

UTILIZATION OF ANTI-RUTTING ADDITIVES AND EXPERIENCE GAINED IN TURKEY

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ABSTRACT

Two most common failures observed on flexible highway pavements are wheel track rutting and cracking.

Wheel track rutting is due to ever increasing traffic volumes (repetition of load) and axle loads and high temperatures. Crackings, if not due to underdesign, they are due to fatigue (repetition of load), very low temperatures or frequently changing temperatures (thermal fatigue).

Rutting is considered as a major failure because it may be hazardous to road safety after a certain depth. Cracks are considered as minor functional failures because if they are properly maintained by filling them with good quality crack filling materials, they are objectionable only from esthetic point of view.

There are different ways to struggle with rutting depending upon the severity of the problem. Utilization of rutting resistant gradations, hard bitumen, modified bitumen and anti-rutting additives are main solutions.

In Turkey rutting is actually a major problem on highways because of the above mentioned factors especially in hot regions. In recent years, in addition to precautions such as utilization of more effective aggregate gradations, some anti-rutting additives were used to prevent rutting in HMA. Promising results are obtained. In this paper the experience gained in Turkey is summarized.

KEY WORDS: HMA, Rutting, Anti-rutting Additives,