An introduction to CE marking and the Construction Products Directive (CPD) / Construction Products Regulation (CPR)

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What is CE marking?

CE marking is a manufacturer’s declaration that their product meets the requirements of a harmonised European technical specification.

And therefore the CE mark shows compliance to one of the ‘New Approach Directives.’
In 1985 the European Council (EC) recognised the need to solve the situation regarding technical barriers to trade across member states in Europe.

They did this by producing a list of "New Approaches to technical harmonisation" to basically harmonise the way products are assessed for their end use for the whole of Europe.

These ‘New Approaches’ were called ‘Directives’ and covered a wide range of product groups.
One of the first „New Approach“ Directives was the CPD

CPD was replaced by CPR at April 2011 and will become effective in full range on 1st of July 2013
# Some of the New Approach Directives

<table>
<thead>
<tr>
<th>Directive No.</th>
<th>Product family</th>
</tr>
</thead>
<tbody>
<tr>
<td>90/396/EEC</td>
<td>Appliances burning gaseous fuels</td>
</tr>
<tr>
<td><strong>89/106/EEC</strong></td>
<td><strong>Construction products -&gt; CPR 305/2011</strong></td>
</tr>
<tr>
<td>89/336/EEC</td>
<td>Electromagnetic compatibility (EMC)</td>
</tr>
<tr>
<td>94/9/EC</td>
<td>Equipment and protective systems in potentially explosive atmospheres (ATEX)</td>
</tr>
<tr>
<td>93/15/EEC</td>
<td>Explosives for civil uses</td>
</tr>
<tr>
<td>95/16/EC</td>
<td>Lifts</td>
</tr>
<tr>
<td>73/23/EEC</td>
<td>Low voltage equipment</td>
</tr>
<tr>
<td>90/385/EEC</td>
<td>Medical devices: Active implantable</td>
</tr>
<tr>
<td>93/42/EEC</td>
<td>Medical devices: General</td>
</tr>
<tr>
<td>98/79/EC</td>
<td>Medical devices: In vitro diagnostic</td>
</tr>
<tr>
<td>90/384/EEC</td>
<td>Non-automatic weighing instruments</td>
</tr>
<tr>
<td>94/62/EC</td>
<td>Packaging and packaging waste</td>
</tr>
<tr>
<td>89/686/EEC</td>
<td>Personal protective equipment (PPE)</td>
</tr>
<tr>
<td>COM(93)322 final</td>
<td>Precious metals</td>
</tr>
<tr>
<td>97/23/EC</td>
<td>Pressure equipment</td>
</tr>
<tr>
<td>94/25/EC</td>
<td>Recreational craft</td>
</tr>
<tr>
<td>98/37/EC</td>
<td>Safety of machinery</td>
</tr>
<tr>
<td>88/387/EEC</td>
<td>Safety of toys</td>
</tr>
<tr>
<td>87/404/EEC</td>
<td>Simple pressure vessels</td>
</tr>
<tr>
<td>98/13/EC</td>
<td>Telecommunications terminal and satellite earthstation equipment (ITVSES)</td>
</tr>
</tbody>
</table>
On which products does the CPD/CPR apply to?

- all products “permanently incorporated into the works” i.e. building, civil engineering, highways etc.
- all construction products that are covered by Building Regulations somewhere in Europe i.e. at least one Essential Requirement (ER) applies to them in their end use. The 6 ER’s are:
  1. mechanical resistance and stability
  2. safety in case of fire
  3. hygiene, health and environment
  4. safety in use
  5. protection against noise
  6. energy economy and heat retention
  7. sustainable use of natural resources
The conception of CPR / CPD stays in a principle where manufacturer shall prove that its product satisfies the requirements.

The only way for a manufacturer to prove compliance with the CPD / CPR is to apply the CE-mark.
What are the routes to CE marking?

The only document a manufacturer can CE mark to is called a harmonised technical specification.

There are two types of harmonised technical specification:

1. Harmonised European standard (hEN) - produced by the European Committee for Standardisation (CEN)

2. European Technical Approval (ETA) - produced by an ETA Issuing Body through EOTA (European Organisation for Technical Approvals).

- BM TRADA are an ETA Issuing Body -
1. harmonised European Standard (hEN)

- a hEN is an European standard that directly relates to one of the New Approach Directives (in our case the CPD / CPR)
- ‘harmonised’ means it contains criteria which permit CE marking to be affixed
- they are prepared on the basis of a ‘Mandate’ (formal request) issued by EC
- their content matches the ‘Essential Requirements’ of the relevant directive
An ETA is ‘A favourable technical assessment of a product’s fitness for its intended use’

ETAs can only be granted when any of the following conditions apply:

- No harmonised Standard exists
- No mandate for such a Standard has been given by the EC
- The EC considers a Standard cannot be developed in a reasonable time
- Product deviates significantly from hEN
European Technical Approval (ETA)

An ETA is written by an ETA Issuing Body following:

a) an ETA Guideline (ETAG)

or

b) a Common Understanding of Assessment Procedure (CUAP)

ETAGs are written by EOTA under instruction from CEN for a group of products that have no hEN or deviate from a hEN.

