

# Importance of dowels in transversal joints in concrete pavements

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**Abstract.** Concrete pavements are designed for heavy loaded road structures. Their usage brings a number of specific issues. It is necessary to solve them all to ensure that concrete pavements will fulfil their function along the whole design period. One of these issues concerns dowels, which are located in transversal joints. Modelling of load, caused by heavy vehicles, with the use of the finite element method, provides valuable information about the stress condition of concrete pavement. The results of modelling can be verified by measurements or experiments in practice. Dowels and tie bars in jointed unreinforced concrete pavements and the importance of their correct placement, dimensions and material quality on pavement behaviour and lifespan were studied as a part of R&D projects of Technology Agency of the Czech Republic Nos. TA02031195 and TE01020168. The paper presents the experience from the modelling and performed experiments and makes conclusions which are important for the use in practice.