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DETECTION OF VARIOUS TYPES OF CRACKS USING THE INNER ELECTRICAL RESISTIVITY MEASUREMENT IN REINFORCED CONCRETE MEMBERS: A REVIEW

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Abstract

This research aims to detect any types of cracks whether flexural, shear, or torsional generated inside any RC members whether made of normal or heavy weight concrete using efficient non-destructive method such as linear inner electrical resistivity and square inner electrical resistivity measurements. The two efficient parameters used to detect the cracks inside the RC members in real time are the percentage change in inner electrical resistivity between uncracked and cracked members and the decimal logarithm resistivity anisotropy (DLRA) at different setups of measurements inside the cracked members to show the crack's presence and its direction instantaneously.

Author Keywords

Electrical Resistivity, Inner Electrical Resistivity Measurements, Square Inner Electrical Resistivity Measurement, Linear Inner Electrical Resistivity Measurement, Cracks, Decimal Logarithm Resistivity Anisotropy (DLRA), Heavy Weight Concrete.

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