

## **EFFECTS OF LOW VEHICLE SPEED ON THE SERVICE LIFE TIME OF ASPHALT PAVEMENTS**

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### *ABSTRACT*

The constant increase of traffic density in recent years, especially in the highest-level road system, leads to the significant axle-loading of the superstructure and inevitably affects the traffic quality. Additionally, maintenance projects for upgrading the bearing capacity of pavement layers lead to the further reduction in the road capacity. All this factors provoke a significant decrease in the average traffic speed. Using mechanistic pavement design procedure flexible pavements can be designed analytically. In addition to the asphalt stiffness, the fatigue resistance of the asphalt base course material serves as an input to the computation model. Both material parameters are gathered from laboratory testing using cyclic indirect tensile test (ITT). The standard procedure for fatigue testing implies cyclic sinusoidal loading till failure at the temperature of 20 °C and frequency of 10 Hz. In order to simulate low traffic velocity, lower loading frequencies are implied. Finally the effects of reduced frequencies on fatigue resistance on the service life time of asphalt pavements are investigated.