Research in Asphalt Technology and Pavements

Mix design and Characterization

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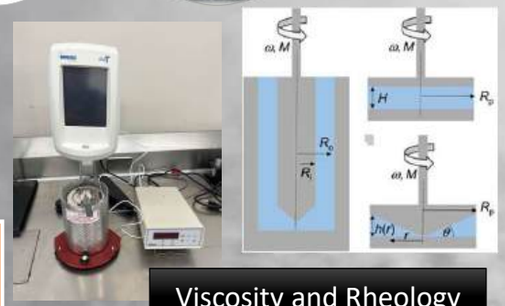
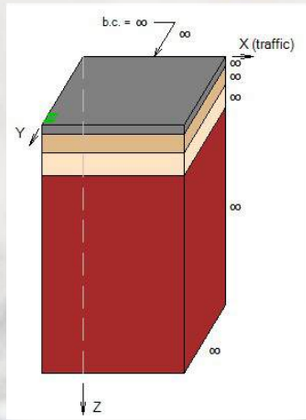
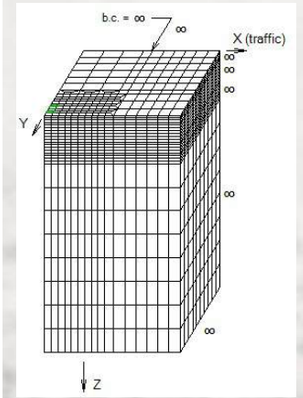
Asphalt Rubber Technology Service (ARTS) facility



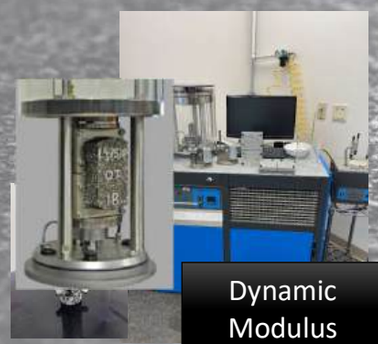
Viscosity and Rheology





Pavement Design, Modeling and Instrumentation

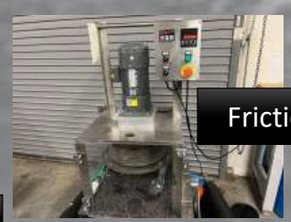
Rutting



Dynamic Modulus

Mechanical Performance Testing

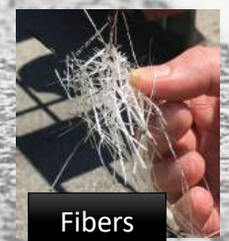
Cracking



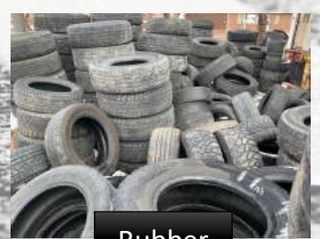
Friction

Plastic

RAP



Fibers



Rubber

Evaluation of Recycled Materials

Research in Asphalt Technology and Pavements

The Civil Engineering Department of Clemson University has state-of-the-art facilities to conduct construction materials research. The ***Asphalt Rubber Technology Service (ARTS)*** near the main campus has a state-of-the-art laboratory for conducting research and testing in asphalt technology, specifically for aggregate characterization, asphalt mix design, asphalt mix performance testing, asphalt binder physical and mechanical characterization.

Some of the equipment available for this project include the following: an Asphalt Mixture Performance Tester (AMPT); Asphalt Pavement Analyzer (APA); Superpave Gyratory Compactor (SGC), Hamburg Wheel Tracking (HWT), several servo-hydraulic machines and balanced mix design equipment to conduct current simple cracking and rutting tests.

The future of ARTS involves research on the following topics:

- Low-carbon materials and technologies
- Asphalt binder characterization,
- Asphalt mixture design and performance testing
- Pavement analysis, design, and modeling
- Intelligent construction
- Full-scale accelerated pavement testing and instrumentation
- Recycled materials and additives
- Pavement condition evaluation
- Non-destructive testing
- Pavement preservation and rehabilitation
- Pavement Friction