

COMPARATIVE ENVIRONMENTAL ASSESSMENT OF INNOVATIVE TECHNOLOGIES FOR PAVEMENTS

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ABSTRACT

The environment has reached a critical point for its viability that obligates all the industrial sectors to redefine their targets. Under these circumstances, the industry related to road construction evolves towards environmental sustainability standards in order to retain the natural resources, as well as to produce environmental friendly products.

The present paper concerns the comparative environmental assessment of pavements and techniques that are already being used or proposed by the road construction industry at a worldwide level. The objective is the presentation of innovative technologies found already in application or still under research, and furthermore the determination of their comparative environmental advantages. The comparative assessment that is attempted in the present paper is implemented with a checklist developed specifically for this reason. The overall result of the comparative assessment is a well documented classification of some of the most widespread pavements concerning environmental friendliness and the proposal of the most optimal solutions. Finally, it can be said that the conclusions arisen from the application of this checklist are encouraging for the environmental sustainability of the innovations that road construction industry provides for pavements.

KEY WORDS: Environment, checklist, comparative assessment, pavements