

# Modelling of the Stresses and Strains Distribution in an RCC Pavement Using the Computer Code "Abaqus"

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## ABSTRACT

*The Roller Compacted Concrete (RCC) pavements are built employing the Portland cement. The design of the rigid RCC pavements was developed gradually through methods of design. These methods were established by various organisms for the determination of the necessary thicknesses of roadways. In this study a numerical 3D modelling was used by introducing to the computer code "Abaqus" the behaviour law of the RCC. Several other methods of 2D modelling were applied for the determination of the stress and the strains in the RCC slab such as the Closed-form Formulas and the Portland Cement Association (PCA) method. Finally the results of 3D modelling are compared with those obtained by the various other methods. The comparison shows good correspondences although the 3D modelling gives results slightly lower than those given by the 2D methods in stresses.*

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