

TimTek Plant Will Offer New Timber Market, Jobs

By Karen Brasher

A process conceived in Australia and refined at Mississippi State University to turn small-diameter trees into high-strength engineered lumber may soon bring new jobs to Mississippi.

Shuqualak Lumber Company has signed a license agreement to build a TimTek engineered wood products plant in Meridian. The Mississippi Legislature recently approved a \$10 million appropriation to assist Lauderdale County with the purchase of the proposed site and the development of infrastructure necessary for the plant.

It is predicted the plant will provide 140 jobs directly and another 168 jobs indirectly in Lauderdale County and surrounding areas, said Anderson Thomas, vice president of Shuqualak Lumber Company.

"A pilot project in MSU's Forest and Wildlife Research Center has demonstrated a viable market for small-diameter trees for use in the TimTek process," said Walter Jarck, a director of TimTek Australia, Pty. Ltd. "The patented process makes high-strength engineered lumber from small-diameter trees thinned from pine plantations."

The TimTek process separates the wood from the small-diameter trees into long strands. The strands are then coated with an exterior-type adhesive and dried before being formed to the desired shape in a specialized steam chamber hot press.

Conceived in Australia by the Commonwealth Scientific Industrial Research Organization and refined at MSU, TimTek's product is a unique, long-fiber, structural-engineered lumber with uniform, stable and high-strength properties of select-grade sawn timber.

"It can be produced in lengths and cross sections greater than can be achieved from the largest logs available," Jarck said. "The beams and timbers compete very favorably with engineered products now used in residential and commercial construction as joists, rafters and headers and for other uses where strength and quality are required."

The pilot plant operation began on the MSU campus in 2003 and has been successful in producing several types and sizes of beams. Equipment has been purchased and installed to

perform numerous tests on the TimTek product. This new test equipment will be used in the future to test all structural products, thus making MSU one of the leading test labs in the U.S.



Marco Nicorich

Quad Sudduth separates strands of wood in the TimTek pilot plant.

The TimTek wood product recently passed the long beam or span portion of the code approval process with the APA - The Engineered Wood Association in Tacoma, Wash. When all code tests are completed, the code approvals will allow the TimTek product to carry a grade stamp for acceptance in the marketplace.

"The long beam test is the most difficult test to pass in the code approval process, which will test 1,229 individual specimens," said Dan Seale, project investigator and professor. "Other tests include shorter spans, thickness swell, duration of load, shear and fastener."

The pilot plant has also experimented with agricultural fibers, including cornstalks and kenaf to determine if other types of media can be made into marketable products using the TimTek process for raw material preparation. Kenaf is a woody plant from Asia that is related to both cotton and okra.

"The kenaf worked well, but we are still working with the cornstalks," Seale said. "The cornstalks have a waxy surface that traditional resins cannot penetrate."

Agricultural fibers would likely be processed using a combination of traditional pressing technologies combined with new raw material preparation techniques.

The TimTek plant is important for landowners, Seale added.

"Owners of timberland will see a new market for their pine trees in east-central Mississippi," he said. "This comes after several years of depressed timber prices, particularly for pulpwood, and the closure of several mills in and around the state."