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Change Of Electrical Resistivity Depending On Water Saturation Of The Concrete Samples

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ABSTRACT

In this study, the changes of electrical apparent resistivity values depending on the water saturation of cubic concrete samples which designed according to different strength were investigated. For this purpose, 3 different concrete design as poor, middle and good strength 150x150x150mm dimensions 9 for each design cubic samples were prepared. After measuring the weight of the prepared samples, in oven were dried at 105 ° C for 24 hours and then the dry weights were measured. Then the samples were placed into the curing pool and saturated weight of the samples were measured in specific time periods during the 90 day take out from the curing pool and the water content were calculated at each stage of these processes. The water content of the samples were obtained during 90 days specific points in time and as well as electrical apparent resistivity method of the different surfaces of the samples the potential difference measurements made by electrical resistivity method and electrical apparent resistivity values of the samples were calculated. Depending on time obtained from this study with respect to time curves of the water content and the apparent resistivity values were constructed. Results showed that the electrical apparent resistivity values increased depends on the water content.

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