Under the global background of shortage crisis of forestry and fossil oil resources, it is estimated that there is an expectation for the application of natural fiber–reinforced composites from 12% in 2010 to 18% and 25% by 2020 and 2030, respectively [1]. With the fast–growing demands of engineering wood products for various applications, wood plastic composites (commonly abbreviated as WPC), as the most important one of natural fiber–reinforced composites, mainly produced by the thermoplastic polymers (polyethylene (PE), polypropylene (PP), polyvinyl chloride (PVC) and polystyrene (PS)) and the biomass particles and fibers from forestry and agricultural wastes (wood, bamboo, straw, stalk, husk and bast), which have been well considered as a crucial and novel candidate for residential and industrial constructions [2, 3]. WPC with a unique combination of advantages from wood and plastic has been extensively employed in landscaping facility, transportation, packaging, municipal engineering as well as the inner–outer decoration and structure of building [4, 5, 6], as seen in Figures 1–3. In recent years, WPC begins to partially replace some conventional and novel engineered wood products like wood veneer (WV), particle board (PB), medium–density fiber board (MDF), plywood (PW), oriented strand board (OSB) and laminated veneer lumber (LVL) [7].

Summarized by © lakhasly.com