



SLOVENSKI STANDARD

SIST EN 1090-2:2008

01-december-2008

BUXca Yý U

SIST ENV 1090-1:1999

SIST ENV 1090-2:2001

SIST ENV 1090-3:2001

SIST ENV 1090-4:2001

SIST ENV 1090-5:2001

SIST ENV 1090-6:2001

en, fr, de
Execution of steel structures and aluminium structures – Part 2: Technical requirements for steel structures

(standards.iteh.ai)

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

[SIST EN 1090-2:2008](https://standards.iteh.ai/catalog/standards/sist/5951da36-4a31-448a-b859-b9db69a303b7/sist-en-1090-2-2008)

[https://standards.iteh.ai/catalog/standards/sist/5951da36-4a31-448a-b859-](https://standards.iteh.ai/catalog/standards/sist/5951da36-4a31-448a-b859-b9db69a303b7/sist-en-1090-2-2008)

[b9db69a303b7/sist-en-1090-2-2008](https://standards.iteh.ai/catalog/standards/sist/5951da36-4a31-448a-b859-b9db69a303b7/sist-en-1090-2-2008)

Ausführung von Stahltragwerken und Aluminiumtragwerken - Teil 2: Technische Anforderungen an Tragwerke aus Stahl

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

Ta slovenski standard je istoveten z: EN 1090-2:2008

ICS:

91.080.10 Kovinske konstrukcije Metal structures

SIST EN 1090-2:2008 en,fr,de

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN 1090-2:2008

<https://standards.iteh.ai/catalog/standards/sist/5951da36-4a31-448a-b859-b9db69a303b7/sist-en-1090-2-2008>

EUROPEAN STANDARD

EN 1090-2

NORME EUROPÉENNE

EUROPÄISCHE NORM

July 2008

ICS 91.080.10

Supersedes ENV 1090-1:1996, ENV 1090-2:1998, ENV
1090-3:1997, ENV 1090-4:1997, ENV 1090-5:1998, ENV
1090-6:2000

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 Anforderungen an Tragwerke aus Stahl

This European Standard was approved by CEN on 11 April 2008.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

Management Centre: rue de Stassart, 36 B-1050 Brussels

Contents

Page

Foreword.....	9
Introduction	10
1 Scope	11
2 Normative references	12
2.1 General.....	12
2.2 Constituent products	12
2.2.1 Steels	12
2.2.2 Steel castings.....	14
2.2.3 Welding consumables.....	14
2.2.4 Mechanical fasteners	15
2.2.5 High strength cables	16
2.2.6 Structural bearings.....	17
2.3 Preparation	17
2.4 Welding	18
2.5 Testing	19
2.6 Erection.....	19
2.7 Corrosion protection.....	20
2.8 Tolerances	20
2.9 Miscellaneous	20
3 Terms and definitions	21
4 Specifications and documentation	23
4.1 Execution Specification	23
4.1.1 General.....	23
4.1.2 Execution classes.....	23
4.1.3 Preparation grades	24
4.1.4 Geometrical tolerances	24
4.2 Constructor's documentation	24
4.2.1 Quality documentation.....	24
4.2.2 Quality plan	24
4.2.3 Safety of the erection works.....	25
4.2.4 Execution documentation.....	25
5 Constituent products	25
5.1 General.....	25
5.2 Identification, inspection documents and traceability	25
5.3 Structural steel products	26
5.3.1 General.....	26
5.3.2 Thickness tolerances	28
5.3.3 Surface conditions	28
5.3.4 Special properties.....	29
5.4 Steel castings.....	29
5.5 Welding consumables.....	29
5.6 Mechanical fasteners	31
5.6.1 General.....	31
5.6.2 Terminology	31
5.6.3 Structural bolting assemblies for non preloaded applications	31
5.6.4 Structural bolting assemblies for preloading.....	31
5.6.5 Direct tension indicators.....	32
5.6.6 Weather resistant assemblies	32
5.6.7 Foundation bolts.....	32

