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The Impact of Stress Intensity on Mechanical Abrasion Resistance of Different Dosage Concretes

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ABSTRACT

In this study, the relations between mechanical abrasion resistance and stress intensity as a result of applying 40 V, 60 V, 80 V and 100 V AC stress to 250, 300, 350 and 400 dosages have been investigated. In experiments, 10cm x 10cm x 35cm moulds have been used. The measurements have been done at room temperature. In experimental study, crushed sand and aggregate whose maximum grain sizes are 4 mm and 11.2 mm have been used. Electric cost analysis has also been examined. As a result of this research, mechanical abrasion has taken its lowest value when 40 V AC stress intensity has been applied to concretes. It has been found out that as stress intensity increases, the value of consumed energy increases too.

Keywords: AC current, Concrete, Mechanical abrasion, Cost analysis.

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