Abstract

Recently, it has been seen an increased interest in determining the durability and the service life of building constructive elements, their components and materials. This interest has come along with economic and environmental issues. On the one hand, durability is directly related to the search of a sustainable development, a subject on which much effort is being invested at an international level. On the other hand, existing buildings, defined as capital property, represent a significant amount of the national capital; therefore, the costs of inspection and maintenance of these buildings are of great importance for the economy of a country. Studying the durability of different building systems and selecting the most durable ones could reduce these costs.

In this context, based on the method proposed by ISO-15686, a methodological proposal is executed to estimate the service life of the most frequently used building systems for facades and roofs at present in Spain. The main results obtained in the process of the methodology elaboration are a database, including the durability of different components of construction elements, and the characterization of the lesions that most affect the constructive elements of facade and roof.

In these times in which the construction industry needs to change the model applied in the past decades, a step of this type could represent a quality and sustainability improvement in the building sector, as it will promote a better understanding of the components and building systems we use. We cannot improve what we do not know how it behaves.