5.6.8	Locking devices.....	32
5.6.9	Taper washers	32
5.6.10	Hot rivets	32
5.6.11	Fasteners for thin gauge components	33
5.6.12	Special fasteners	33
5.6.13	Delivery and identification.....	33
5.7	Studs and shear connectors	33
5.8	Grouting materials.....	34
5.9	Expansion joints for bridges.....	34
5.10	High strength cables, rods and terminations.....	34
5.11	Structural bearings.....	34
6	Preparation and assembly.....	34
6.1	General	34
6.2	Identification	35
6.3	Handling and storage.....	35
6.4	Cutting	37
6.4.1	General	37
6.4.2	Shearing and nibbling.....	37
6.4.3	Thermal cutting.....	37
6.4.4	Hardness of free edge surfaces.....	38
6.5	Shaping	38
6.5.1	General	38
6.5.2	Hot forming	39
6.5.3	Flame straightening	39
6.5.4	Cold forming	39
6.6	Holing.....	41
6.6.1	Dimensions of holes	41
6.6.2	Tolerances on hole diameter for bolts and pins	42
6.6.3	Execution of holing	42
6.7	Cut outs	43
6.8	Full contact bearing surfaces	44
6.9	Assembly.....	44
6.10	Assembly check	45
7	Welding.....	45
7.1	General	45
7.2	Welding plan	45
7.2.1	Requirements for a welding plan.....	45
7.2.2	Content of a welding plan.....	45
7.3	Welding processes.....	46
7.4	Qualification of welding procedures and welding personnel	47
7.4.1	Qualification of welding procedures	47
7.4.2	Welders and welding operators	49
7.4.3	Welding coordination.....	49
7.5	Preparation and execution of welding	51
7.5.1	Joint preparation	51
7.5.2	Storage and handling of welding consumables.....	52
7.5.3	Weather protection.....	52
7.5.4	Assembly for welding	53
7.5.5	Preheating	53
7.5.6	Temporary attachments.....	53
7.5.7	Tack welds	53
7.5.8	Fillet welds	54
7.5.9	Butt welds	54
7.5.10	Welds on steels with improved atmospheric corrosion resistance.....	55
7.5.11	Branch connections	55
7.5.12	Stud welding	55
7.5.13	Slot and plug welds.....	55
7.5.14	Spot welds for thin gauge components	56

STANDARD PREVIEW
(standards.iteh.ai)

SIST EN 1090-2:2008

[https://standards.iteh.ai/catalog/standards/sist/5951da56-4a51-448a-b839-](https://standards.iteh.ai/catalog/standards/sist/5951da56-4a51-448a-b839-b9db69a503b7/sist-en-1090-2-2008)

[b9db69a503b7/sist-en-1090-2-2008](https://standards.iteh.ai/catalog/standards/sist/5951da56-4a51-448a-b839-b9db69a503b7/sist-en-1090-2-2008)

EN 1090-2:2008 (E)

7.5.15	Other weld types	56
7.5.16	Post-weld heat treatment	56
7.5.17	Execution of welding	56
7.5.18	Welding of bridge decks	57
7.6	Acceptance criteria	57
7.7	Welding of stainless steels	58
7.7.1	Amendments to EN 1011-1 requirements	58
7.7.2	Amendments to EN 1011-3 requirements	59
7.7.3	Welding dissimilar steels	60
8	Mechanical fastening	60
8.1	General	60
8.2	Use of bolting assemblies	60
8.2.1	General	60
8.2.2	Bolts	61
8.2.3	Nuts	61
8.2.4	Washers	61
8.3	Tightening of non-preloaded bolts	62
8.4	Preparation of contact surfaces in slip resistant connections	62
8.5	Tightening of preloaded bolts	63
8.5.1	General	63
8.5.2	Torque reference values	65
8.5.3	Torque method	65
8.5.4	Combined method	65
8.5.5	HRC method	66
8.5.6	Direct tension indicator method	66
8.6	Fit bolts	67
8.7	Hot riveting	67
8.7.1	Rivets	67
8.7.2	Installation of rivets	67
8.7.3	Acceptance criteria	68
8.8	Fastening of thin gauge components	68
8.8.1	General	68
8.8.2	Use of self-tapping and self-drilling screws	69
8.8.3	Use of blind rivets	69
8.8.4	Fastening sidelaps	70
8.9	Use of special fasteners and fastening methods	70
8.10	Galling and seizure of stainless steels	70
9	Erection	71
9.1	General	71
9.2	Site conditions	71
9.3	Erection method	72
9.3.1	Design basis for the erection method	72
9.3.2	Constructor's erection method	72
9.4	Survey	73
9.4.1	Reference system	73
9.4.2	Position points	74
9.5	Supports, anchors and bearings	74
9.5.1	Inspection of supports	74
9.5.2	Setting out and suitability of supports	74
9.5.3	Maintaining suitability of supports	74
9.5.4	Temporary supports	74
9.5.5	Grouting and sealing	75
9.5.6	Anchoring	76
9.6	Erection and work at site	76
9.6.1	Erection drawings	76
9.6.2	Marking	77
9.6.3	Handling and storage on site	77
9.6.4	Trial erection	77

