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Message from the Editor in Chief

LATIN AMERICAN MAGAZINE ON QUALITY CONTROL, PATHOLOGY AND CONSTRUCTION RECOVERY

http://www. mda.cinvestav.mx/alconpat/revista

It is a proud and joyful moment for the ALCONPAT magazine team to see the third and last issue of our fifth year published.

The objective of the ALCONPAT (RA) magazine is the publication of case studies related to the topics of our association, quality control, pathology and construction recovery, motivating as well the presentation of basic or applied research that could be applied to case studies.

In this V5N3, we began with our article from **Portugal and the United Kingdom**. A. Silva and colleagues discuss useful life prediction models where information is extrapolated in order to predict the future behavior of the construction elements, anticipating the moment when intervention is required. This study also helps to understand the influence of exposure conditions on the evolution of the degradation of coatings.

In the second work, S.H., Lopes da Silva and his colleagues from **Brazil** discuss the combinations of cement types in order to obtain the one with the highest ability to protect the reinforcement of the concrete from corrosion induced by chlorides. For this, the hierarchical analysis was used, which helped in the selection of the type of cement.

In the third article, which comes from **Venezuela,** Humberto Bolognini and colleagues comment that in the last few years in Venezuela there has been a crisis on the demand, commercialization and production of cement, which is the primary construction material. This work presents the chemical and physical-mechanical characterizations done to the main commercial brands of cement with aggregates in the country, characterizing them according to: chemical composition, Blaine fineness, setting time and mechanical resistance to compression. The results show that these cements do not comply with the minimum requirements set by the Venezuelan standards for their use in the elaboration of structural concrete.

The fourth article comes from **Mexico,** Lauren Y. Gómez Zamorano and colleagues present a research work which focused on the evaluation of the effect that different replacement materials and two superplasticizer additives had on the development of the mechanical properties, phase formation and evolution of heat on hydration in Portland cement pastes replaced up to 60%. Based on the results it was confirmed that with the use of replacement materials, the quantity of calcium hydroxide was reduced due to the pozzolanic reaction and the resistance to compression was increased.

The fifth work of this issue was written by Marcelo Medeiros and his colleagues from **Brazil**. They analyzed the contributions of three protection methods for the surface of concrete on the efficiency of surface treatments to prevent the penetration of chloride ions. Some results indicated that concrete with a certain type of protection could increase the contamination time up to three times.

The sixth article is a review on the State of Art from **Mexico**, where Elia Alonso Guzmán and her colleagues discuss how the generation of solid residues of hydraulic concrete, considered waste, have turned into an environmental problem. The elaboration of recycled concrete faces the search of optimal designs in order to achieve the highest mechanical performance under static and dynamic requests. This work reviews the international advancements on this topic.

Each RA issue aims to balance the participation of topics concerning the social objectives of the International ALCONPAT.

We are grateful for the authors' collaboration on this issue, their resolve and effort to comply with the established quality and deadlines.

Each issue of the magazine will include the articles in the original language, and before the following issue the versions in other languages will be published. The official languages of the ALCONPAT magazine are English, Spanish and Portuguese.

The Editorial Board

Pedro Castro Borges
Editor in Chief