

**PREFABRICATED WOOD I-JOIST FROM JOINTED LAMINATED VENEER  
LUMBER (LVL) AS FLANGE AND WEB**

**By**

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Wood I-joist is a system that consists of flange and web component. Both components have work together as a system in order to match the strength property of a laminated veneer lumber (LVL). The objective of the study is to obtain strength properties of prefabricated wood I-joist made from butt jointed web (LVL: *Heavea brasiliensis*) and flanges that used PRF (Phenol Resorcinol Formaldehyde) adhesive as a joint binder. The I-joist was combining with synthetic materials, resulting in lightweight, strong and environment-friendly building material. The average of modulus of rupture (MOR) for the study of 22.6 MPa and the average value of modulus of elasticity (MOE) was 7887.61 MPa. As the conclusion to this study, LVL web and flanges as an I-joist system cannot perform as a system.