Subterranean Termite Resistance of Smoked Glued Laminated Lumber Made from Fast Growing Species in Indonesia

Hadi YS[1], Efendi M[1], Massijaya YM[1], Pari G[2], Arinana[1]

1. Forest Products Department, Faculty of Forestry, Bogor Agricultural University, Bogor, 16680, Indonesia

email: yshadi@indo.net.id;

2. Forest Products Research Institute, Environment and Forestry Ministry, Bogor 16680, Indonesia

Abstract - *The purpose of this research was to determine the resistance of smoked glulams against subterranean termites (Coptotermescurvignathus Holmgren) using JIS K1571-2004 standard. Glulam was made from fast growing species namely Acacia mangium (mangium), Maesopsiseminii (manii), Falcatariamoluccana (sengon). The glulams contained either the same wood species for all layers or a combination of mangiumas face and back layers with a core layer of manii or sengon. Glulams were smoked for 15 and 30 days using smoke of mangiumwood, and for comparison purposes wood preserved with imidaclopridand untreated glulam were prepared. The results showed that smoked glulam was the same resistant as imidacloprid preservative glulam and more resistant than untreated glulam against subterranean termite. The smoked glulam for 15 days was the same resistant as smoked glulam for 30 days. Smoke treatment produced acetic acid, cyclobutanol, Trideuteroacetonitrile, phenol, 1-6 Anhydro-Beta-D-Glucopyranose (Levoglucosan), 1-Acetoxy-Cyclopenten-3-One,2H-Pyran-2-one,tetrahydro-(CAS)5-Valerolactone propenoiacid and 2,5-Dimetoxytoluenethat improving resistant of glulams.*