9.6.5	Erection methods	78
10	Surface treatment	79
10.1	General	79
10.2	Preparation of steel substrates	80
10.3	Weather resistant steels	81
10.4	Galvanic coupling	81
10.5	Galvanizing	81
10.6	Sealing of spaces	82
10.7	Surfaces in contact with concrete	82
10.8	Inaccessible surfaces	82
10.9	Repairs after cutting or welding	82
10.10	Cleaning after erection	83
10.10.1	Cleaning of thin gauge components	83
10.10.2	Cleaning of stainless steels components	83
11	Geometrical tolerances	83
11.1	Tolerance types	83
11.2	Essential tolerances	84
11.2.1	General	84
11.2.2	Manufacturing tolerances	84
11.2.3	Erection tolerances	84
11.3	Functional tolerances	86
11.3.1	General	86
11.3.2	Tabulated values	86
11.3.3	Alternative criteria	86
12	Inspection, testing and correction	87
12.1	General	87
12.2	Constituent products and components	87
12.2.1	Constituent products	87
12.2.2	Components	87
12.2.3	Non conforming products	87
12.3	Manufacturing: geometrical dimensions of manufactured components	88
12.4	Welding	88
12.4.1	Inspection before and during welding	88
12.4.2	Inspection after welding	89
12.4.3	Inspection and testing of welded shear studs for composite steel and concrete structures	92
12.4.4	Production tests on welding	92
12.5	Mechanical fastening	93
12.5.1	Inspection of non-preloaded bolted connections	93
12.5.2	Inspection and testing of preloaded bolted connections	93
12.5.3	Inspection, testing and repairs of hot rivets	96
12.5.4	Inspection of cold formed components and sheeting fastening	96
12.5.5	Special fasteners and fastening methods	97
12.6	Surface treatment and corrosion protection	97
12.7	Erection	98
12.7.1	Inspection of trial erection	98
12.7.2	Inspection of the erected structure	98
12.7.3	Survey of geometrical position of connection nodes	98
12.7.4	Other acceptance tests	99
Annex A (normative)	Additional information, list of options and requirements related to the execution classes	100
A.1	List of required additional information	100
A.2	List of options	103
A.3	Requirements related to the execution classes	107
Annex B (informative)	Guidance for the determination of execution classes	111
B.1	Introduction	111
B.2	Governing factors for choice of execution class	111
B.2.1	Consequence classes	111

EN 1090-2:2008 (E)

