

# Cement quality

## – awareness of usage of tested building materials

The principles of marketing building products, the conditions of their usage and control procedures are all regulated by the Act on Building Products, dated 16<sup>th</sup> April 2004. Pursuant to this Act, a building product may be marketed if it is fit for use in building work, to the extent corresponding with its properties and intended application.



Construction of sewage-treatment plant in Katowice

This means that its usage properties ensure that properly designed and executed building structures fulfil the so-called basic requirements. The basic requirements have not been directly specified in the Act on Building Products, but they are enumerated in the Building Law (Journal of Laws of 2003, No. 207, Item 2016 with subsequent amendments). They include the following:

- safety of the structure,
- fire safety,
- safety of usage,
- appropriate sanitary, health and environmental protection conditions,
- protection against noise and vibrations,
- energy saving properties and appropriate thermal insulating power.

The end product of building work carried on in accordance with the abovementioned requirements are structures that are durable, resistant to external factors, ensure a feeling of comfort, and – most importantly – do not endanger our health or life. Each manufacturer of building materials, building investor and designer should strive to erect buildings that are durable and safe.

Having in mind the tragic event which occurred in the beginning of 2006, namely the collapse of the roof of the exhibition hall in Chorzów, we are faced with questions concerning the observance of legal requirements in the course of construction work, and also during the operation of buildings. What materials may be safely used for construction work? What information should we possess about a product in order to be sure that it is of the appropriate quality and may be safely used? These are questions to which we should find answers.

In Poland, the introduction of the Act on Building Products was accompanied by the establishment of the National List of Questionable Building Products. This contains information about building products that do not fulfil the relevant requirements and cannot be safely used in the construction industry. The List of Questionable Building Products is publicly available on the Internet website of the General Office of Building Control. The group of products entered therein includes a cement that was marketed by companies engaged in modifying the original composition of cement manufactured by cement plants, this by the admixture of various types of additives, for example fly ash. The product thus created did not fulfil standard requirements. The



usage of additives such as fly ash is absolutely admissible and frequently justified, for it leads to the production of cements that have many important and desirable usage properties lacking in pure cements – however, the application of cement additives requires the maintenance of an appropriate technological regime and the detailed inspection of the properties of the end product. If these activities are neglected, the cement does not meet standard requirements and constitutes a real threat to the quality of concrete products and the durability of building structures.

We should keep in mind that in Polish cement plants the manufacture of cements with

a stable, good quality is carried out under the constant control of plant laboratories and external inspecting entities, which guarantees a high and stable product quality and the safety of its application. All and any modifications of cement performed outside of professional cement plants may lead to serious consequences, even to building catastrophes.

Having in mind the responsibility resting with cement manufacturers, and first and foremost the safety of users, the Polish Cement Association has undertaken an information campaign intended to develop a wider knowledge and understanding of cements. As part of this campaign, we have published a “Cement guide – What you should know before you purchase cement”. It contains important information related to cement standards and legal provisions enacted in pertinent Acts and Regulations, which are useful for any potential buyer of this building material. The Guide was distributed free-of-charge by cement plants, and is also available at the seat of the Association and at fairs, exhibitions and conferences attended by the Association. In the event of any questions regarding the quality of cement, it is worth obtaining some reliable information from the technical consultancy departments functioning at cement plants.

