

## **ZEOLITE MINERAL AS SUPPLEMENTARY CEMENTING MATERIALS IN HASTCHEK PROCESS IN CUBA**

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### **ABSTRACT**

Many research studies in Cuba over the last few years, related the behavior of the zeolite mineral, clinoptilolite, as Supplementary Cementing Materials (SCM), as similar way to typical pozzolans, silica fumes (SF) and fly ash (FA) because there are great deposit of this mineral, there is not production of SF and FA and the prices are very high in order to logistical expense.

Like other pozzolanic materials the zeolite contributes to improve the mortar and concrete performance and saving in product cost by cement replacing.

Expanding field application of zeolite mineral is used in the mixture of the process Hastchek with asbestos and recycle Kraft pulp achieve to increase the durability and mechanical resistance of fibre cement sheet. The aim of this work is show the effect of zeolite on undulated sheets for roofing properties. Also was confirmed the pozzolanic reaction of zeolite particle by SEM analysis to different ages and was demonstrated the effect of this pozzolanic reaction of zeolite improving the bond between fibre and cement matrix.

### **KEYWORDS**

Zeolite; Supplementary Cementing Material; Pozzolanic reaction, Fibre cement sheets