BUILDING REGULATION AND ITS APPLICATION IN SLOVENIA

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EUROPEAN REGULATORY SYSTEM

1. Regulations
   • directly applicable in all member states, obligatory acts

2. Directives
   • demand measures for implementation on the national level to the prescribed date. Directives are the most important and most efficient instruments for implementation and strengthening the internal EU market.

3. Decisions
   • obligatory for those who are concerned

4. Recommendations and Opinions
   • non obligatory documents
The regulatory framework differed widely between Member States:

- **in some countries:**
  - broad functional requirements, extensive use of advisory codes of practice or manufacturers’ self-declaration of compliance

- **in others:**
  - reliance on legally enforceable national standards with extensive third party attestation
NEW APPROACH DIRECTIVES

- Unification of regulative with prescription of all product properties was impossible
- The solution was introduction of "new approach directives" in 1985. Only harmonization of Essential requirements (ER), for which public interest exists was foreseen - health and safety of users
- Unique moduli for conformity assessment of products were introduced
CONSTRUCTION PRODUCTS DIRECTIVE (CPD)

- One of the "new approach" directives, adopted in 1989 (106/89/EEC), basis for CE marking
- Its aim is to break down regulative barriers and enables free movement of construction products throughout Europe
- Problem: construction products can not be treated like others (e.g. electrical appliances) because its "fitness for use" depends on the place (country) where they will be installed
- National requirements should be taken into account
BUILDING REGULATIONS

Basic principles:

- **Free movement** of construction products is regulated by the European legal system (Construction Products Directive - CPD), Member States have to implement it to their national legal systems (in Slovenia Construction Products Act - ZGPro was adopted before entering the EU - UL RS Nr. 52/2000)

- **Construction regulated in national building regulations** (in Slovenia Construction Act was adopted in 2002 - ZGO-1, UL RS Nr. 110/02)

- **Other provisions** should be taken into account (eg. from General Products Safety Act - ZSVP-1, UL RS Nr. 101/03)
NATIONAL BUILDING REGULATIONS

- In national building regulations Member States should include essential requirements of CPD and are not allowed to put obstacles (additional requirements) for the products marked with CE mark.

- Practical problems arose in the states who had well established national building regulations and national classification system for construction products (e.g. Germany) which, in principle, were more strict than CPD.
DIFFERENCES BETWEEN CPD AND OTHER DIRECTIVES

- Construction products should have such characteristics that buildings in which they will be installed, fullfil essential requirements from CPD.
- Moduli for conformity assessment are different than common moduli in other directives (moduli A – H), CPD systems 1 – 4.
- The use of harmonized technical specifications (standards, technical approvals) is obligatory.
SPECIALITIES OF CPD

- Requirements for products are fulfilled through technical specifications: harmonized European standards (hEN) and European Technical Approvals (ETA)
- Attestation of Conformity systems (AoC) are prescribed in advance by Commission decision
- Member States have to notify to the Commission all notified bodies (testing laboratories, inspection and certification bodies) taking part in the AoC activities
CONSTRUCTION PRODUCTS (1a)

Products are very different:

- basic construction materials (cement, steel, aluminium, timber, polymers...)

- basic construction elements/composites (bricks, concrete, glulam...)

- composite materials (wood based panels, gypsum boards, thermal insulation panels...)
CONSTRUCTION PRODUCTS (1b)

- **structural elements** (floor plates, columns, beams, also from **wood** - e.g. from **cross-laminated wood**)

- **kits** (windows, doors...)

- **whole buildings** (timber, concrete and steel **frame** buildings, log buildings, cold storage premises...)

Tallinn, June 2007
CONSTRUCTION PRODUCTS (2)

Definition:

- **Construction product** is permanently installed into a building, could be important or less important.
- **Important construction product**
  - influences the essential requirements
  - its removal causes substantial degradation of building
  - changing needs construction procedure

Which are essential requirements for CPD?

