



MODIFICATION OF TEMPERATURE CORRECTION FACTOR IN FWD BASED ON FIELD EXPERIENCE IN INDIAN CONTEXT

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ABSTRACT

Recently flexible pavements are evaluated by Falling Weight Deflectometer (FWD) instead of Benkelbeam method because of several advantages. Now pavement temperature is one of the most important parameters that influence the Falling Weight Deflectometer (FWD) measurements. Since there is a huge temperature variation in Vadodara City, Gujarat, India, it is necessary to study the temperature effect on the FWD measurements. In this paper, temperature correction factor is modified based on the field results. Five different sites are selected. The readings are taken at temperature 35° C and 45° C. Some other tests like road condition survey and test pit methods are used to know the thickness of the pavement. The field results are compared with the calculated values of the elastic moduli. Comparisons show that surface and base layer are mostly affected by the temperature variation but the sub grade layer is not much affected.

Keywords: Falling weight deflectometer, flexible pavement, temperature correction factor

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