

Questions for Chapter 2 – Bolting

1. Clause 6.5.2.3 of ENV 1993-1-1
4. Partial safety factors for slip-resistant connections
5. Maximum bolt end and edge distances
6. Maximum bolt spacing for members in non-corrosive environment
7. Bearing resistance of bolt
8. Bearing resistance of bolt
9. Partial safety factor for slip-resistant connections
10. Loss of bolt pre-load
11. Partial safety factor for Category C connections
13. Deformation criteria for bolt bearing resistance
31. Resistance of M12 and M14 bolts
32. Non pre-loaded bolts subjected to load fluctuation
35. Design rules for slotted holes
37. Bolts for reversed shear loads
38. Design method for fitted bolts
40. End and edge bolt distances
42. Resistance of Category C connections
44. Combination of tension and shear bolt load
45. Shear resistance of pre-loaded bolts carrying a tension force
46. Hole clearance for fitted bolts
52. Resistance of Category C bolted connections
53. Resistance of pin connections
60. Pre-stressing of bolts
63. Friction connections with non-prepared surfaces
69. Class of slip resistant connection
74. Tensile resistance of bolts in oversized holes
75. Bolts in slotted holes
80. Bolt tightening at the erection
81. Assembly of end plate connection with pre-stressed bolt
83. Lubricant for use at low temperatures
84. Tightening of bolts which will be used at low temperatures
86. Resistance of pre-loaded bolts with large diameter
58. Influence of manufacturing tolerances on joint behavior

Questions for Chapter 3 – Welding

30. Throat thickness of fillet weld used in hollow section joints
33. Effective length of welds
54. Flare groove welds
66. Fatigue resistance of welds
68. Minimum thickness of welds
73. Welding of slim-floor beams
89. Selection of quality level of welds
90. Inspection and non-destructive testing of welds
91. Maximum spacing of plug welds
92. Throat area of a plug weld
93. Length of fillet weld specified in drawings
94. Throat thickness of welds with deep penetration
95. Throat thickness of deep penetration fillet weld
96. Value of the correlation factor γ_w

97. Values of γ_w for intermediate values of f_u

98. Using flux cored arc welding

Questions for Chapter 4 – Structural Modeling

16. Classification criteria for column bases

25. Interaction of ground and structure

39. Use of elastic theory for global analysis of structures

48. Preliminary design of connections

50. Design of bridge connections

59. Design of connections loaded by low forces

64. Modeling joint eccentricity in frame design

Questions for Chapter 5 – Simple Connections

12. Block shear failure

36. Force distribution on bolted connections

41. Bolt bearing resistance with respect to manufacturing tolerances

43. Bearing resistance of bolt group

Can the bearing resistance for individual bolts be added together or not? Some

70. Design of pin connection

72. Slip resistant connection loaded by a tension force

Questions for Chapter 6 – Moment Resistant Connections

3. End-plate bolted connections

14. Effective width of welded beam-to-column connection

15. Stiffness modification coefficient γ for end-plated connections

19. Formula for coefficient γ of effective length of a T-stub

20. Calculation of joint properties loaded by bending moment and axial force

22. Design rules for diagonal web stiffener

49. Rules for design of haunched connections

55. Rules for diagonal stiffeners

57. Design rules for 'K' and Morris stiffeners

62. Yield line patterns for bolt row with 4 bolts

65. Plastic distribution of forces on end plated connection with very thick plate

67. Distribution of shear forces on bolted connection

78. Calculation of prying force for a T-stub

85. Design of beam to column joint loaded by normal force

Questions for Chapter 7 – Steel-Concrete Connections

2. Elastic resistance of a base plate

17. Transfer of shear forces by anchor bolts

18. Transfer of shear forces by friction and anchor bolts

21. Calculation of base plate resistance with low quality grout

23. Effective length of base plate T-stub

24. Effective length of base plate with bolts outside the column flange

56. Base plate of circular hollow section

61. Yield strength of hooked anchor bolts

87. Slip factor between steel and concrete

99. Rules for anchorage of holding down bolts

100. Comparison of concrete strength calculation according to EC2 and EC3

101. Stress concentration factor k_j for column bases

Questions for Chapter 8 – Seismic Design

34. Design of connections subject to dynamic load

Questions for Chapter 9 – Fire Design

No questions collected.

Questions for Chapter 10 – Hollow Section Joints

- 26. Design of offshore construction
- 28. High strength steel in hollow section joints
- 29. Buckling length of hollow section members at fire resistance

Questions for Chapter 11 – Cold Formed Member Joints

- 27. Increased yield strength of cold-formed sections

Questions for Chapter 12 – Special Steel Joints

- 82. Lubricant for stainless steel bolts

Questions for Chapter 13 – Aluminium Connections

No questions collected.

Questions for Chapter 14 – Bad Cases

- 47. Resistance of beam with lateral restraint on the tension flange

Questions for Chapter 15 – Design Cases

- 71. Handling manufacturing tolerances during erection procedure