

Laboratory Evaluation of Gilsonite Modified Bituminous Mixes

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Abstract : The present guideline for the construction of flexible pavement in India, IRC 37: 2012 recommends to use viscous grade VG 40 bitumen in both wearing and binder bituminous layers. However, most of the bitumen production plants in India are unable to produce the air-blown VG40 grade bitumen. This requires plant's air-blowing technique modification, and often the manufactures finds it as uneconomical. In this context, stiffer grade bitumen can be produced if bitumen is modified. Gilsonite, which is naturally occurring asphalt have been found to be used for increasing the stiffness of binders. The present study evaluates the physical, rheological characteristics of Gilsonite modified binders and the performance characteristics of these binders when used in the mix.

Keywords : bitumen, gilsonite, stiffness, laboratory evaluation

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