Scope of EN 1090-1 – Clarification Document

This document has been submitted to the European Commission as the UK view on the scope of EN 1090-1. After discussions, including with the European Technical Committee responsible for EN 1090-1 and the European Notified Body Sector Group 17 covering this product area, the Commission intends to put a clarification of the scope of EN 1090-1 on the Frequently Asked Questions section of its website: http://ec.europa.eu/enterprise/sectors/construction/faq/index_en.htm.

The UK submission offers a more detailed description of products that are within and outside the scope of EN 1090-1 and is intended as a starting point for discussion; it represents the consensus view but there is some disagreement as to whether on-shore wind turbines masts, bases for plant and fences are included in the scope of EN 1090-1. Other Member States have also submitted documents, which sometimes take different views on what is included and what is excluded.

Therefore this document should be used with caution, as only the Commission's website can be regarded as being authoritative.

1. Introduction

This document relates to *EN 1090-1: 2009 + A1: 2011 'Execution of steel structures and aluminium structures Part 1: Requirements for conformity assessment of structural components'* and provides guidance on the scope of structural components that are covered by this harmonised standard.

Clause 1 Scope of EN 1090-1 gives a very broad definition of the types of structural components that are covered. This definition includes:

- structural steel and aluminium components,
- kits,
- steel components used in composite steel and concrete structures and
- structural cold-formed members and sheeting as defined in EN 1993-1-3 and EN 1994-1-4

The scope of EN 1090-1 also states that the components described above can be made from different types of steel and aluminium constituent products and limits these products to the following:

- Hot rolled or cold formed
- Products made with other technologies
- Sections/profiles with various shapes,
- Flat products (plates, sheet, strip)
- Bars
- Castings
- Forgings
- Unprotected
- Protected against corrosion by coatings or other surface treatments

The above definition is extremely general and needs further refinement to develop a comprehensive list of structural steel and aluminium components that is readably identifiable by the constructional steel and aluminium industries. Section 2 sets out the principles used to develop a list of structural components that are covered by EN 1090-1 and a list of both non-structural and structural components that are not within the scope of EN 1090-1.

2. Principles

The list of structural steel and aluminium components given below is based on the following principles:

- All components must fall within the scope of the Construction Products Regulation
- All components must fall within the scope of Mandate M/120
- All components must fall within the scope of EN 1090-1
    - They must be 'structural'
    - They must be made from steel or aluminium constituent products as defined in the Scope of en 1090-1
- Structural components that come within the scope of another harmonised standard are excluded

The term '*structural component*' is defined in EN 1090-1 as:

Structural component *- Components to be used as load-bearing parts of works designed to provide mechanical resistance and stability to the works and/or fire resistance, including aspects of durability and serviceability which can be used directly as delivered or can be incorporated into a construction work.*

The above principles together with the definition for structural component have been used to develop a list of structural steel and aluminium components for a limited range of civil engineering structures covered by the Construction Products Regulation. This list is given in Section 3 below.

Similarly the above principles have been used to identify a range of both structural and non-structural steel and aluminium components that do not fall with the scope of EN 1090-1. This list is given in Section 4 below.

3. Structural Steel and Aluminium Components - within Scope

3.1 Components for Use in Buildings

a. Architectural steelwork for:

- Staircases
- Balconies
- Canopies

b. Lighter fabrications include:

- Fire escapes,
- Ladders
- Catwalks
- Walkways, including open mesh flooring
- Ramps
- Guardrails, handrails and balustrades

c. Specialist fabrication services:
- Bending of steel sections
- Cellular and castellated sections
- Plate girders

d. Trusswork

e. Structural frames for use in buildings including:
- Agricultural sheds
- Portal frames for warehouse, industrial sheds etc
- Frames for buildings (including dwellings; offices, commercial, hospitals education, recreational buildings etc)
- Sheds

f. Tubular work where tubular construction forms a major part of the building

g. Tension systems

h. Cold-formed purlins and cladding rails

i. Cold-formed decking for use in composite steel and concrete floors

j. Cold-formed sheeting for roofing and cladding

k. Fabricated pile foundations (including foundations made from sections and sheet piles)