- protection of health and safety of users (for all directives)
- environment protection and energy saving (only for CPD)
# Essential Requirements (ER)

<table>
<thead>
<tr>
<th>ER</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Mechanical resistance and stability</td>
</tr>
<tr>
<td>2</td>
<td>Safety in the case of fire</td>
</tr>
<tr>
<td>3</td>
<td>Hygiene, health and environment</td>
</tr>
<tr>
<td>4</td>
<td>Safety in use</td>
</tr>
<tr>
<td>5</td>
<td>Protection against noise</td>
</tr>
<tr>
<td>6</td>
<td>Energy economy and heat retention</td>
</tr>
</tbody>
</table>

Additional: Durability
Different construction products influence differently the safety of the building.

According to CPD importance of the product results in the Attestation of Conformity System (AoC).

All systems are combination of tasks which should be performed by producer, and those performed by notified body (NB):

- Initial Type-Testing = ITT
- Factory Production Control = FPC

AoC system is prescribed in technical specification.
## ATTESTATION OF CONFORMITY SYSTEMS (2)

<table>
<thead>
<tr>
<th>Tasks at conformity assessment</th>
<th>AoC systems</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1+</td>
</tr>
<tr>
<td><strong>Producer</strong></td>
<td></td>
</tr>
<tr>
<td>Factory production control</td>
<td>yes</td>
</tr>
<tr>
<td>Tests according to the</td>
<td>yes</td>
</tr>
<tr>
<td>prescribed test plan</td>
<td></td>
</tr>
<tr>
<td>Initial type testing</td>
<td>no</td>
</tr>
<tr>
<td><strong>Notified body</strong></td>
<td></td>
</tr>
<tr>
<td>Initial type testing</td>
<td>yes</td>
</tr>
<tr>
<td>Initial visit and assessment</td>
<td>yes</td>
</tr>
<tr>
<td>of factory production control</td>
<td></td>
</tr>
<tr>
<td>Regular surveillance of</td>
<td>yes</td>
</tr>
<tr>
<td>factory production control</td>
<td></td>
</tr>
<tr>
<td>Audit testing of samples</td>
<td>yes</td>
</tr>
</tbody>
</table>
ATTESTATION OF CONFORMITY SYSTEMS (3)

- In AoC systems 1 and 1+ CE certificate of conformity for the product is needed. It should be obtained by notified certification body.

- In AoC systems 2 and 2+ CE certificate of factory production control is needed. It should be also obtained by notified certification body.

- In AoC system 3 test report for the initial type testing from the notified testing laboratory is needed.

- In AoC system 4 producer should have a documented test report for the initial type testing.
NOTIFIED BODIES

- Member state should notify to the European Commission its notified bodies:
  - testing laboratories
  - inspection bodies
  - certification bodies

- Bodies are notified for the relevant technical specification (TS) only and not for testing or inspection procedures

- Before TS is issued notification is not possible!

- Accreditation of notified bodies is not necessary but usually demanded by the state authorities
GROUP OF NOTIFIED BODIES

- All bodies, involved in AoC, are equivalent, customer can perform all tasks in any country
- If product has CE mark it can be sold in all Member States without the need for additional national certification and/or testing
- For unifying the work a Group of Notified Bodies (GNB) was established
- Organizational questions are solving by the Advisory Group of Notified Bodies (AG GNB), and technical problems (eg. unifying the procedures) through the work of Sector Groups (SG CPD)
## SLOVENIAN NOTIFIED BODIES

<table>
<thead>
<tr>
<th>Type of notification</th>
<th>Organisation</th>
</tr>
</thead>
<tbody>
<tr>
<td>AB</td>
<td>ZAG - LJ UBLJ ANA Slovenian National Building and Civil Engineering</td>
</tr>
<tr>
<td>NB 1373</td>
<td>IGMAT - Institute for Building Materials</td>
</tr>
<tr>
<td>NB 1374</td>
<td>IRMA - Institute for Material Research and Application d.d.d.</td>
</tr>
<tr>
<td>NB 1404</td>
<td>ZAG LJ UBLJ ANA</td>
</tr>
<tr>
<td>NB 1494</td>
<td>AKTI M</td>
</tr>
</tbody>
</table>

Abbreviations: AB…approval body
               NB…notified body
SLOVENIAN WORK IN SECTOR GROUPS

- In sector groups (SG) experts from notified bodies issue working documents regarding testing and inspection procedures - “Operating procedures”, “Sampling for ITT testing” etc.
- Members of SG should be representatives of all notified bodies but due to costs, lack of time etc. it does not happen - attendance to the meeting depends also on the type of product
- Sector groups in which representatives of Slovenia participate: SG-02 (Cement), SG-06 (Doors and windows), SG-18 (Structural timber products), SG-13 (Prefabricated concrete elements), SG-21 (Building kits), SH-02 (Fire)
MANDATES

