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A Reply to a Discussion by R. Sersale, G. Frigione, R. Cioffi, B. de Vito and F. Zenone of the Paper "CARBONATION AND POROSOITY OF MORTAR SPECIMENS WITH POZZOLANIC AND HYDRAULIC CEMENT ADMIXTURES" *

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We would like to thank R.Sersale, G.Frigione, R.Cioffi, B.de Vito and F.Zenone for their interest in our paper. We are familiar with R.Sersale's et al. work on the use of the italian blast furnace slag and on the behaviour of slag cements and believe that their results enrich the topic of the carbonation of slag cement structures taking into account two factors, other than porosity, such as SO_3 and lime content.

We agree that blastfurnace slag cement mortars demand adequate curing in order to attain a porosity comparable to that of Portland cement mortars. This is valid for all the other types of composite cements too, and we give the relevant references in our paper.

As R.Sersale et al. show, it is possible to prepare laboratory specimens with composite cements having comparable porosity to these with Portland cement, and investigate the influence of other factors on carbonation. However, it is rather not so easy when dealing with real structures, in which the guide-lines for curing are not usually followed adequately.

For this reason, in the context of a project aiming to classify nine types of composite cement according to their durability properties we spotlighted the differences in the resulting carbonation using comparable curing for all types of cement. The carbonation rate of the specimens was then discussed and related with the porosity, but not exclusively attributed to it. A significant relation between porosity and carbonation was demonstrated.

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