

Destruction of Insects During Manufacture of Wood Structural Panels

Wood structural panel manufacturing processes subject raw wood materials to a number of severe environments that destroy any insects or organisms that may be present in the wood before processing. These environments of typical manufacturing are briefly described below.

- Prior to processing, the logs are cured in hot water or high temperature steam chambers to facilitate the veneer cutting or flake generation process.
- For veneer production, the logs are inserted in a high-speed lathe and veneers (typically from 1/10-inch to 3/16-inch thick) are cut. The “furnish” used in nonveneer products is produced in a waferizer. A waferizer uses a series of high-speed knives that slice off wafers that are approximately 0.025-inch thick.
- Veneer is then processed through a veneer dryer that is set between 325 and 350°F. The veneer stays in the dryer for up to fifteen minutes. Furnish, on the other hand, is quickly dried at temperatures of 600 to 1200°F as it passes through a drum dryer.
- The veneers are then “layed up” into plywood and are placed into a plywood press. The press operates at 150 to 210 lbs per square inch. While under this high pressure, the temperature of the veneer is again elevated to a minimum of 220°F at the core of the panel. This temperature is maintained for a minimum of two minutes to insure adequate glue bond. Similarly, OSB panels are pressed at between 300 to 600 psi and 390°F for three to six minutes.

In addition to the steaming, soaking, veneer peeling and high-pressure processes, the raw material used to fabricate wood structural panels is elevated to temperatures above 212°F at least twice during the manufacturing process. Most organisms die at 165°F and physically break down at 212°F, the boiling point of water. Therefore, it is the opinion of the APA that the manufacturing process for wood structural panels effectively eliminates insects from the manufactured panel. It should be obvious, however, that it is possible for infestation to reoccur after manufacturing, whether in storage or in situ.

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