

## **Study on Parallel Shear Stress of Cement-Wood Composites Using Pinus sp. and Eucalyptus sp. in natura and Treated with CCA**

**Authors :** Rodrigo D. S. Oliveira, Sarah David-Muzel, Maristela Gava, Victor A. De Araujo, Glaucia A. Prates, Juliana Cortez-Barbosa

**Abstract :** Improper disposal of treated wood waste is a problem of the timber sector, since this residue is toxic, due to the harmful characteristics of the preservative substances. An environmentally friendly alternative is the use of this waste for the production of cement-wood composites. The aim of this work was to study the possibility of using wood treated with CCA (Chromated Cooper Arsenate) in cement-wood. Specimens of Pinus sp. and Eucalyptus sp. were produced with wood raw in natura and treated with CCA. A test was performed to determine the parallel shear stress of samples after 14 days of drying, according to the Brazilian Standard NBR-7215/97. Based on the analyzed results it is concluded that the use of wood treated with CCA is not feasible in cement-wood production, because the composite samples of treated wood showed lower mechanical strength in shear stress than those with wood in natura.

**Keywords :** waste recovery, wood composites, cement-wood, wood preservation, chromated copper arsenate

**Conference Title :** ICWSE 2014 : International Conference on Wood Science and Engineering

**Conference Location :** London, United Kingdom

**Conference Dates :** September 26-27, 2014