

If you need a new product developed or an existing product refined, please call us. The MSU Department of Forest Products has state-of-the-art facilities to meet industry needs. The facilities include over 90,000 square feet housed with analytical and testing equipment and pilot plants.

Work can be performed under a number of arrangements from contract research to complete product development for industrial plants. We also have the ability to perform confidential work.

Mechanical Testing Laboratory

- Kajaani FO-100 Fiber Length Analyzer
- 25,000-kg Statac Computerized Testing Maching
- 13,600-kg Tinius Olsen Testing Machine
- 5,000-kg Instron Testing Maching
- Pneumatic Plywood Shear Testing Machine
- TMI Toughness Testing Machine
- Vision Strain Data Acquisition System
- Instron-Satec Model 8800-T 4 Channel Tester

Wood Machining Laboratory

- Force Transducers with Associated Electronics
- Universal Milling Machine (tool-makers overarm)
- Bridgeport Milling Machine
- Engine Lathe (dual cross-feed)
- Universal Tool and Cutter Grinder

Scientists available to assist you within the department include:

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MECHANICAL TESTING



Mississippi State University

College of Forest Resources

Forest and Wildlife Research Center



Specialized static bending testing machine for small samples.

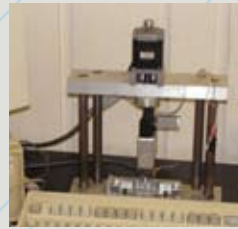
The Department of Forest Products in the Forest and Wildlife Research Center at Mississippi State University has a long history of industrial research and development. Projects have assisted industry in a number of areas including: resin development, new engineered products, environmental remediation, and preservative development/evaluation. A recent project that developed a new engineered wood product created a spinoff company and also provided equipment for a state-of-the-art mechanical testing laboratory. Proprietary research is also available.

The laboratory has universal testing machines that can test samples with sizes ranging from 6-inches up to 24 feet. The big beam tester has a 4-foot width between the uprights which allow specialized engineered wood product testing such as equipment mats or ultra wide LVL in plank.

Very small samples may also be tested on specialized machines for modulus of rupture (MOR) and modulus of elasticity (MOE).



Universal Testing Machine with a 24 foot bed. 130(kip).



Instron tabletop testing machine for MOE, MOR, and IB. 2(kip).

Two table top machines are available for intermediate size MOE and MOR samples and are also configured for internal bond (IB) testing. The software that controls all of the universal testing machines is identical, making setups quick and easy. Once tests have been performed, the data are available for printed reports and also written into a database so design loads can be quickly calculated.

Block shear and most ASTM tests for lumber and engineered wood can be performed.



Tinius Olsen with Instron Software configured for block shear testing. 25(Kip).

Scientists within the Department also have the expertise to test other kinds of end-use applications such as furniture and cabinetry components.



Satec machine with Instron electronics configured to test furniture frame joints. 60(kip).

Tension testing can be performed on several machines including the Metriguard tension tester at a number of guage lengths. The Metriguard tension tester has a 100,000 pound capacity.



Metriguard tension tester.

Product density variation examination can be performed on large samples using the Inspex X-ray system. This unique piece of equipment can inspect samples 16 inches wide and at least up to 20 feet long for density variation.



Inspex X-ray System



QMS Density Profile Machine

Small sample density profiles can be examined across the face of samples using a QMS density profile X-ray system.

Non destructive testing is a valuable tool because it can be directly incorporated into plant quality control programs. Non-destructive testing of wood samples, boards, beams, and logs can be examined using a Carter, Holt Harvey Systems or Systems from Falcon Engineering.

Carter Holt Harvey – Director 200.



Non destructive testing of MOE is also available using: (1) a Metriguard E-Computer or (2) a Grindo. A number of conditioning chambers are available to equalize specimens at various moisture contents.



Metriguard E-Computer



RTP Russels walk in conditioning chamber.

A high capacity creep tester is being fabricated and will be available for use.



Creep frame assembly.