CUAPs are written by an ETA Issuing Body where there is no hEN or ETAG or the product deviates from a hEN or ETAG.
Proposed stages through ETA process

A. **Gap analysis** – this is the first stage and takes the form of a gap analysis of the information received from the client against that required in the relevant technical specification.

B. **Technical assessment** – this stage entails carrying out a detailed assessment of the data submitted by the client. This will need to include copies of all relevant drawings, manuals (technical, sales and production), test data, design protocols, material specifications and any supporting documents and/or certificates.

C. **Initial Type Testing** – if any additional testing is needed then this should be performed in this stage. Testing can be made in BM TRADA facilities also.

D. **Production of European Technical Approval** – preparation by BM TRADA of the ETA covering the Client’s range of products, final analysis of all the data submitted, including additional test data if appropriate, review of the final report against the requirements.

E. **Circulation of ETA** – BM TRADA as member of the EOTA technical board will circulate the ETA to other members of the board for commenting.
ETA process stages continue...

F. **Site assessment** - The objective of this stage in the process is to review the implementation of the factory production control (FPC) procedures. This will include consideration of test procedures, equipment, personnel, frequency of tests, interpretation of results, calibration of test equipment, product dimensions, storage of materials etc. as laid down within the technical specifications and is based on one production facility.

G. **Registration and Certification** - This is the stage where the final assessments of the reports produced for stage F is carried out and, providing all requirements have been met BM TRADA Certification will issue the CE certificate to the client.

H. **Annual subscription** - The annual subscription covers a variety of incurred costs including scheme management, arrangement and analysis of audit visits and general scheme administration. CE marking requires two surveillance visits per year.
Summary of routes to CE marking

CONVENTIONAL PRODUCTS

Harmonised European Standard hEN

MANY SIMILAR or DEVIATING PRODUCTS

ETA based on an ETAG

ONE DEVIATING or INNOVATIVE PRODUCT

ETA based on a CUAP
<table>
<thead>
<tr>
<th>harmonised Technical Specification</th>
<th>Guideline for hTS (if required)</th>
<th>Product Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>hEN</td>
<td>ETAG</td>
<td>Conventional products</td>
</tr>
<tr>
<td>ETA</td>
<td>CUAP</td>
<td>One deviating or innovative product</td>
</tr>
</tbody>
</table>

Stages in **green** written by CEN or EOTA
Stages in **red** written by ETA Issuing Body for a manufacturer
What needs doing to apply for CE mark?

- The technical specification will give each product an ‘Attestation of Conformity’ or AoC level.

- In simple terms the Attestation of Conformity is basically the “who does what” to allow CE marking.
  - some tasks done by the manufacturer, some done by a Notified Body i.e. test laboratory or certification body
# Table showing AoC tasks

<table>
<thead>
<tr>
<th>Tasks for the manufacturer</th>
<th>1+</th>
<th>1</th>
<th>2+</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factory production control</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Further testing of samples taken at factory according to prescribed test plan</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Initial type testing</td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>tasks for the notified body</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Initial type testing</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Certification of FPC</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Surveillance of FPC</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Audit testing of samples</td>
<td>✓</td>
<td></td>
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</tbody>
</table>
The three monitoring areas

- **Initial Type Testing (ITT)**
  - This will be dictated by the end use of the product and will be detailed in the technical specification

- **Factory production Control (FPC)**
  - Satisfied if FPC is according to ISO 9001 and made specific to the technical specification

- **On going test programme**
  - The minimum requirements will be stated in the technical specification
  - This will then be incorporated into the FPC manual
Why should a manufacturer use CE mark?

If a hEN exists for a product and the manufacturer sells the product (exc. UK, Ireland, Sweden) it is a legal requirement.

Before the CPD a manufacturer had to satisfy the requirements of EU member states on an individual basis. Now they satisfy them ALL with one product and/or production assessment.
Why should a manufacturer use CE mark?

CE marking is proof that a product is fit for its intended end use. If a manufacturer cannot prove this fitness, should they be selling the product?

CE mark does not show the quality!

Q-mark (quality mark by BM TRADA)
Summary

• Technical specifications and the use of these are now emerging

• CE marking has arrived, but will take time for full coverage

• CE marking will probably become the expected norm, whether mandatory or not, and therefore manufacturers will have to adopt it

• BM TRADA Certification can provide Notified Body services to assist manufacturers in the CE marking process
We can help You on the following ...

- EN 13986 Wood based panels
- EN 14080 Glued laminated timber
- EN 14081 Strength graded structural timber
- EN 14250 Truss rafters
- EN 14351 Windows and doors
- ETA (ETAG 007 and ETAG 012)
- BS 5534 Timber battens
- ...
Any Questions?

Thank You for listening

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