PERFORMANCE ASSESSMENT OF NON-CONVENTIONAL PAVEMENTS USING BACK-ANALYSIS TECHNIQUES

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ABSTRACT
Cold in-place recycling (CIR) technology with Foamed Asphalt (FA) as stabilization agent was used for the rehabilitation of a severely damaged highway asphalt pavement. Considering that the recycled structure (FA and AC overlay) is based on a remaining cement bound material (CBM) layer, the recycled pavement can be characterized as "non-conventional". In order to assess the performance of the recycled pavement, a comprehensive in-situ data monitoring and analysis research study was conducted for several years after construction, using mainly the Falling Weight Deflectometer (FWD) technique. The present research is focusing on the influence of the FWD loading, on the accuracy of the back-analysis results. According to the analysis, it can be concluded that the FWD load may influence more the back-calculated AC modulus than the FA modulus. The main findings are presented and discussed in the present research work.