

FIELD VALIDATION OF HOT-RECYCLED POROUS ASPHALT CONTAINING 20% RAP

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ABSTRACT

The capability of reducing traffic noise and enhancing safety in wet conditions makes porous asphalt (PA) mixtures as one of the most common surface layers for road pavements. Thus, the use of reclaimed asphalt pavement (RAP) in PA mixtures can lead to important economic and environmental benefits that should be strongly encouraged. However, most technical specifications do not allow such use of yet due to the inherent low durability and high air void content of PA mixtures. In this sense, reliable techniques allowing the use of RAP in PA mixtures are needed. In this research, the possible use of 20% of coarse fraction of RAP obtained from old PA surface layers in new PA mixtures was evaluated. A comprehensive laboratory and field study was carried out based on the construction of a full scale trial section. Results showed that recycled PA mixtures were able to outperform standard PA mixtures.