PARAMETER TO ENSURE A DURABLE GRID-REINFORCED ASPHALT PAVEMENT

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ABSTRACT
Asphalt reinforcement products manufactured using polyester fibers have successfully been applied in pavement rehabilitation for more than 40 years. Their outstanding performance has helped to increase time between maintenance, which has not only had a substantial financial cost saving but also a very positive ecological effect, in form of a reduction in the use of exhaustible resources and less construction traffic. The practice impressively shows the function of asphalt reinforcement, but the theoretical aspects of the function are not completely researched. Through the introduction of a design model for reinforced roads, we have fixed the factors of influence which are responsible for a durable effective asphalt reinforcement. Research has focused on following topics: 1) surface characteristics of the raw material and their effect on the in-situ activated tensile strength; and 2) elongation underneath the asphalt layer during dynamic loading and the influence on lifetime expectation.