

FATIGUE VERIFICATION CRITERIA FOR SEMI-RIGID PAVEMENTS

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SUMMARY

The aim of this paper is to discuss some ideas about classification of semi-rigid pavements as well as to present some new models for verifying the fatigue process on pavements composed by asphaltic mixture coating and cement treated bases.

The more relevant difference, under the point of view of pressures transmitted over the subgrades, between flexible and rigid pavement, is discussed. A revision of the fatigue concept for cemented materials is also done, and a recent experimental study concerning the fatigue behaviour of a cement treated crushed stone is presented.

Based on the layered theory, equations for computing the flexural stresses on the lower fiber of cement treated bases are presented. Linking these theoretical models with experimental models for the fatigue process, a criteria for verifying the design of semi-rigid pavements was proposed.