B.2.2	Hazards connected with execution and use of the structure	111
B.3	Determination of execution classes	112
Annex C	(informative) Check-list for the content of a quality plan	114
C.1	Introduction	114
C.2	Content	114
C.2.1	Management.....	114
C.2.2	Specification review	114
C.2.3	Documentation.....	114
C.2.4	Inspection and testing procedures.....	115
Annex D	(normative) Geometrical tolerances.....	116
D.1	Essential tolerances	116
D.1.1	Essential manufacturing tolerances – Welded profiles.....	117
D.1.2	Essential manufacturing tolerances – Press braked cold formed profiles	118
D.1.3	Essential manufacturing tolerances – Flanges of welded profiles	119
D.1.4	Essential manufacturing tolerances – Flanges of welded box sections	120
D.1.5	Essential manufacturing tolerances – Web stiffeners of profiles or box sections.....	121
D.1.6	Essential manufacturing tolerances – Stiffened plating	123
D.1.7	Essential manufacturing tolerances – Cold formed profiled sheets.....	124
D.1.8	Essential manufacturing tolerances – Fastener holes, notches and cut edges	125
D.1.9	Essential manufacturing tolerances – Cylindrical and conical shells	126
D.1.10	Essential manufacturing tolerances – Lattice components.....	127
D.1.11	Essential erection tolerances – Single storey columns	128
D.1.12	Essential erection tolerances – Multi-storey columns	129
D.1.13	Essential erection tolerances – Full contact end bearing	131
D.1.14	Essential erection tolerances – Towers and masts	131
D.1.15	Essential erection tolerances – Beams subject to bending and components subject to compression	132
D.2	Functional tolerances.....	133
D.2.1	Functional manufacturing tolerances – Welded profiles	134
D.2.2	Functional manufacturing tolerances – Press braked cold formed profiles	135
D.2.3	Functional manufacturing tolerances – Flanges of welded profiles	137
D.2.4	Functional manufacturing tolerances – Welded box sections	138
D.2.5	Functional manufacturing tolerances – Webs of welded profiles or box sections	139
D.2.6	Functional manufacturing tolerances – Web stiffeners of welded profiles or box sections	140
D.2.7	Functional manufacturing tolerances – Components	141
D.2.8	Functional manufacturing tolerances – Fastener holes, notches and cut edges.....	142
D.2.9	Functional manufacturing tolerances – Column splices and baseplates	143
D.2.10	Functional manufacturing tolerances – Lattice components	144
D.2.11	Functional manufacturing tolerances – Stiffened plating	145
D.2.12	Functional manufacturing tolerances – Towers and masts	147
D.2.13	Functional manufacturing tolerances – Cold formed profiled sheets	148
D.2.14	Functional manufacturing tolerances – Bridge decks.....	148
D.2.15	Functional erection tolerances – Bridges	150
D.2.16	Functional erection tolerances – Bridge decks (sheet 1/3).....	151
D.2.17	Functional erection tolerances – Bridge decks(sheet 2/3).....	152
D.2.18	Functional erection tolerances – Bridges decks (sheet 3/3).....	153
D.2.19	Functional manufacturing and erection tolerances – Crane beams and rails	154
D.2.20	Functional tolerances – Concrete foundations and supports	155
D.2.21	Functional erection tolerances – Crane runways	157
D.2.22	Functional erection tolerances – Positions of columns.....	158
D.2.23	Functional erection tolerances – Single storey columns.....	159
D.2.24	Functional erection tolerances – Multi-storey columns	160
D.2.25	Functional erection tolerances – Buildings	161
D.2.26	Functional erection tolerances – Beams in buildings	162
D.2.27	Functional erection tolerances - Roof sheeting designed as a stressed-skin.....	163
D.2.28	Functional erection tolerances - Profiled steel sheeting.....	163
Annex E	(informative) Welded joints in hollow sections.....	164
E.1	General.....	164

E.2	Guidance for start and stop positions	164
E.3	Preparation of joint faces	164
E.4	Assembly for welding	165
E.5	Fillet welded joints	171
Annex F (normative)	Corrosion protection.....	172
F.1	General	172
F.1.1	Field of application.....	172
F.1.2	Performance specification	172
F.1.3	Prescriptive requirements	172
F.1.4	Work method.....	173
F.2	Surface preparation of carbon steels.....	173
F.2.1	Surface preparation of carbon steels prior to painting and metal spraying.....	173
F.2.2	Surface preparation of carbon steels prior to galvanizing	174
F.3	Welds and surfaces for welding	174
F.4	Surfaces in preloaded connections.....	174
F.5	Preparation of fasteners	174
F.6	Coating methods	175
F.6.1	Painting	175
F.6.2	Metal spraying	175
F.6.3	Galvanizing	175
F.7	Inspection and checking.....	176
F.7.1	General	176
F.7.2	Routine checking.....	176
F.7.3	Reference areas.....	176
F.7.4	Galvanized components.....	176
Annex G (normative)	Test to determine slip factor.....	178
G.1	General	178
G.2	Significant variables.....	178
G.3	Test specimens.....	178
G.4	Slip test procedure and evaluation of results.....	179
G.5	Extended creep test procedure and evaluation.....	180
G.6	Test results	181
Annex H (normative)	Test to determine torque values for preloaded bolts under site conditions	183
H.1	Scope.....	183
H.2	Symbols and units.....	183
H.3	Principle of the test	183
H.4	Test apparatus	183
H.5	Test assemblies.....	184
H.6	Test set up.....	184
H.7	Test procedure.....	185
H.8	Evaluation of test results.....	186
H.9	Test report.....	187
Annex J (normative)	Use of compressible washer-type direct tension indicators	188
J.1	General	188
J.2	Fitting.....	188
J.3	Checking	190
Annex K (informative)	Hexagon injection bolts	193
K.1	General	193
K.2	Hole sizes	193
K.3	Bolts.....	193
K.4	Washers.....	194
K.5	Nuts.....	195
K.6	Resin.....	195
K.7	Tightening	195
K.8	Installation.....	195
Annex L (informative)	Guide to flow diagram for development and use of a WPS.....	197

