

CASE STUDY OF ASPHALT ADDITIVE EFFECT ON JET FUEL RESISTANCE IN AIRPORT'S FLEXIBLE PAVEMENTS

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ABSTRACT

Regarding to the fact that project owners does not often accept responsibility for rehabilitation and maintenance of airfields in Iran, we need to pay a lot of resources for repairing in short service lives.

In this study, we aim to tackle the problem of pavement deterioration due to fuel spillage using bitumen additive in order to enhance the performance. We also will describe the development of jet fuel-resistant additive to be combined to the bitumen and asphalt mixture. For this target, we performed a lot of experimental laboratory examinations on the bitumen and hot mix asphalt mixtures. In this survey, it is focused on Using FT_WAX and anti stripping additives for improvement of asphalt properties. In order to challenge the conventional Hot Mix Asphalt (HMA), we developed and tested the modified asphalt and compared the mixture with HMA.

We will show that modified bitumen and asphalt mixture outperforms the conventional one for basic properties. As the result, it is presented that utilizing proper methods with high service life will lead us to low construction cost and instant return of investment (ROI). We can evaluate economic and technical issues in pavement designs and rehabilitations using the results gathered in this paper.

KEY WORDS: HMA, FT-WAX, Anti stripping additives, Modified bitumen