TERAS- JA ALUMIINIUMKONSTRUKTSIOONIDE VALMISTAMINE. OSA 2: TEHNILISED NÕUDED TERASKONSTRUKTSIOONIDELE

Execution of steel structures and aluminium structures - Part 2: Technical requirements for steel structures

EESTI STANDARDIMIS- JA AKREDITEERIMISKESKUS
ESTONIAN CENTRE FOR STANDARDISATION AND ACCREDITATION

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 1090-2:2018+A1:2024 sisaldab Euroopa standardi EN 1090-2:2018+A1:2024 ingliskeelset teksti.	This Estonian standard EVS-EN 1090-2:2018+A1:2024 consists of the English text of the European standard EN 1090-2:2018+A1:2024.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation and Accreditation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 01.05.2024.	Date of Availability of the European standard is 01.05.2024.
Standard on kättesaadav Eesti Standardimis-ja Akrediteerimiskeskusest.	The standard is available from the Estonian Centre for Standardisation and Accreditation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

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English Version

Execution of steel structures and aluminium structures - Part 2: Technical requirements for steel structures

Exécution des structures en acier et des structures en aluminium - Partie 2: Exigences techniques pour les structures en acier

Ausführung von Stahltragwerken und Aluminiumtragwerken - Teil 2: Technische Regeln für die Ausführung von Stahltragwerken

This European Standard was approved by CEN on 22 January 2018 and includes Amendment 1 approved by CEN on 19 February 2024.

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Contents

Page

European foreword

This document (EN 1090-2:2018+A1:2024) has been prepared by Technical Committee CEN/TC 135 “Execution of steel structures and aluminium structures”, the secretariat of which is held by SN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by November 2024 and conflicting national standards shall be withdrawn at the latest by November 2024.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document includes Amendment 1 approved by CEN on 19 February 2024.

This document supersedes ⟨A1⟩ EN 1090-2:2018 ⟨A1⟩.

The start and finish of text introduced or altered by amendment is indicated in the text by tags ⟨A1⟩ ⟨A1⟩.

This document has been prepared under a standardization request addressed to CEN by the European Commission. The Standing Committee of the EFTA States subsequently approves these requests for its Member States.

This document is part of the EN 1090 series, which comprises the following parts:

— EN 1090-1, *Execution of steel structures and aluminium structures - Part 1: Assessment and verification of constancy of performance for structural components*

— EN 1090-2, *Execution of steel structures and aluminium structures - Part 2: Technical requirements for steel structures*

— EN 1090-3, *Execution of steel structures and aluminium structures - Part 3: Technical requirements for aluminium structures*

— EN 1090-4, *Execution of steel structures and aluminium structures - Part 4: Technical requirements for cold-formed structural steel elements and cold-formed structures for roof, ceiling, floor and wall applications*

— EN 1090-5, *Execution of steel structures and aluminium structures - Part 5: Technical requirements for cold-formed structural aluminium elements and cold-formed structures for roof, ceiling, floor and wall applications*

Technical requirements for cold-formed structural steel elements, members and sheeting and cold-formed steel structures for roof, ceiling, floor, wall, and cladding applications have been removed from this Part of the EN 1090 series, as they are given in EN 1090-4.

Informative Annex B giving guidance for the determination of execution class has been removed as normative requirements for the selection of execution class are now included in of EN 1993-1-1:2005/A1:2014, Annex C.

A new informative Annex D has been included giving guidance on a procedure for checking the capability of thermal cutting processes.

A new informative Annex I has been included giving guidance on determination of the loss of preload from thick coatings on contact surfaces in preloaded connections.

Normative Annex J “Use of compressible washer-type direct tension indicators” has been removed.

A new informative Annex L has been included giving guidance on the selection of weld inspection classes.

Other annexes have been renumbered accordingly:

— Annex D becomes Annex B;

— Annex K becomes Annex J;

— Annex L becomes Annex K.

Annexes A, C, E, F, G, H and M have not been renumbered.

There have been some amendments included in these annexes.

The main text contains some changes. It includes updated cross-references to supporting standards and some corrections.

