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ПОСТАПКА ЗА АТЕСТИРАЊЕ НА УПОТРЕБЛИВОСТА НА ГРАДЕЖНИТЕ ПРОИЗВОДИ ВО РЕПУБЛИКА ХРВАТСКА

РЕЗИМЕ

Постапката за хармонизација на Хрватската градежна регулатива со законодавството е во тек веќе неколку години, но беше значително интензивирани по изгласувањето на Законот за Градба во 2003 година, во кој се вградени основните одредби од CPD. Согласно одредбите на Законот за Градба, техничките прописи за производите или група на производи во Република Хрватска се изработени врз база на принципите за Европска хармонизација на техничката регулатива.

Во трудот се наведени податоци за веќе усвоената техничка регулатива, за сертификатите за употребливост и сертификатите за контрола на фабричките производи.

Клучни зборови: Закон за Градба, атест за употребливост, сертификати

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PROCEDURE ON ATTESTATION OF CONFORMITY OF CONSTRUCTION PRODUCTS IN THE REPUBLIC OF CROATIA

SUMMARY

Procedure of harmonization of the Croatian construction legislation with the *acquis communautaire* has been going on for a number of years, while it has been substantially accelerated after enactment of the Building Law in the year 2003, which transposed the basic provisions of the CPD. According to provisions of the Building Law, the technical regulations for products or groups of products are prepared in the Republic of Croatia on principles of European harmonization of technical legislation.

The data about so far issued technical regulations, certificates of conformity and factory production control certificates, are mentioned in this paper.

Keywords: Construction products directive, Building law, attestation of conformity, certificates

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1. INTRODUCTION

The objective of introducing the EU *acquis* into the Croatian legislative system is to enable free movement of goods, people and services, as well as the free circulation of capital. In construction industry, the Construction Product Directive (CPD) [1] regulates all structural requirements to be applied by the EU member countries so that construction products manufactured in any EU member country can be sold and installed in any other member country.

The approximation of the Croatian legislation to European regulations has been taking place for several years now, and the process intensified as of 2003, i.e. after proclamation of the building law (ZOG) [2] which introduces some basic CPD notions. This law was accompanied with a number of subordinate acts and technical regulations dealing, *inter alia*, with individual products. The technical regulations specify product-related standards which refer to standards according to which products are tested, including provisions for national specificities when appropriate.

According to the Building Law (Official Gazette, issues 175/03 and 100/04), a construction product may be marketed and used for construction only if its usability has been proven, i.e. if its technical properties comply with an appropriate standard specified in technical regulations [3].

The usability of a construction product is proven by the certificate of conformity or the declaration of compliance, following the compliance determination procedure which has to be conducted in accordance with the *Byelaw on conformity certification, conformity certifying documents, and marking of construction products* (Official Gazette, 1/05). [4]

2. CURRENT TECHNICAL REGULATIONS

To enable rapid approximation of the Croatian legislation with the EU *acquis*, in harmony with principles observed in previous construction regulations, the Ministry of environmental protection, space planning and construction has so far passed the following technical regulations:

- Technical regulation for cement used in concrete structures,
- Technical regulation for concrete structures,
- Technical regulation on energy savings and thermal protection in buildings,
- Technical regulation for masonry structures,
- Technical regulation on ventilation systems, and on the partial and full air-conditioning in buildings,
- Technical regulation on chimneys used in buildings, and
- Technical regulation for windows and doors.

Technical regulations define technical properties and other requirements for construction products that are installed in buildings and other built facilities, as well as requirements related to such facilities, their construction and maintenance.

Technical properties must comply with general and special requirements that are significant for the end use, and must be defined based on product specification standards (accepted as Croatian standards, as derived from EU standards) referred to in technical regulations, the aim of which is to contribute to the uniformity of construction products. When required, technical properties of products must also meet some additional requirements as specified on individual projects.

Technical regulations also define procedure that is used for the certification of conformity of construction products. At the same time, the time of validity of construction product certification is defined on the basis of acknowledged technical rules. After expiry of this time, the usability of construction products can be proven, depending on the conformity certification system used, by means of a certificate of conformity, by internal (factory) production control certificate, and by the initial type testing report.

First three of the above mentioned technical regulations were passed in 2005 and, based on actions taken (in the scope of the system 1 and 1+) to determine conformity of individual construction product, a number of conformity certificates has been issued, as shown in table 1. For system 2 and 2+ to determine conformity of factory production control, issued certificates are shown in table 2.

Technical regulation for cement used in concrete structures [5] defines technical properties and other requirements for cement used in the construction of concrete structures.

