

The title of Research: - The development of recycled paper based composite material to produce furniture.

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Abstract

This research presents the investigation on the development of recycled paper based composite material to produce furniture and other decorative products. This recycled paper based composite material is made of a mixture of shredded paper, cement, gypsum, sand and water. The effects of recycled paper contents were investigated by varying the amount of the waste paper pulps in the ratio of 5, 10, 15 and 20 percent by weight of cement. And the influence of plastic mesh reinforcement and non-reinforcement in the samples were tested. The physical and mechanical properties of the samples were determined after monitoring them for 28 days. Then the recycled paper based composite material was used to produce furniture components and decorative products.

The results of this research indicated that using the recycled paper based composite material can reduce the bulk density (weight). When the paper pulp content was increased, the density, modulus of rupture and the internal bond decreased. However, the water absorption and thickness of the material and the moisture content increased. These samples can be cut, polished, drilled, molded and painted similar as soft woods which can be assembled into small desks and chairs for children and other decorative products. It's a very simple technique and you can make furniture and decorative products yourself.

Therefore, the development of recycled paper based composite material can be used to replace plywood and soft wood to produce paper furniture and decorative products that are environmentally friendly. It is a great alternative to the furniture industry in local market.

Keywords: -

Recycled paper based composite

Recycled paper

Alternative decorative products (materials)

Paper furniture