Any feedback and questions on this document should be directed to the users’ national standards body. A complete listing of these bodies can be found on the CEN website.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.

Introduction

This European Standard specifies requirements for execution of steel structures, in order to ensure adequate levels of mechanical resistance and stability, serviceability and durability.

This European Standard specifies requirements for execution of steel structures in particular those that are designed according to the EN 1993 series and the steel parts of composite steel and concrete structures designed according to the EN 1994 series.

This European Standard presupposes that the work is carried out with the necessary skill and adequate equipment and resources to perform the work in accordance with the execution specification and the requirements of this European Standard.

1 Scope

This European Standard specifies requirements for execution of structural steelwork as structures or as manufactured components, produced from:

— hot rolled, structural steel products up to and including grade S700;

— cold formed components and sheeting up to and including grade S700 (unless coming within the scope of EN 1090-4);

— hot finished or cold formed austenitic, austenitic-ferritic and ferritic stainless steel products;

— hot finished or cold formed structural hollow sections, including standard range and custom-made rolled products and hollow sections manufactured by welding.

For components produced from cold formed components, and cold formed structural hollow sections that are within the scope of EN 1090-4, the requirements of EN 1090-4 take precedence over corresponding requirements in this European Standard.

This European Standard can also be used for structural steel grades up to and including S960, provided that conditions for execution are verified against reliability criteria and any necessary additional requirements are specified.

This European Standard specifies requirements, which are mostly independent of the type and shape of the steel structure (e.g. buildings, bridges, plated or latticed components) including structures subjected to fatigue or seismic actions. Certain requirements are differentiated in terms of execution classes.

This European Standard applies to structures designed according to the relevant part of the EN 1993 series. Sheet piling, displacement piles and micropiles designed to EN 1993-5 are intended to be executed in accordance with respectively EN 12063, EN 12699 and EN 14199. This European Standard only applies to the execution of waling, bracing, and connections.

This European Standard applies to steel components in composite steel and concrete structures designed according to the relevant part of the EN 1994 series.

This European Standard can be used for structures designed according to other design rules provided that conditions for execution comply with them and any necessary additional requirements are specified.

This European Standard includes the requirements for the welding of reinforcing steels to structural steels. This European Standard does not include requirements for the use of reinforcing steels for reinforced concrete applications.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

2.1 Constituent products

2.1.1 Steels

EN 10017, *Steel rod for drawing and/or cold rolling - Dimensions and tolerances*

EN 10021, *General technical delivery conditions for steel products*

EN 10024, *Hot rolled taper flange I sections - Tolerances on shape and dimensions*

EN 10025-1, *Hot rolled products of structural steels - Part 1: General technical delivery conditions*

EN 10025-2, *Hot rolled products of structural steels - Part 2: Technical delivery conditions for non-alloy structural steels*

EN 10025-3, *Hot rolled products of structural steels - Part 3: Technical delivery conditions for normalized/normalized rolled weldable fine grain structural steels*

EN 10025-4, *Hot rolled products of structural steels - Part 4: Technical delivery conditions for thermomechanical rolled weldable fine grain structural steels*

EN 10025-5, *Hot rolled products of structural steels - Part 5: Technical delivery conditions for structural steels with improved atmospheric corrosion resistance*

EN 10025-6, *Hot rolled products of structural steels - Part 6: Technical delivery conditions for flat products of high yield strength structural steels in the quenched and tempered condition*

EN 10029, *Hot-rolled steel plates 3 mm thick or above - Tolerances on dimensions and shape*

EN 10034, *Structural steel I and H sections - Tolerances on shape and dimensions*

EN 10048, *Hot rolled narrow steel strip - Tolerances on dimensions and shape*

EN 10051, *Continuously hot-rolled strip and plate/sheet cut from wide strip of non-alloy and alloy steels - Tolerances on dimensions and shape*

EN 10055, *Hot rolled steel equal flange tees with radiused root and toes - Dimensions and tolerances on shape and dimensions*