Technical regulation for concrete structures [6] defines, in the scope of requirements significant for buildings and built facilities, technical properties of concrete structures contained in buildings and built facilities, requirements for the design, realization of works, usability and maintenance, as well as other requirements relating to construction products to be incorporated in concrete structures. Standards for construction products that are incorporated in concrete structures are described and specified in appendices, which form an integral part of this technical regulation. All appendices define technical properties and other requirements of concrete that is incorporated in concrete structures, and the way in which conformity of individual construction products is certified. This technical regulation has the following appendices:

Appendix A	Concrete
B	Reinforcement
C	Cement
D	Aggregate
E	Concrete additives and mortar additives for tenon grouting
F	Water
G	Prefabricated concrete elements
H	Design of concrete structures according to codes of practice
I	Design of concrete structures according to Croatian standards
J	Realization and maintenance of concrete structures
K	Products and systems for the protection and remedy of concrete structures

The **Technical regulation on energy savings and thermal protection in buildings** [7] defines technical properties and other requirements for some construction products that are installed in buildings to realize energy savings and to increase thermal protection, the certification of conformity for these products as related to such requirements, and other technical requirements relating to thermal energy savings and thermal protection. The regulation defines factory made thermal-insulation products produced of: mineral wool, expanded polystyrene, extruded polystyrene foam, hard polyurethane foam, phenol foam, cellular glass, wood wool, expanded perlite, expanded cork, wooden fibres, and the related external thermal insulation systems (ETICS).

3. IMPLEMENTATION OF CONFORMITY CERTIFICATION PROCEDURE IN CROATIA

The *Byelaw on conformity certification, conformity certification documents, and marking of construction products* (Official Gazette, 1/05) [4] defines requirements for testing conformity of construction products, as well as the set of actions that must be taken by construction product manufacturers and the authorized legal person, depending on the type of certification system specified in technical regulations.

According to relevant recommendations, the legal person authorized to perform initial type testing for construction products should be accredited in accordance with HRN ISO/IEC 17025 [8], and in accordance with HRN EN 45011 [9] for the initial production plant inspection and initial inspection of internal (factory) production control, and for permanent monitoring, assessment and inspection of internal production control.

The authorization to perform the above activities is given by the ministry of environmental protection, space planning and construction. This authorization, issued to an eligible legal person, also contains the list of products for which the authorization is given, and the list of persons that are authorized to perform specific certification-related actions.

Civil Engineering Institute of Croatia (Institut građevinarstva Hrvatske d.d.), as an eligible legal person, is duly authorized to perform conformity certification actions for :

- Cement,
- Concrete
- Reinforcing steel and prestressing steel
- Aggregate,
- Concrete additives,
- Mineral additives,
- Prefabricated concrete products,
- Products for the protection and remedy of concrete structures,
- Thermal insulation products,
- Related systems for the external thermal insulation (ETICS),
- Mortars for walls,
- Masonry cement,
- Building lime, and
- Windows and doors.

Based on the results of certification activities, the authorized legal person issues, depending of the certification system used, the certificate of conformity (for systems 1 and 1+), (internal) factory production control certificate (for systems 2 and 2+), or the initial type testing report (for the system 3). In case of conformity certification according to system 4, all activities are performed by the manufacturer [10].

Once the certification activities are completed, the product manufacturer issues the declaration of conformity, submits this declaration to the Ministry of environmental protection, space planning and construction, and marks the product as specified in the building law or the *Byelaw on conformity certification, conformity certifying documents, and marking of construction products*. The product must be marked in such a way that an empty space is left in the space destined for the CE mark.

The Ministry of environmental protection, space planning and construction is empowered to inspect the certification procedure for construction products as well as the certificate delivery activities. The Ministry also monitors actions taken by the authorized body and the manufacturer.

4. EXPERIENCE GAINED IN CONFORMITY CERTIFICATION

A number of difficulties are encountered in the course of conformity certification. The construction product manufacturer is required to know well the legislation relating to this field, to have and understand the product specification standards, as well as the relevant test standards and, based on this knowledge and inspection of the place where the product will be used, the manufacturer must also be capable of marking the product in an appropriate manner.

Similarly the manufacturer must have the quality manual and documents proving that he has met all requirements for the internal (factory) quality control. This in other words means that he has to have a laboratory for making control tests in accordance with the product specification standards and, when required, in accordance with special regulations.

Based on the two years of experience in certification, it may be concluded that the procedure is clear and simple in case of manufacturers that have already passed through a conformity certification procedure in one of European countries. However, the problems occur in case of manufacturers who, due to the fact that they do not own a testing laboratory, did not check the quality of their products or checked it as necessary by third party laboratories. In this case, the adjustment to new legislation will call for significant investment in laboratory equipment and also in education of an appropriate laboratory personnel.

