

Sifat-sifat mekanik dari flax/polypropylene = Mechanical properties of flax/polypropylene

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Abstrak

Polypropylene diperkuat serat flax dipersiapkan untuk mengetahui pengaruh penambahan serat dan coupling agent terhadap sifat - sifat mekanik dari komposit. Komposit flax/polypropylene dibuat dengan kandungan yang berbeda (10,20 dan 30 % berat). Sedangkan untuk coupling agent dengan tipe maleic anhydride polypropylene dilakukan penambahan 4% pada masing - masing komposisi komposit. Proses pembuatan material dilakukan dengan cara ekstrusi dan injeksi. Sifat - sifat mekanik yang diteliti yaitu tarik, tekan, tekuk, puntir dan impak. Modulus dan tegangan maksimum dari flax/polypropylene meningkat dengan penambahan serat. Pengaruh yang sama juga dihasilkan melalui penambahan coupling agent.

.....Flax fibre reinforced polypropylene were prepared to investigate the influence of fibre loading and coupling agent on the mechanical properties of the composite. Flax/polypropylene composite was made with different content (10, 20 and 30 wt %). Whereas, coupling agent of maleic anhydride polypropylene was added by 4% to each composite composition. The process making of materials was performed by extrusion and injection. The mechanical properties of composite such as tensile, compression, flexural, torsion and impact were investigated. Modulus and maximum stress of flax/polypropylene increased with increase of fibres loading. The same effect was also generated through the addition of coupling agent.