



Fundamentals of OSB thickness swell

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Abstract: Reducing thickness swell is the most critical and challenging problem facing oriented strand board (OSB) manufacturers. This is especially important for new end applications for OSB including sub-flooring, web stock and concrete forming.

To address the thickness swell problem for OSB, the present report discusses the fundamentals of thickness swell in Part 1 describing in detail the dimensional stability of wood strands under the interactions of heat, moisture pressure and time, develops a statistical model in Part 2 and finally in Part 3, develops a new practical patented radio-frequency method to reduce thickness swell in OSB.

It is recommended that the statistical models generated from the present study should be combined with some of the earlier work by Hsu (1994) and Sean (1997) to form a comprehensive computer software for OSB manufacturers.

Oriented strandboard
Swelling and shrinkage

Documents



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