

COMPACT ASPHALT AS AN INNOVATIVE CONSTRUCTION PROCESS

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ABSTRACT

"Compact Asphalt" is a new, innovative construction process which enables thin wearing course layers to be laid on the binder layer "Hot On Hot" in one process to increase the stability and quality of the finished product. This method was developed in Germany during a period of 6 years starting with test sections in 1995. The innovative element is to apply two layers of different materials at the same time with a simultaneous compaction of both layers. The advantages of the process are

- Improved compaction of the mixture package due to the possibility of longer compaction because of even temperature distribution within the binder and wearing course layers
- Reduction of thickness of the wearing course and therefore reduction of rut formation and saving of valuable materials
- Optimum interlocking of the asphalt layers
- Surfacing can even be carried out during adverse weather conditions.

To develop and improve this technique several stages of development for the equipment were used starting with two pavers, the second being fed by an excavator. The current enhanced equipment is a Compact Module Paver. In general the normal asphalt mixtures can be used, but there are also recommendations on how to alter the mix design for the special application process. The assessment of several trials (four on motorways) has led to recommendations for the construction process, so that the knowledge can be imparted to other users. In 2002 a new test will be carried out in Germany applying two layers of porous asphalt for noise reduction with this method.

KEY WORDS: compaction, pavement, Compact Asphalt, construction method