EN 10056-1, *Structural steel equal and unequal leg angles - Part 1: Dimensions*

EN 10056-2, *Structural steel equal and unequal leg angles - Part 2: Tolerances on shape and dimensions*

EN 10058, *Hot rolled flat steel bars for general purposes - Dimensions and tolerances on shape and dimensions*

EN 10059, *Hot rolled square steel bars for general purposes - Dimensions and tolerances on shape and dimensions*

EN 10060, *Hot rolled round steel bars for general purposes - Dimensions and tolerances on shape and dimensions*

EN 10061, *Hot rolled hexagon steel bars for general purposes - Dimensions and tolerances on shape and dimensions*

EN 10080, *Steel for the reinforcement of concrete - Weldable reinforcing steel - General*

EN 10088-1, *Stainless steels - Part 1: List of stainless steels*

EN 10088-4:2009, *Stainless steels - Part 4: Technical delivery conditions for sheet/plate and strip of corrosion resisting steels for construction purposes*

EN 10088-5:2009, *Stainless steels - Part 5: Technical delivery conditions for bars, rods, wire, sections and bright products of corrosion resisting steels for construction purposes*

EN 10131, *Cold rolled uncoated and zinc or zinc-nickel electrolytically coated low carbon and high yield strength steel flat products for cold forming - Tolerances on dimensions and shape*

EN 10139, *Cold rolled uncoated low carbon steel narrow strip for cold forming - Technical delivery conditions*

EN 10140, *Cold rolled narrow steel strip - Tolerances on dimensions and shape*

EN 10143, *Continuously hot-dip coated steel sheet and strip - Tolerances on dimensions and shape*

EN 10149 (all parts), *Hot rolled flat products made of high yield strength steels for cold forming*

EN 10163 (all parts), *Delivery requirements for surface condition of hot-rolled steel plates, wide flats and sections*

EN 10164, *Steel products with improved deformation properties perpendicular to the surface of the product - Technical delivery conditions*

EN 10169, *Continuously organic coated (coil coated) steel flat products - Technical delivery conditions*

EN 10204, *Metallic products - Types of inspection documents*

EN 10210-1, *Hot finished structural hollow sections of non-alloy and fine grain steels - Part 1: Technical delivery conditions*

EN 10210-2, *Hot finished structural hollow sections of non-alloy and fine grain steels - Part 2: Tolerances, dimensions and sectional properties*

[A1] EN 10210-3, *Hot finished steel structural hollow sections of non-alloy and fine grain steels - Part 3 : Technical delivery conditions for high strength and weather resistant steels* [A1]

EN 10219-1, *Cold formed welded structural hollow sections of non-alloy and fine grain steels - Part 1: Technical delivery conditions*

EN 10219-2, *Cold formed welded structural hollow sections of non-alloy and fine grain steels - Part 2: Tolerances, dimensions and sectional properties*

[A1] EN 10219-3, *Cold formed welded steel structural hollow sections of non-alloy and fine grain steels - Part 3 : Technical delivery conditions for high strength and weather resistant steels* [A1]

EN 10268, *Cold rolled steel flat products with high yield strength for cold forming - Technical delivery conditions*

EN 10279, *Hot rolled steel channels - Tolerances on shape, dimensions and mass*

EN 10296-2:2005, *Welded circular steel tubes for mechanical and general engineering purposes - Technical delivery conditions - Part 2: Stainless steel*

EN 10297-2:2005, *Seamless circular steel tubes for mechanical and general engineering purposes - Technical delivery conditions - Part 2: Stainless steel*

EN 10346, *Continuously hot-dip coated steel flat products for cold forming - Technical delivery conditions*

EN 10365, *Hot rolled steel channels, I and H sections - Dimensions and masses*

EN ISO 1127, *Stainless steel tubes - Dimensions, tolerances and conventional masses per unit length (ISO 1127)*

EN ISO 9444-2, *Continuously hot-rolled stainless steel - Tolerances on dimensions and form - Part 2: Wide strip and sheet/plate (ISO 9444-2)*

EN ISO 9445 (all parts), *Continuously cold-rolled stainless steel - Tolerances on dimensions and form - Part 1: Narrow strip and cut lengths (ISO 9445 series)*

