

**Contact Angles of Viscoelastic-Thermal Compression (VTC) Modified
Paraserianthes falcataria (L.) Laminas**

ABSTRACT

Wood is recognized as hygroscopic material, which tends to absorb moisture from surrounding, thus affecting both physical and mechanical properties of the material itself. The aim of this study was to evaluate the effect of viscoelastic-thermal compression (VTC) on the contact angles of modified laminas of *Paraserianthes falcataria* (L.), in correlation with density and wettability of the wood. This low-density wood species was subjected to densification treatment in order to improve its density as well as mechanical properties. VTC is a densification treatment which involved pre-steaming for softening purpose and compression via hot pressing. There were four different pre-steaming durations alongside one control (NS/D: no pre-steaming (control); S1/D: 10 minutes; S2/D: 20 minutes; S3/D: 30 minutes). The laminas underwent contact angle test (sessile drop method) by referring to ASTM D7334- 08: Surface Wettability of Coatings, Substrates and Pigments by Advancing Contact Angle Measurement. In addition, basic morphological feature of the laminas was determined by using Scanning Electron Microscope (SEM). The contact angle of S1/D (10 minutes) laminas indicated the lowest degree of contact angle, which means it had better wettability; while S3/D (30 minutes) laminas recorded the highest degree of contact angle, therefore having poor wettability.