

TEGANGAN DAN GAYA BOUT PADA SAMBUNGAN BALOK KAYU SEUMANTOK

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Abstract: *Three beams of Seumantok Kuning (yellow Seumantok) wood connected using clamps wood on side had been tested. The thickness of connected woods were 5x12 cm, mean while the thickness of clamps wood were 2x2,5x12 cm. As connectors were used steel bolt di- mension 1/2" (1,12 cm). As the test fiber parallel tension test, fiber parallel compression test, push out test, bendin test, and bolt tension test. The wood had been tested on air dry condition with moisture content 15,18%; water conten 16,30% . Specific gravity of the wood 0,87. All testing were conducted based on American Society for Testing and Materials (ASTM) 2004. Show that fiber parallel tensile strength 1422,8 kg/cm² on strain 0,012; fiber parallel compressive strength 423,32 kg/cm² on strain 0,00479; fleurel strength 585 kg/cm² on strain 0,00257. Steel's yield strength is 3566,88 kg/cm² on yield strain 0.00255 and steelelasticity modulus 2,018 x 10⁶ kg/cm². The push out test result of bolt point out strain 0,00317 on load 1040 kg. Data on the beam connection test show that force that avery bolt such 1259,84 kg.*

Keywords : *bolt, yellow Seumantok, flextural, compressive dan tensile strength, steel elasticity modulus.*

Abstrak: Telah di uji tiga balok kayu Seumantok Kuning yang disambung dengan menggunakan pelat penyambung di samping. Tebal kayu yang disambung 5x12 cm, sedangkan tebal kayu penyambung 2x2,5x12 cm. Sebagai alat sambung digunakan baut 1/2" (1,12 cm). Sifat mekanis standar juga diuji tarik dan tekan sejajar serat, push out, lentur, dan uji tarik baja baut. Kayu diuji pada kondisi kering udara pada kadar lengas 15,18 % dan kadar air 16,30 %. Berat jenis kayu diperoleh 0,87. Semua pengujian didasarkan pada peraturan American Society for Testing and Materials (ASTM), 2004. Diperoleh tegangan tarik sejajar serat 1422,8 kg/cm² pada regangan 0,0212, tegangan tekan sejajar serat 423,32 kg/cm² pada regangan 0,00479. Tegangan lentur 585 kg/cm² pada regangan 0,00257. Tegangan luluh baja 3566,88 kg/cm² pada regangan luluh 0,00255 dan modulus elastisitas baja 2,018x 10⁶ kg/cm². Pada uji push out diperoleh regangan baut 0,00317 pada beban 1040 kg. Pada uji sambungan balok gaya yang timbul pada tiap baut sebesar 1259,84 kg.

Kata kunci : baut, Seumantok, lentur, tegangan tekan dan tarik, modulus elastisitas baja.