

Applying High Technology in Reusing Wood Industrial Process Waste Based on Sustainability Principles

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Abstract :

The several stages in the operation of wood and furniture manufacture, from cutting and shaping to finishing and polishing, result in a lot of wood waste of varying degrees in size, shape and type, and dealing with these violations in developing African countries, especially Egypt, is done in random ways that lack planning, whether from In terms of storage, transportation or reuse, due to the lack of a clear mechanism for industrial establishments that adopt the principle of sustainability to deal with these wastes, these wastes remain a source of increasing concern, and often constitute environmental challenges, and this research has addressed the presentation of a sustainable model for managing this waste , Is to create a production unit that works to run those wood waste that comes out of the industry periodically, and turn it into precise sawdust produced according to studied standards through experiments to determine special specifications such as, for molding it afterwards with reused plastic, to produce artistic products that can be used once Other, which represents a new economic dimension for these waste and in a sustainable way, based on modern molding techniques to deal with waste in a sustainable and economic way, and thus the waste turns into a source of income to the company and represents an added value to the actual product, and the disposal of waste to project generates income after covering the costs of its establishment.

Research problem :

The majority of the woodworking and wood industries operating units in Egypt and Africa lack an effective scientific method for managing industrial waste that achieves the principle of sustainability.

Keywords:

Wood reuse - sustainable manufacturing - wood waste management - compound materials - economic value added.