INCORPORATING RAP INTO AIRPORT ASPHALT RESURFACING

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ABSTRACT

Many airports desire increased environmental sustainability, but have resisted recycled asphalt pavement (RAP), citing concerns regarding variability, performance and durability. Two otherwise identical asphalt mixtures were produced in a mobile asphalt plant, one containing 5% low-risk RAP. The low-risk RAP was obtained from the removal of temporary asphalt surface ramps and the texturing of the underlying surface, which was identical to the asphalt without RAP and was less than eight weeks old. Comparison of mixture design, asphalt production and asphalt construction data indicated that there was no detrimental impact associated with the inclusion of 5% low-risk RAP. However, there were significant differences in the mixture maximum density, Marshall Stability and surface friction. It is recommended that other airports incorporate low-risk RAP sources into airport asphalt resurfacing works. Further research should investigate the inclusion of other RAP sources and the factors that contributed to the observed reduction in surface friction.