

ASPHALT CONCRETE FOR VERY THIN LAYERS: QUALITY CONTROL DATA COLLECTED DURING CONSTRUCTION AND PERFORMANCE AFTER EIGHT YEARS IN SERVICE

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ABSTRACT

Asphalt Concrete for Very Thin Surfacing Layer (AC-VTSL) started to be used in Greece in the year 2005, after successful trial section laid in 2000 and monitored for five years. In 2006 the first major project was implemented where AC-VTSL was laid aiming at a thickness of 25 ± 3 mm over an area of approximately 2 million square meters of dual carriage motorway (approximate length 94 km). During the execution of asphalt works extensive quality control testing was carried out on polymer modified bitumen, properties of AC-VTSL, surface texture depth, tack coating, layer thickness, surface evenness, and constructional details (environmental temperatures, bituminous mix temperatures during laying, number of finishers used, etc). The paper presents construction details and evaluation of quality control results obtained assisted by statistical analysis. The final aim of this paper is to establish safe variation coefficients from targeted values after examining the performance of the very thin surface layer after a period of 10 years in use. This will be valuable information for National relevant specifications. The examination of the performance of the very thin surface layer is scheduled to take place in 2016, after ten years in service.