

## EXPERIENCES IN PAVEMENT REHABILITATION USING AN ASPHALT REINFORCEMENT GRID OF HIGH MODULUS POLYESTER

**Bernd Thesseling**

Civil Engineer (Dipl.-Ing.), Huesker Synthetic GmbH, Germany

*ABSTRACT:*

The conventional rehabilitation method for cracked concrete or asphalt pavements is the plain installation of new asphalt layers. As the cracks are still present in the existing (old) asphalt layers, they rapidly propagate into the new asphalt overlay due to external forces from traffic and natural temperature variations. This phenomenon, called reflective cracking, is already well known and well documented by a lot of research all over the world.

A very effective system for the delay of reflective cracking has proven to be an Asphalt Reinforcement Grid out of high modulus Polyester fibres. Its installation leads to a considerable extension of pavement life which has been successfully demonstrated in different applications such as roads, highways and airports.

Described through basic theory and practical experiences from the last 40 years with asphalt reinforcement, this paper shows typical applications and limits for the use of asphalt reinforcement. Special attention is also given on the performance on site, such as the installation process, milling of reinforced asphalt and its recycling.

*KEY WORDS:* Asphalt reinforcement, rehabilitation, geogrid, polyester, recycling