

Polish experience with cold in-place recycling

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Abstract. Deep cold in-place recycling using cement and asphalt emulsion has been used for reconstruction of existing roads since the beginning of the 1990s. This paper describes the first Polish requirements for mineral-cement-emulsion mixtures. As requirements stated for the strength of the mineral-cement-emulsion mixtures were quite high, most of the mixtures were designed using high amount of cement and aggregate added for the improvement of gradation. The paper also presents selected results of the visual assessment of existing pavements with bases made of mineral-cement-emulsion mixtures. The mixtures used in bases were designed according to the first Polish requirements. On all of the sections numerous reflective transverse cracks were observed. Most of them resulted from very high requirements stated for the strength. Last part of the paper describes the changes which were introduced to the Polish requirements on the basis of conducted field investigations and other past experiences of using mineral-cement-emulsion mixtures in Polish climatic conditions. Newly developed instruction liberalized the requirements stated for base materials and significantly reduced the amount of cement.