BEHAVIOUR OF ASPHALTIC CONCRETE TYPE A265 IN PERMANENT DEFORMATION

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ABSTRACT

This paper presents a study in the evaluation of asphaltic concrete type A265 using the static creep test and more specific to evaluate the effect of : a) percentage of fine aggregate in gradations with the same maximum aggregate size, b) the ratio of fine to coarse aggregate c) the type of bitumen (80/100 and 40/50 pen) and d) the percentage of bitumen in the mix to the resistance of permanent deformation.

The analysis of results showed that : a) the asphaltic concrete with the greatest percentage of coarse aggregate or/and the largest maximum aggregate size possesses the greatest resistance to permanent deformation, b) the effect of percentage of air voids is a determining factor for its behaviour in permanent deformation (Minimum permissible values have been proposed), c) the observed differences on permanent deformation among the asphaltic concrete mixtures are more profound when mixtures have bitumen content greater than the optimum, and d) the use of 40/50 pen instead of 80/100 pen seems to have minimal effectiveness to the resistance of permanent deformation, for the type of gradations and aggregate used.

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