EN ISO 18286, *Hot-rolled stainless steel plates - Tolerances on dimensions and shape (ISO 18286)*

ISO 4997, *Cold-reduced carbon steel sheet of structural quality*

2.1.2 Steel castings

EN 1559-1, *Founding - Technical conditions of delivery - Part 1: General*

EN 1559-2, *Founding - Technical conditions of delivery - Part 2: Additional requirements for steel castings*

EN 10340, *Steel castings for structural uses*

2.1.3 Welding consumables

EN ISO 636, *Welding consumables - Rods, wires and deposits for tungsten inert gas welding of non-alloy and fine-grain steels - Classification (ISO 636)*

EN ISO 2560, *Welding consumables - Covered electrodes for manual metal arc welding of non-alloy and fine grain steels - Classification (ISO 2560)*

EN ISO 3581, *Welding consumables - Covered electrodes for manual metal arc welding of stainless and heat-resisting steels - Classification (ISO 3581)*

EN ISO 13918, *Welding - Studs and ceramic ferrules for arc stud welding (ISO 13918)*

EN ISO 14171, *Welding consumables - Solid wire electrodes, tubular cored electrodes and electrode/flux combinations for submerged arc welding of non alloy and fine grain steels - Classification (ISO 14171)*

EN ISO 14174, *Welding consumables - Fluxes for submerged arc welding and electroslag welding - Classification (ISO 14174)*

EN ISO 14175, *Welding consumables - Gases and gas mixtures for fusion welding and allied processes (ISO 14175)*

EN ISO 14341, *Welding consumables - Wire electrodes and weld deposits for gas shielded metal arc welding of non alloy and fine grain steels - Classification (ISO 14341)*

EN ISO 14343, *Welding consumables - Wire electrodes, strip electrodes, wires and rods for arc welding of stainless and heat resisting steels - Classification (ISO 14343)*

EN ISO 16834, *Welding consumables - Wire electrodes, wires, rods and deposits for gas shielded arc welding of high strength steels - Classification (ISO 16834)*

EN ISO 17632, *Welding consumables - Tubular cored electrodes for gas shielded and non-gas shielded metal arc welding of non-alloy and fine grain steels - Classification (ISO 17632)*

EN ISO 17633, *Welding consumables - Tubular cored electrodes and rods for gas shielded and non-gas shielded metal arc welding of stainless and heat-resisting steels - Classification (ISO 17633)*

EN ISO 18275, *Welding consumables - Covered electrodes for manual metal arc welding of high-strength steels - Classification (ISO 18275)*

EN ISO 18276, *Welding consumables - Tubular cored electrodes for gas-shielded and non-gas-shielded metal arc welding of high strength steels - Classification (ISO 18276)*

EN ISO 26304, *Welding consumables - Solid wire electrodes, tubular cored electrodes and electrode-flux combinations for submerged arc welding of high strength steels - Classification (ISO 26304)*

2.1.4 Mechanical fasteners

EN 14399 (all parts), *High-strength structural bolting assemblies for preloading*

EN 15048 (all parts), *Non-preloaded structural bolting assemblies*

EN ISO 898-1, *Mechanical properties of fasteners made of carbon steel and alloy steel - Part 1: Bolts, screws and studs with specified property classes - Coarse thread and fine pitch thread (ISO 898-1)*

EN ISO 898-2, *Mechanical properties of fasteners made of carbon steel and alloy steel - Part 2: Nuts with specified property classes - Coarse thread and fine pitch thread (ISO 898-2)*

EN ISO 3506-1, *Mechanical properties of corrosion-resistant stainless steel fasteners - Part 1: Bolts, screws and studs (ISO 3506-1)*

EN ISO 3506-2, *Mechanical properties of corrosion-resistant stainless steel fasteners - Part 2: Nuts (ISO 3506-2)*

EN ISO 4042, *Fasteners - Electroplated coatings (ISO 4042)*

EN ISO 6789 (all parts), *Assembly tools for screws and nuts - Hand torque tools (ISO 6789)*