l. Mezzanine floors

3.2 Components for use in Grandstands and Stadia

3.3 Components for use in boundary and security fences
- Structural fences
- Guardrails

3.4 Components for use in Bridges

a. Bridge refurbishment (where the work is done in the workshop and not on site)

b. Footbridges (pedestrian and bicycle bridges)

c. Sign and gantry girders

d. Cable-supported bridges (Cable-stayed and suspension bridges)

e. Bridges made from stiffened complex platework (e.g. desk, box girders or arch boxes)

f. Tension systems

g. Moving bridges (although some of the moveable parts may also come within the scope of the Machinery Directive)

h. Bridges made from trusswork

i. Bridges made from plate girders

j. Pipe bridges

3.5 Components for Towers and Masts

a. Components for use in towers, masts and pylons

3.6 Components for use in Plant and Machinery

a. Frames for machinery including supports for plant and conveyors including:
- Columns
- Beams
- Trusses
- Grillages

b. Heavy industrial platework for plant, bunkers, hoppers and silos

c. Supporting frames and fixtures for
    a. Lighting
    b. Communication
    c. Transport-lifts
    d. Hoists, including runway beams
    e. escalators

3.7 Components for use in Wharfs and Docks

4.0 Steel and Aluminium Components not within the scope of EN 1090-1

4.1 Components specifically excluded from EN 1090-1

Components for:
- suspended ceilings
- rails or sleepers for use in railway systems

4.2 Component covered by harmonised standards other than EN 1090-1

Structures and components that fall within the scope of other harmonised standards are not covered by EN 1090-1. A list of steel and metal components that are covered by other harmonised standards is given in Table 1 below.

Component	Harmonised Standard
Steel lintels	EN 845-2
Metal chimneys	EN 1856-1
Metal liners	EN 1856-2
Hot rolled steel sections	EN 10025-1
Stainless steel strip	EN 10088-4
Stainless steel bars, rods, wire, sections etc	EN 10088-5
Hot finished steel tubes	EN 10210-1
Cold-formed steel tubes	EN 10219-1
Steel casting	EN 10340
Q and T steels	EN 10343
Fabricated steel tanks	EN 12285-2
Free-standing steel chimneys	EN 13084-7
Industrial, commercial and garage doors and gates – without fire resistance or smoke control	EN 13241-1
Welding consumables	EN 13479
Self-supporting metal sheets for roofing, cladding and lining	EN 14782
Fully supported metal sheet for roofing, cladding and lining	EN 14783
Metal framing for plasterboard	EN 14195
Pre-loadable bolts	EN 14399-1
Self supporting insulating panel panels	EN 14509
Non-preloadable bolts	EN 15048

Table 1 – Steel and metal components covered by harmonised standards other than EN 1090-1

Some of the component give in table 1 may be incorporated into fabricated structural steel and aluminium components that come within the scope of EN 1090-1.

4.3 Components covered by ETAs

Structural steel and aluminium components that fall within the scope of an ETA that is in force do not fall within the scope of EN 1090-1. A list of ETAG is given in Table 2 below.

Component	ETAG
Anchor bolts	ETAG 001
Stair kits not part of the structural frame	ETAG 008
Prefabricated building units	ETAG 023
Metal frame building kits	ETAG 025
Steel parts of movement joints of bridges	ETAG 032
Cladding kits	ETAG 034

Table 2 – Steel and metal components covered by ETAGS

Drafting Note:

Where the manufacturer doesn't have the appropriate ETA in force then those parts of the component that fall within the scope of EN 1090-1 must be CE Marked in accordance with EN 1090-1. For example a manufacturer of metal frame building kits can only claim that he's exempt from CE Marking in accordance with EN 1090-1 if he has the appropriate ETA to ETAG025 in place.

4.4 Other products not covered by EN 1090-1

a. Components for use in structures that are not within the scope of the Construction Products Regulation.
    a. Offshore structures
    b. Temporary works
    c. Components that are not permanently incorporated into the building or civil engineering works (e.g. crane bridge etc)
    d. Traditional craft type components (e.g. blacksmith making weather cocks etc)
    e. Pressure vessels
    f. Boundary fences and railings (provided they are not load bearing)
    g. Gates

b. Components or changes to components which are not made in the factory (i.e. are made on site)

c. Repairs and renovation

d. Non-structural steel or aluminium components

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