Activación alcalina de residuos de minería aurífera de veta para la fabricación de morteros [

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text (article)

Analítica

The mine tailings cause several environmental impacts, due to high and progressive mineral exploitation and waste management. Alkaline activation to manufacture building materials using waste as supplementary cementitious materials has been a widely used method. In this article, mortars with alkali-activated mine tailings has been studied. Vein gold tailing wastes, were activated by a mixture of NaOH and Na2SiO3 solution. Two types of mortars were analyzed to assess influence of particle size were manufactured, the first by using original granulometry tailing and the second with milled residue. In addition, each type of mortar was set at 24 and 80 C. Crystalline phases in mortars were identified by X-ray diffraction (XRD), and the morphology of the fracture surfaces after the compression test was analyzed with scanning electron microscopy (SEM). The results show that the compressive strength of the specimens produced from milled residue was higher value in comparison with original granulometry specimens. In addition, setting temperature increase did not have an influence on the property evaluated
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