EN 1090-2:2008 (E)

Annex M (normative) Sequential method for fasteners inspection.....	198
M.1 General.....	198
M.2 Application	199
Bibliography	201

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN 1090-2:2008

<https://standards.iteh.ai/catalog/standards/sist/5951da36-4a31-448a-b859-b9db69a303b7/sist-en-1090-2-2008>

Foreword

This document (EN 1090-2:2008) 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 January 2009, and conflicting national standards shall be withdrawn at the latest by March 2010.

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

This document supersedes ENV 1090-1:1996, ENV 1090-2:1998, ENV 1090-3:1997, ENV 1090-4:1997, ENV 1090-5:1998 and ENV 1090-6:2000.

EN 1090, *Execution of steel structures and aluminium structures* consists of the following parts:

Part 1: Requirements for conformity assessment of structural components

Part 2: Technical requirements for steel structures

Part 3: Technical requirements for aluminium structures

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, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN 1090-2:2008
<https://standards.iteh.ai/catalog/standards/sist/en-1090-2-2008>
192b691303b7/sist-en-1090-2-2008

EN 1090-2:2008 (E)**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 all parts of EN 1993 and the steel parts of composite steel and concrete structures designed according to all parts of EN 1994.

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.

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN 1090-2:2008

<https://standards.iteh.ai/catalog/standards/sist/5951da36-4a31-448a-b859-b9db69a303b7/sist-en-1090-2-2008>

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 S690;
- cold formed components and sheeting up to and including grades S700 for stainless steels and including S690 for carbon steels;
- hot finished and cold formed austenitic, austenitic-ferritic and ferritic stainless steel products;
- hot finished and cold formed structural hollow sections, including standard range and custom-made rolled products and hollow sections manufactured by welding.

This European Standard may 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 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. The requirements are expressed in terms of execution classes

This European Standard applies to structures designed according to the relevant part of EN 1993.

This European Standard applies to structural components and sheeting as defined in EN 1993-1-3.

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

<https://standards.iteh.ai/catalog/standards/sist/5951da36-4a31-448a-b859-58d0fa371c7c/en-1090-2:2008>

This European Standard may 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 does not cover requirements for watertightness or air permeability resistance of sheeting.

EN 1090-2:2008 (E)**2 Normative references****2.1 General**

The following referenced documents are indispensable for the application 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.

2.2 Constituent products**2.2.1 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 10025-1:2004, *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, shape and mass*

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 uncoated plate, sheet and 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 purpose — 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 10088-2:2005, *Stainless steels — Part 2: Technical delivery conditions for sheet/plate and strip of corrosion resisting steels for general purposes*
- EN 10088-3:2005, *Stainless steels — Part 3: Technical delivery conditions for semi-finished products, bars, rods, wire, sections and bright products of corrosion resisting steels for general 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 mild 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 10149-1, *Hot-rolled flat products made of high yield strength steels for cold forming — Part 1: General delivery conditions*
- EN 10149-2, *Hot-rolled flat products made of high yield strength steels for cold forming — Part 2: Delivery conditions for thermomechanically rolled steels*
- EN 10149-3, *Hot-rolled flat products made of high yield strength steels for cold forming — Part 3: Delivery conditions for normalized or normalized rolled steels*
- EN 10160, *Ultrasonic testing of steel flat product of thickness equal or greater than 6 mm (reflection method)*
- EN 10163-2, *Delivery requirements for surface condition of hot-rolled steel plates, wide flats and sections — Part 2: Plate and wide flats*
- EN 10163-3, *Delivery requirements for surface condition of hot-rolled steel plates, wide flats and sections — Part 3: Sections*
- EN 10164, *Steel products with improved deformation properties perpendicular to the surface of the product — Technical delivery conditions*
- EN 10169-1, *Continuously organic coated (coil coated) steel flat products — Part 1: General information (definitions, materials, tolerances, test methods)*
- EN 10169-2, *Continuously organic coated (coil coated) steel flat products — Part 2: Products for building exterior applications*
- EN 10169-3, *Continuously organic coated (coil coated) steel flat products — Part 3: Products for building interior applications*
- 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*