.8, 5.6, 5.8, 6.8, 8.8 and 10.9 are given in Table 2.2 (CYS) which corresponds to Table 3.1 of CYS EN 1993-1-8: 2005. These values should be adopted as characteristic values in design calculations.

Table 2.2 (CYS): Nominal values of the yield strength f_{yb} and the ultimate tensile strength f_{ub} for bolts

Bolt class	4.6	4.8	5.6	5.8	6.8	8.8	10.9
f_{yb} (N/mm ²)	240	320	300	400	480	640	900
f_{ub} (N/mm ²)	400	400	500	500	600	800	1000

NA 2.4 Clause 3.4 Categories of bolted connections

No information is given on the level of preload if preload is not explicitly used in the design calculations for slip resistances but is required for execution purposes or as a quality measure (e.g. for durability).

NA 2.5 Clause 5.2.1(2) General

No additional information is given on the classification of joints by their stiffness and strength to that given in 5.2.2.1(2) of CYS EN 1993-1-8: 2005.

NA 2.6 Clause 6.2.7.2(9) Beam-to-column joints with bolted end-plate connections

No further information is given on the use of equation (6.26) of CYS EN 1993-1-8: 2005.

NA 3 REFERENCES TO NON-CONTRADICTIONARY COMPLEMENTARY INFORMATION

None