

EFFECT OF ADDING POLYMER ON THE ENGINEERING PROPERTIES OF LOCAL BITUMEN BY CONVENTIONAL TESTING

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ABSTRACT

The need for high performance pavement is increasing world over. Transportation in Pakistan is a fast moving field but the development of polymer modified bitumen, in the author's opinion, is in its infancy. The use of Polymer Modified Bitumen (PMB) in appropriate situations is likely to be an increasing feature of pavement engineering, together with a move towards end product specifications.

The local bitumen from Attock Refinery Ltd. Rawalpindi, Pakistan was used for the research. The PMB prepared in laboratory by using Elvaloy RET: a reactive elastomeric terpolymer, manufactured by Dupont. In order to study the effects on the local bitumen, polymer added was 1.35 and 2% by weight of the bitumen. Tests conducted included Ductility, Flash Point, Penetration, Softening Point and Torsional Recovery for PMB and the Raw Bitumen. The results of the tests were analyzed and compared. The results clearly showed remarkable improvements in the engineering properties of PMB. It also showed that addition of an optimum percentage of Polymer gives the best results.

KEY WORDS: Bitumen, Polymer Modified Bitumen, PMB, Dupont.