



Illinois Department
of Transportation



ILLINOIS CENTER FOR
TRANSPORTATION

Best Practices for Implementation of Tack Coat

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<http://ict.illinois.edu/Publications/report%20files/FHWA-ICT-12-004.pdf>

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Problem Statement

- Interlayer bond is critical to performance
- Tack coat is the sole material bonding layers
- Optimum tack coat application must be identified

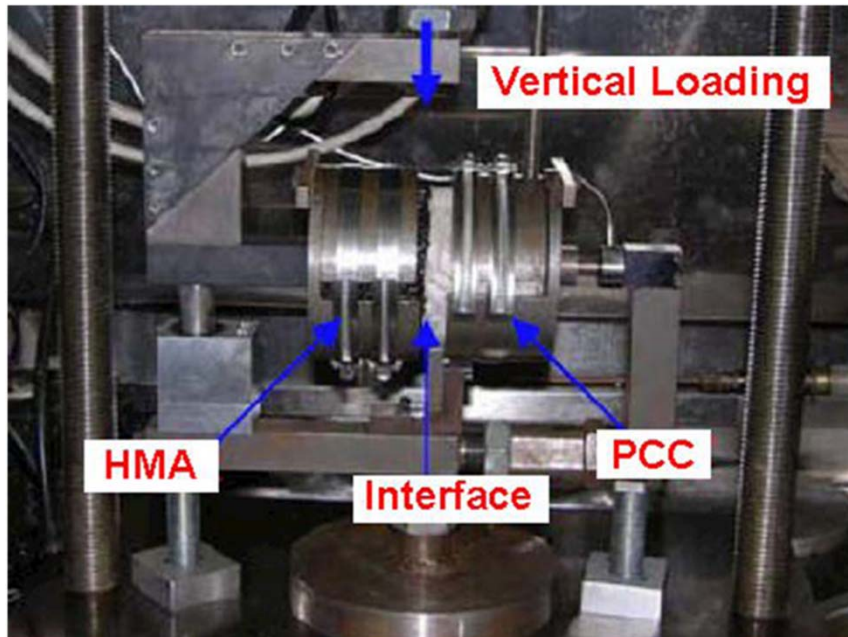


Objectives

- Assess laboratory performance of tack coats
- Determine optimal residual application rate of tack coats
- Evaluate field-optimal tack coat application
- Optimize tack coat materials, application rate, placement methods, and surface preparation techniques

Research Performed

LABORATORY



FIELD



Findings

- Specify tack coat application rate based on residual AC rate, not truck applicator rate
- Developed optimal application rates for all possible surfaces
- Identified methods for surface cleaning that provide best bond strength
- Determined viable options for rapid set tack coats
- Emulsions outperformed cutbacks

Recommendations

- Based on this research, and the good correlation of laboratory and field results, new products in the future can be tested in the laboratory to determine their expected performance in the field

Implementation

- Special Provision for selected projects
- Worked with:
 - Tack Coat Manufacturers
 - Materials Personnel
 - Construction Personnel
 - HMA Contractors
 - Applicator Manufacturers

Benefits

- Improved Pavement performance
 - Reduced delamination
 - Improved rutting resistance
- Faster opening to traffic
 - Some of the tested products allow traffic over tack coat (trackless tack coat)



Questions?

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