

SBS MODIFIED AND CONVENTIONAL BITUMEN: PROPERTIES AND STATISTICAL ANALYSIS OF RESULTS

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ABSTRACT:

Trying to face the problem of pavement deformation and cracking in conjunction with the inability to find harder than 50/70 type of bitumen, in Greece, has led to the use of modified bitumen.

Over the last fifteen years, in Greece, in all asphalt works only one type of bitumen was used, that of 50/70. This can be characterized as a worldwide phenomenon. However, during the last two years, modified bitumen started to be used, at the beginning, for thin surfacing mix and later on for asphalt concrete.

This paper presents laboratory results of conventional (paving grade) and SBS modified bitumen from a large number of samples collected from several projects within the region of Northern Greece, during the period 2004-2006.

The aim of the present study is to map the characteristic properties of both bitumen and to determine the consistency of the characteristic properties. In addition, to confirm the properties improvement resulted by the addition of the SBS modifier and, finally, to make proposals and recommendations for the areas of application of each proposed type of bitumen.

KEY WORDS: Modified bitumen, SBS, paving grade bitumen, properties