

1 General

1.1 Scope

1.1.1 Scope of Eurocode 3

(1) See 1.1.1(1), (2), (3), (4), (5) and (6) of EN 1993-1-1.

1.1.2 Scope of Part 2 of Eurocode 3

(1) EN 1993-2 provides a general basis for the structural design of steel bridges and steel parts of composite bridges. It gives provisions that supplement, modify or supersede the equivalent provisions given in the various parts of EN 1993-1.

(2) The design criteria for composite bridges are covered in EN 1994-2.

(3) The design of high strength cables and related parts are included in EN 1993-1-11.

(4) This European Standard is concerned only with the resistance, serviceability and durability of bridge structures. Other aspects of design are not considered.

(5) For the execution of steel bridge structures, EN 1090 should be taken into account.

NOTE: As long as EN 1090 is not yet available a provisional guidance is given in Annex C.

(6) Execution is covered to the extent that is necessary to indicate the quality of the construction materials and products that should be used and the standard of workmanship needed to comply with the assumptions of the design rules.

(7) Special requirements of seismic design are not covered. Reference should be made to the requirements given in EN 1998, which complements and modifies the rules of EN 1993-2 specifically for this purpose.

1.2 Normative references

(1) This European Standard incorporates, by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication applies (including amendments).

(2) In addition to the normative references given in EN 1990 and EN 1993-1 the following references should apply:

EN 1090	Execution of steel structures and aluminium structures
EN 1337	Structural bearings
EN 10029:1991	Specification for tolerances on dimensions, shape and mass for hot rolled steel plates 3 mm thick or above.
EN 10164	Steel products with improved deformation properties perpendicular to the surface of the product - Technical delivery conditions.
EN ISO 5817	Arc-welded joints in steel - Guidance on quality levels for imperfections.
EN ISO 12944-3	Paints and varnishes - Corrosion protection of steel structures by protective paint systems - Design considerations.
EN ISO 9013:2002	Thermal cutting - Classification of thermal cuts - Geometrical product specification and quality tolerances.

- EN ISO 15613 Specification and qualification of welding procedures for metallic materials - Qualification based on pre-production welding test
- EN ISO 15614-1 Specification and qualification of welding procedures for metallic materials - Welding procedure test - Part 1: Arc and gas welding of steels and arc welding of nickel and nickel alloys

1.3 Assumptions

- (1) See 1.3(1) of EN 1993-1-1.

1.4 Distinction between principles and application rules

- (1) See 1.4(1) of EN 1993-1-1.

1.5 Terms and definitions

- (1) The terms and definitions given in EN 1990, EN 1993-1 and the following apply:

1.5.1 bridges

civil engineering construction works mainly intended to carry traffic or pedestrian loads over a natural obstacle or a communication line

NOTE: Railway bridges and bridges which carry canals, service pipes or other vehicles such as an aircraft are also covered.

1.5.2 abutment

any end support of a bridge

NOTE: A distinction is made between rigid abutments and flexible abutments where relevant.

1.5.3 integral abutment

abutment that is connected to the deck without any movement joint

1.5.4 pier

intermediate support of a bridge, situated under the deck

1.5.5 bearing

structural support located between the superstructure and an abutment or pier of the bridge that transfers loads from the deck to the abutment or pier

1.5.6 cable stay

tensioned element which connects the deck of a bridge to the pylon or pylons above the deck

1.5.7 prestress

permanent effect due to controlled forces and /or controlled deformations imposed within a structure

NOTE: Various types of prestress are distinguished from each other as relevant (such as prestress by tendons or prestress by imposed deformation of supports).

1.5.8 headroom

clear height available for traffic