

Application of infrared camera to bituminous concrete pavements: measuring vehicle

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Abstract. Infrared thermography (IR) has been used for decades in certain fields. However, the technological level of advancement of measuring devices has not been sufficient for some applications. Over the recent years, good quality thermal cameras with high resolution and very high thermal sensitivity have started to appear on the market. The development in the field of measuring technologies allowed the use of infrared thermography in new fields and for larger number of users. This article describes the research in progress in Transport Research Centre with a focus on the use of infrared thermography for diagnostics of bituminous road pavements. A measuring vehicle, equipped with a thermal camera, digital camera and GPS sensor, was designed for the diagnostics of pavements. New, highly sensitive, thermal cameras allow to measure very small temperature differences from the moving vehicle. This study shows the potential of a high-speed inspection without lane closures while using IR thermography.