EN ISO 7089, *Plain washers - Normal series - Product grade A (ISO 7089)*

EN ISO 7090, *Plain washers, chamfered - Normal series - Product grade A (ISO 7090)*

EN ISO 7091, *Plain washers - Normal series - Product grade C (ISO 7091)*

EN ISO 7092, *Plain washers - Small series - Product grade A (ISO 7092)*

EN ISO 7093-1, *Plain washers - Large series - Part 1: Product grade A (ISO 7093-1)*

EN ISO 7094, *Plain washers - Extra large series - Product grade C (ISO 7094)*

EN ISO 10684, *Fasteners - Hot dip galvanized coatings (ISO 10684)*

EN ISO 21670, *Fasteners - Hexagon weld nuts with flange (ISO 21670)*

2.1.5 High strength cables

prEN 10138-3, *Prestressing steels - Part 3: Strand*

EN 10244-2, *Steel wire and wire products - Non-ferrous metallic coatings on steel wire - Part 2: Zinc or zinc alloy coatings*

EN 10264-3, *Steel wire and wire products - Steel wire for ropes - Part 3: Round and shaped non alloyed steel wire for high duty applications*

EN 10264-4, *Steel wire and wire products - Steel wire for ropes - Part 4: Stainless steel wire*

EN 12385-1, *Steel wire ropes - Safety - Part 1: General requirements*

EN 12385-10, *Steel wire ropes - Safety - Part 10: Spiral ropes for general structural applications*

EN 13411-4, *Terminations for steel wire ropes - Safety - Part 4: Metal and resin socketing*

2.1.6 Structural bearings

EN 1337-2, *Structural bearings - Part 2: Sliding elements*

EN 1337-3, *Structural bearings - Part 3: Elastomeric bearings*

EN 1337-4, *Structural bearings - Part 4: Roller bearings*

EN 1337-5, *Structural bearings - Part 5: Pot bearings*

EN 1337-6, *Structural bearings - Part 6: Rocker bearings*

EN 1337-7, *Structural bearings - Part 7: Spherical and cylindrical PTFE bearings*

EN 1337-8, *Structural bearings - Part 8: Guide Bearings and Restraint Bearings*

2.2 Preparation

EN ISO 286-2, *Geometrical product specifications (GPS) - ISO code system for tolerances on linear sizes - Part 2: Tables of standard tolerance classes and limit deviations for holes and shafts (ISO 286-2)*

EN ISO 9013, *Thermal cutting - Classification of thermal cuts - Geometrical product specification and quality tolerances (ISO 9013)*

CEN/TR 10347, *Guidance for forming of structural steels in processing*

2.3 Welding

EN 1011-1, *Welding - Recommendations for welding of metallic materials - Part 1: General guidance for arc welding*

EN 1011-2, *Welding - Recommendations for welding of metallic materials - Part 2: Arc welding of ferritic steels*

EN 1011-3, *Welding - Recommendations for welding of metallic materials - Part 3: Arc welding of stainless steels*

EN ISO 3834 (all parts), *Quality requirements for fusion welding of metallic materials (ISO 3834)*

EN ISO 4063, *Welding and allied processes - Nomenclature of processes and reference numbers (ISO 4063)*

EN ISO 5817:2014, *Welding - Fusion-welded joints in steel, nickel, titanium and their alloys (beam welding excluded) - Quality levels for imperfections (ISO 5817:2014)*

EN ISO 9606-1:2017, *Qualification testing of welders - Fusion welding - Part 1: Steels (ISO 9606-1:2017)*

EN ISO 9692-1, *Welding and allied processes - Types of joint preparation - Part 1: Manual metal arc welding, gas-shielded metal arc welding, gas welding, TIG welding and beam welding of steels (ISO 9692-1)*

EN ISO 9692-2, *Welding and allied processes - Joint preparation - Part 2: Submerged arc welding of steels (ISO 9692-2)*

EN ISO 11970, *Specification and qualification of welding procedures for production welding of steel castings (ISO 11970)*

EN ISO 13916, *Welding - Guidance on the measurement of preheating temperature, interpass temperature and preheat maintenance temperature (ISO 13916)*

