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EVALUATION OF ROUGHNESS OF EXISTING BITUMINOUS PAVEMENTS

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ABSTRACT

Roughness of pavement surface is a consideration of major importance for the road riding quality evaluation. Of particular interest is the case of the roughness evaluation of the top asphalt wearing courses of motorway pavements. The elaboration of the present work belongs in this case, summarizing and discussing the basic research stages and outcomes of a road experiment, which is the product of a relevant research cooperation between the EYDE-PATHE Motorway Service and the Department of Transportation Planning and Engineering of the National Technical University of Athens (NTUA). To this effect, the surface condition of the pavement under investigation was evaluated in different phases through the implementation of roughness measurements using high technology recording systems and the development of users (panel group) perception of the desirable road riding quality level. The analysis of data that were gathered led to conclusions, which concern the assessment of the roughness variation levels. In addition an initiative methodology, concerning the asphalt wearing course and the estimation of the related roughness acceptable thresholds, is presented, in the framework of the adopted by the Agency Service rehabilitation procedure of the pavement surface condition on the in view motorway.

KEY WORDS: *Roughness, riding quality, roughness measurements, acceptable thresholds, rehabilitation procedure*