

The Effect of Double Addition of Retarders / Accelerators on the Early Hydration Reaction of Portland Cement¹

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In this research, strong retarders that delay setting time of Portland Cement were used . Then set accelerators were used in the form of seeds to overcome the retardation effect.

The result of this double addition was investigated by using thermal methods that showed a big change in the process of the hydration reactions. Moreover, the effect of double addition on the compressive strength of cement mortar was investigated . It was found that the compressive strength at 28 days was increased up to 14% .

Key words :Portland cement - set retarder and accelerators – Hydration reaction – Compressive strength .

¹ For the paper in Arabic see pages (47-58).

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