EN ISO 14554 (all parts), *Quality requirements for welding - Resistance welding of metallic materials (ISO 14554 series)*

EN ISO 14555, *Welding - Arc stud welding of metallic materials (ISO 14555)*

EN ISO 14731, *Welding coordination - Tasks and responsibilities (ISO 14731)*

EN ISO 14732, *Welding personnel - Qualification testing of welding operators and weld setters for mechanized and automatic welding of metallic materials (ISO 14732)*

EN ISO 15607, *Specification and qualification of welding procedures for metallic materials - General rules (ISO 15607)*

CEN ISO/TR 15608, *Welding - Guidelines for a metallic material grouping system*

EN ISO 15609 (all parts), *Specification and qualification of welding procedures for metallic materials - Welding procedure specification (ISO 15609 series)*

EN ISO 15610, *Specification and qualification of welding procedures for metallic materials - Qualification based on tested welding consumables (ISO 15610)*

EN ISO 15611, *Specification and qualification of welding procedures for metallic materials - Qualification based on previous welding experience (ISO 15611)*

EN ISO 15612, *Specification and qualification of welding procedures for metallic materials - Qualification by adoption of a standard welding procedure (ISO 15612)*

EN ISO 15613, *Specification and qualification of welding procedures for metallic materials - Qualification based on pre-production welding test (ISO 15613)*

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 (ISO 15614-1)*

EN ISO 15614-11, *Specification and qualification of welding procedures for metallic materials - Welding procedure test - Part 11: Electron and laser beam welding (ISO 15614-11)*

EN ISO 15614-12, *Specification and qualification of welding procedures for metallic materials - Welding procedure test - Part 12: Spot, seam and projection welding (ISO 15614-12)*

EN ISO 15614-13, *Specification and qualification of welding procedures for metallic materials - Welding procedure test - Part 13: Upset (resistance butt) and flash welding (ISO 15614-13)*

EN ISO 15620, *Welding - Friction welding of metallic materials (ISO 15620)*

EN ISO 17652-1, *Welding - Test for shop primers in relation to welding and allied processes - Part 1: General requirements (ISO 17652-1)*

EN ISO 17652-2, *Welding - Test for shop primers in relation to welding and allied processes - Part 2: Welding properties of shop primers (ISO 17652-2)*

EN ISO 17652-3, *Welding - Test for shop primers in relation to welding and allied processes - Part 3: Thermal cutting (ISO 17652-3)*

EN ISO 17652-4, *Welding - Test for shop primers in relation to welding and allied processes - Part 4: Emission of fumes and gases (ISO 17652-4)*

EN ISO 17660 (all parts), *Welding - Welding of reinforcing steel (ISO 17660 series)*

2.4 Testing

EN 10160, *Ultrasonic testing of steel flat product of thickness equal or greater than 6 mm (reflection method)*

EN ISO 3452-1, *Non-destructive testing - Penetrant testing - Part 1: General principles (ISO 3452-1)*

EN ISO 6507 (all parts), *Metallic materials - Vickers hardness test - Part 1: Test method (ISO 6507 series)*

EN ISO 9018, *Destructive tests on welds in metallic materials - Tensile test on cruciform and lapped joints (ISO 9018)*

EN ISO 9712, *Non-destructive testing - Qualification and certification of NDT personnel (ISO 9712)*

EN ISO 17635, *Non-destructive testing of welds - General rules for metallic materials (ISO 17635)*

EN ISO 17636 (all parts), *Non-destructive testing of welds - Radiographic testing (ISO 17636 series)*

EN ISO 17637, *Non-destructive testing of welds - Visual testing of fusion-welded joints (ISO 17637)*

EN ISO 17638, *Non-destructive testing of welds - Magnetic particle testing (ISO 17638)*

EN ISO 17640, *Non-destructive testing of welds - Ultrasonic testing - Techniques, testing levels and assessment (ISO 17640)*

EN ISO 23279, *Non-destructive testing of welds - Ultrasonic testing - Characterization of indications in welds (ISO 23279)*