- After consultation with Standing Committee for Construction (SCC) European Commission (EC) gives "mandates" to standardization body (CEN) and European Organization for Technical Approvals (EOTA) to make harmonized technical specification for specific product or family of products.
- EC prescribes essential requirements relevant for the product.
- EC sets an Attestation of Conformity system.
HARMONIZED STANDARDS

- Different kinds of standards: basic, for terminology, for processes (eg. testing), for procedures (eg. factory production control), for compatibility, for products, for design (Eurocodes)...

- Speciality of CPD: adoption of standards with requirements for products – harmonized standards

- Fulfilling requirements from harmonized standards enables CE marking

- Annex Z (CPD ZA, other directives ZB, ZC, ZD)
ANNEX ZA

- The same structure for all harmonized standards:
  - ZA.1: harmonized (obligatory) properties of the product
  - ZA.2: Attestation of Conformity system (1+, 1, 2+, 3, 4) – in the same standard also several AoC systems possible - depending on the type of product and intended use
  - ZA.3: content and example of CE mark
EXAMPLE OF CE MARK

Product: roof window

Standard, to which product is conformed with: EN 14351-1

Important information:
- name of the producer
- year of affixing CE mark
- intended use
- number of notified body
- technical characteristics
DECLARED VALUES OF TECHNICAL CHARACTERISTICS

- Technical characteristics have to:
  - reach the **threshold**, prescribed in technical specification (values are different for different levels/classes)
  - be defined as **declared values**

- Declared values are often connected with **building regulations in Member States (MS)**

- **Option NPD (no performance determined)**

- **Be careful with NPD option** - **installation** of such a product in MS with prescriptive national regulation regarding this property/requirement is **not possible**!
NUMBER OF HARMONIZED STANDARDS

- What is the total number of harmonized standards?
  

- Concerned standards in the last list (20. 4. 2007): **471**
  
  - Approved and cited in OJ: **247**
  - Approved not yet cited in OJ: **79**
  - Approved not yet available: **2**

- Total approved: **328**
  
  - Voted drafts waiting for report: **5**
  - Drafts in acceptation procedure: **44**
  - Drafts: **94**

- In the preparation process: **143**
HARMONIZED STANDARDS FOR TIMBER…

- A total number of harmonized standards in "timber area"?

**Concerned standards in the last list (20. 4. 2007):**

- Approved and cited in OJ: 16
  - (1 doors, 1 shutters, 7 hardware)
- Approved not yet cited in OJ: 4
  - (1 windows/doors)

**Total approved:** 20

- Drafts in acceptation procedure: 3
- Drafts: 9
  - (1 windows/doors, 5 hardware)

**In the preparation process:** 12
CE MARKING : QUALITY MARK

- Is CE mark also a quality mark?
- It assures fulfillment of minimum requirements, it does not include the involvement of "third party" in all cases
- Possibility of increasing level of control is introduction of "quality marks"
- A variety of these marks: key mark, NEMKO mark, institutes' marks
- Should not be mixed with CE mark - they are voluntary
- Relating to AoC: usually it is system 1 (certificate of the product) or system 2+ (certificate of FPC)
TECHNICAL APPROVALS (1)

- "European Technical Approval is favourable technical assessment of the fitness for use of a product for an intended use, based on fulfillment of the essential requirements for building works for which the product is used"

- Technical approval is technical specification for the known producer and for specific product/products

- Technical approvals may be granted to a product for which neither a harmonized standard not a recognized national standard not a mandate for harmonized standard is issued, or to product which differs significantly from standard - in this category we also treat products, composed from more components ("kits")
TECHNICAL APPROVALS (2)

- Technical approval is **technical specification** for the known producer and for specific product/products.
- European technical approval (**ETA**) consists of all chapters needed for CE marking (**relevant properties, testing needed, quite detailed description of FPC, AoC system, tasks for producer and notified body, description of CE mark**)...
- It is **not** a passport for a product to enter the market.
- AoC procedures, prescribed in technical approval should be performed (**also certification** if needed).
- European technical approval (**ETA**) can be obtained only by the **member of EOTA**.
EUROPEAN TECHNICAL APPROVALS