5. CERTIFICATES ISSUED BASED ON AUTHORIZATION GRANTED BY THE MINISTRY

From September 2005. till August 2007. Civil Engineering Institute of Croatia has issued following documents:

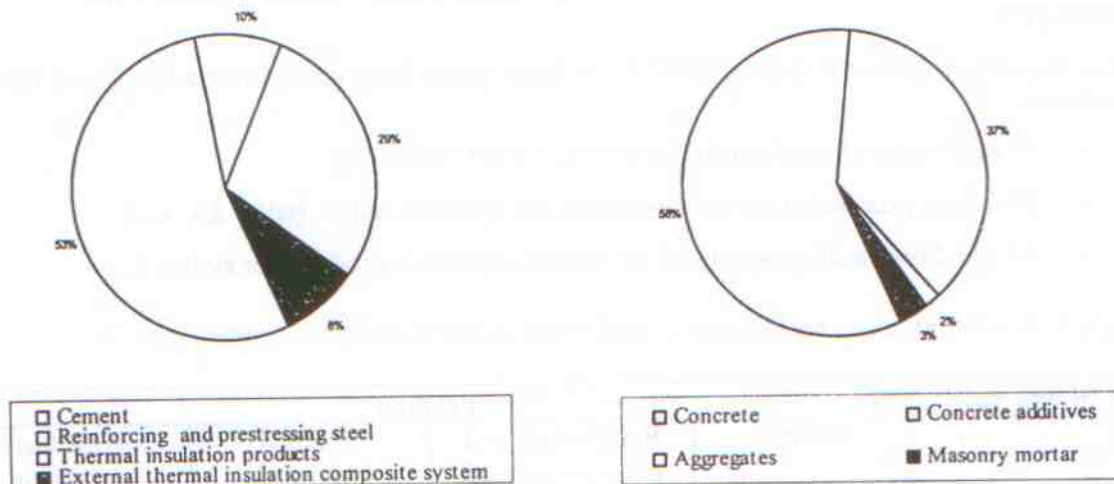
- 84 certificates of conformity for system 1 and 1+ (table 1.),
- 60 factory production control certificates for system 2 and 2+ (table 2.), and
- 44 initial type testing reports, all for thermal insulation products for system 3.

Table 1. Number of issued certificates of conformity in the scope of the system 1 and 1+

Month/year	Product			
	Cement	Reinforcing and prestressing steel	Thermal insulation products	External thermal insulation composite system
System:	1+	1+	1	1
9/05	7			
10/05	1			
11/05	4			
12/05	1			
2/06	3			
3/06	1			
4/06	5		8	
5/06	1		5	
6/06	1			
7/06	3	1		1
8/06	2	1		
9/06	4	1	3	
10/06	2	1		3
11/06		1		
12/06	2		4	1
2/07	1			
3/07	6	1		
4/07			2	
5/07			1	2
6/07	1			
8/07		2	1	
Total	45	8	24	7

Table 1. Number of issued factory production control certificates in the scope of the system 2 and 2+

Month/year	Product			
	Concrete	Concrete additives	Aggregates	Masonry mortar
System:	2+	2+	2+	2+
6/06	1			
7/06			1	
8/06				
10/06	1	1		
11/06		2		
12/06	2	1		
3/07	6	6		
4/07	4	4		
5/07	4	1		
6/07	9			
7/07	3	1		
8/07	5	6		2
Total	35	22	1	2



Picture 1. Percent of issued certificates of conformity (left) and factory production control certificates (right) for different products

6. CONCLUSION

During the process of technical approximation of Croatian legislation to the EU acquis, and through implementation of European standards, the conditions have been met for proving usability of construction products based on principles set in the new approach.

The experience gained so far in the implementation of conformity certification procedures for construction products has visibly contributed to the manufacturers' understanding of the need to reach and maintain high quality standards during manufacture of their products. Unfortunately, the documents prepared to this effect are still not sufficiently recognized neither by the clients, nor by designers, supervising engineers and contractors.

The system of market supervision by state institutions and consumer associations is still at an initial stage of implementation, which in other words means that the system must continuously be developed and upgraded, and that all participants in construction must undergo continuous education in this area.

LITERATURE

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- [7] Technical regulation on energy savings and thermal protection in buildings, Official Gazette (79/05, 155/05 and 74/06)
- [8] HRN ISO/IEC 17025 General requirements for the competence of testing and calibration laboratories
- [9] HRN EN 45011 General requirements for bodies operating product certification system
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