2.5 Erection

EN 1337-11, *Structural bearings - Part 11: Transport, storage and installation*

ISO 4463 (all parts), *Measurement methods for building - Setting-out and measurement*

2.6 Corrosion protection

EN ISO 1461, *Hot dip galvanized coatings on fabricated iron and steel articles - Specifications and test methods (ISO 1461)*

EN ISO 2063 (all parts), *Thermal spraying - Metallic and other inorganic coatings - Zinc, aluminium and their alloys (ISO 2063 series)*

EN ISO 2808, *Paints and varnishes - Determination of film thickness (ISO 2808)*

EN ISO 8501 (all parts), *Preparation of steel substrates before application of paints and related products - Visual assessment of surface cleanliness (ISO 8501)*

EN ISO 8502 (all parts), *Preparation of steel substrates before application of paints and related products - Tests for the assessment of surface (ISO 8502)*

EN ISO 8503 (all parts), *Preparation of steel substrates before application of paints and related products - Surface roughness characteristics of blast-cleaned steel substrates (ISO 8503)*

EN ISO 8504 (all parts), *Preparation of steel substrates before application of paints and related products - Surface preparation methods (ISO 8504)*

EN ISO 12670, *Thermal spraying - Components with thermally sprayed coatings - Technical supply conditions (ISO 12670)*

EN ISO 12679, *Thermal spraying - Recommendations for thermal spraying (ISO 12679)*

EN ISO 12944 (all parts), *Paints and varnishes - Corrosion protection of steel structures by protective paint systems (ISO 12944-1 series)*

EN ISO 14713-1:2017, *Zinc coatings - Guidelines and recommendations for the protection against corrosion of iron and steel in structures - Part 1: General principles of design and corrosion resistance (ISO 14713-1)*

EN ISO 14713-2, *Zinc coatings - Guidelines and recommendations for the protection against corrosion of iron and steel in structures - Part 2: Hot dip galvanizing (ISO 14713-2)*

ISO 19840, *Paints and varnishes - Corrosion protection of steel structures by protective paint systems - Measurement of, and acceptance criteria for, the thickness of dry films on rough surfaces*

2.7 Miscellaneous

EN 1090-4, *Execution of steel structures and aluminium structures - Part 4: Technical requirements for cold-formed structural steel elements and cold-formed structures for roof, ceiling, floor and wall applications*

EN 1993-1-6, *Eurocode 3 - Design of steel structures - Part 1-6: Strength and Stability of Shell Structures*

EN 1993-1-8, *Eurocode 3: Design of steel structures - Part 1-8: Design of joints*

EN 1993-1-9:2005, *Eurocode 3: Design of steel structures - Part 1-9: Fatigue*

EN 1993-2:2006, *Eurocode 3 - Design of steel structures - Part 2: Steel Bridges*

EN 13670, *Execution of concrete structures*

ISO 2859-5, *Sampling procedures for inspection by attributes - Part 5: System of sequential sampling plans indexed by acceptance quality limit (AQL) for lot-by-lot inspection*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- IEC Electropedia: available at https://www.electropedia.org/
- ISO Online browsing platform: available at https://www.iso.org/obp

3.1
construction works
everything that is constructed or results from construction operations

Note 1 to entry: This term covers both building and civil engineering works. It refers to the complete construction comprising both structural and non-structural components.

3.2
works
parts of construction works that are structural steelwork

3.3
structural steelwork
steel structures or manufactured steel components used in construction works

3.4
constructor
〚A1〛 person or organization responsible for the execution of the works 〚A1〛

3.5
structure
organized combination of connected parts designed to carry loads and provide adequate rigidity

[SOURCE: EN 1990:2002, 1.5.1.6]

3.6
manufacturing
activity required to produce and deliver a component

Note 1 to entry: As relevant, this comprises e.g. procurement, preparation and assembly, welding, mechanical fastening, transportation, surface treatment, and the inspection and documentation thereof.

3.7
execution
activity performed for the physical completion of the works

Note 1 to entry: i.e. manufacturing, erection and the inspection and documentation thereof.