- There are two types of European Technical Approvals (ETA)
  - made on the basis of Guideline (ETAG)
  - made on the basis of Common Understanding of Assessment Procedure (CUAP) - art. 9.2 of CPD

- European technical approvals are harmonized by European Organisation for Technical Approvals (EOTA), in which all Approval bodies shall participate

- All documents (issued ETA and endorsed ETAG) are available on the website of EOTA: http://www.eota.eu
SLOVENIAN APPROVAL BODY

- Ministry for Economy authorised with a decision Nr. 210-9/2002-5 from 27.06.2003 Slovenian National Building and Civil Engineering Institute (ZAG) as an Approval Body

- With this decision ZAG gained responsibilities and rights from the next activities:
  - issuing, changing, prolonging or deleting Slovenian Technical Approvals (STS)
  - issuing, changing, prolonging or deleting European Technical Approvals (ETA)
  - as a member of European Organization for Technical Approvals (EOTA) represents Republic of Slovenia in this organization
ZAG'S WORK IN THE FIELD OF EOTA

- Till May 2007 ZAG has issued 8 ETAs:
  - 2 for metal anchors (ETAG 001)
  - 2 for plastic anchors (ETAG 014)
  - 6 for ETICS (ETAG 004)

- All ETA drafts are circulating between EOTA members, so ZAG's experts should check and comment them.

- ZAG is obliged to inform all EOTA members on Slovenian regulatory demands when ETAG, ETA or CUAP are drafted.

- ZAG's representatives attend the meetings of Technical Board (TB), Executive Committee (ExCom) and Plenary meetings (PM).
Mainly for the products for which hEN is in the preparatory phase (prEN) - in that case approvals follow quite strictly the requirements of prEN.

Sometimes they are issued on the demand of producer or its legal representative (even when ETAG is available) because the procedure is quicker.

In the year 2006 ZAG issued app. 120 Slovenian technical approvals whereas over 400 applications were submitted.
EUROPEAN INFORMATION SYSTEM

- Legal documents are published in the Official Journal EU (OJ)
  

- Other path - through Comité Européen de Normalisation (CEN) “business domains” - construction
  

- Lists of notified bodies can be found in NANDO basis:
  
  http://ec.europa.eu/enterprise/newapproach/nando/
SLOVENIAN INFORMATION SYSTEM

- Legal documents published in the Uradni list RS
  http://www.uradni-list.si/main.cp2
- e.g. Law on Construction products
  http://www.uradni-list.si/1/objava.jsp?urlid=200052&stevilka=2448
- Other path - through Ministry for Environment and Spatial Planning (MOP) - building regulation
  http://www.mop.gov.si/si/zakonodaja_in_dokumenti/prostor/#c16759
- Standards can be purchased through Slovenian Institute for Standardization (SIST)
  http://www.sist.si/index.htm
Obligatory use of technical specifications is cited in Official Journal (Uradni list) RS:

- there have been 9 citations for using harmonized standards as recognized technical specifications: “List of standards whose application creates the presumption of conformity on construction products for their intended use” (first in UL RS Nr. 103/29.11.2002, last in UL RS Nr. 49/4.6.2007)

- a list of Guidelines for European technical approvals was cited in UL RS Nr. 58/18.6.2003
CONCLUSIONS (general)

- Construction Products Directive (CPD) is, according to many parties involved, very effective tool for enabling free market for construction products.

- On the other hand, some participants (not necessarily producers!) think that procedures for getting CE mark are costly and time consuming.

- A lot of attempts for revision of CPD has been initiated, so far not successfully.

- CPD cannot be treated as other directives - products are assessed when installed (construction is under the national regulations!)
CONCLUSIONS (Slovenian aspect)

- After abandoning JUS standards and former building regulatory system, Slovenia remained practically without regulations in this field.
- The solution was fast implementation of Construction Products Directive into Slovenian legal system (in 2000).
- We found procedures from CPD very useful.
- Problems occur mainly due to very long procedures in adopting technical specifications, specially standards - Slovenian technical approvals are needed.
THANK YOU FOR YOUR ATTENTION!

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