

DIN EN 1090-1:2012-02 (E)

Execution of steel structures and aluminium structures - Part 1: Requirements for conformity assessment of structural components (includes Amendment A1:2011)

Contents		Page
Foreword		4
Introduction		5
1	Scope	6
2	Normative references	6
3	Terms, definitions and abbreviations	7
3.1	Terms and definitions	7
3.2	Abbreviations	8
4	Requirements	9
4.1	Constituent products	9
4.1.1	General	9
4.1.2	Constituent products for steel components	9
4.1.3	Constituent products for aluminium components	9
4.2	Tolerances on dimensions and shape	9
4.3	Weldability	9
4.4	Fracture toughness	10
4.5	Structural characteristics	10
4.5.1	General	10
4.5.2	Load bearing capacity	10
4.5.3	Fatigue strength	10
4.5.4	Resistance to fire	10
4.5.5	Deformation at serviceability limit state	11
4.6	Reaction to fire	11
4.7	Dangerous substances	11
4.8	Impact resistance	11
4.9	Durability	11
5	Evaluation methods	12
5.1	General	12
5.2	Constituent products	12
5.3	Tolerances on dimensions and shape	12
5.4	Weldability	12
5.5	Fracture toughness	12
5.6	Structural characteristics	13
5.6.1	General	13
5.6.2	Structural design	13
5.6.3	Manufacturing characteristics	14
5.7	Resistance to fire	14
5.8	Reaction to fire	14
5.9	Dangerous substances	14
5.10	Impact resistance	14
5.11	Durability	14
6	Evaluation of conformity	15
6.1	General	15
6.2	Initial type testing	15
6.2.1	General	15

6.2.2	Characteristics	16
6.2.3	Use of historical data	16
6.2.4	Use of structural calculations for conformity assessment	16
6.2.5	Initial type calculation	16
6.2.6	Sampling, evaluation and conformity criteria	16
6.2.7	Declaration of performance characteristics	16
6.2.8	Recording of results from evaluations	17
6.2.9	Corrective actions	17
6.3	Factory production control	19
6.3.1	General	19
6.3.2	Personnel	19
6.3.3	Equipment	19
6.3.4	Structural design process	19
6.3.5	Constituent products used in manufacture	20
6.3.6	Component specification	20
6.3.7	Product evaluation	20
6.3.8	Non-conforming products	20
7	Classification and designation	21
8	Marking	22
Annex A (informative) Guidelines for preparation of the component specification		23
A.1	General	23
A.2	Purchaser provided component specification (PPCS)	23
A.3	Manufacturer provided component specification (MPCS)	23
Annex B (normative) Assessment of factory production control		25
B.1	General	25
B.2	Initial inspection	25
B.3	Continuous surveillance	26
B.4	Frequency of inspection	27
B.4.1	General	27
B.4.2	Surveillance intervals	27
B.4.3	Declaration by manufacturer	28
B.4.4	Action in case of non-compliance	28
B.5	Reports	28
Annex ZA (informative) Clauses of this European Standard Addressing the provisions of EU Construction Products Directive (CPD)		29
ZA.1	Scope and relevant characteristics	29
ZA.2	Procedures for the attestation of conformity of structural steel and aluminium components ...	31
ZA.2.1	System of attestation of conformity	31
ZA.2.2	Assignment of tasks	31
ZA.2.3	Declaration of conformity	32
ZA.3	CE marking and labelling	33
ZA.3.1	General	33
ZA.3.2	Declaration of product properties by material properties and geometrical data	33
ZA.3.3	Declaration of the strength value(s) of the component	37
ZA.3.4	Declaration of compliance with a given component specification	39

ZA.3.5 Declaration of the strength value(s) of the component from purchaser`s order41
Bibliography43