

التصميم لإعادة التدوير كأحد المتطلبات البيئية في تصميم المنتج

Design for Recycling as One of the Environmental Requirements in Product Design

م/ ميرنا محمد حسين كامل مرعى

معيد بقسم تصميم منتجات - كلية الفنون التطبيقية - جامعة السادس من أكتوبر

Abstract:

Research on The design of the product with the possibility of recycling in mind during the design stage, while maintaining its shape and structure and reuse it for the same functions and tasks or the use of materials in the manufacture of any product (recycling) and use it as raw materials or in the manufacturing of new raw materials. One of the challenges now is to address the dilemma of depleting non-renewable resources, increasing the amount of waste, environmental pollution and looking for alternatives and solutions.

This research includes several points that help the designer to apply the design for recycling in the process of product design. Through:

- 1- Knowing the difference between reuse, reduce and recycling
- 2- Design for recycling during product lifecycle stages
- 3- Identify recyclable materials and identify non-recyclable materials
- 4- Use of recyclable materials
- 5- Use of Recycled Materials
- 6- Recycling the product after dismantling and use its components and parts for the production and assembly process
- 7- Recycle the materials by recycling them and using them as operating materials or by treating them chemically or thermally to manufacture new raw materials
- 8- Material recycling and manufacturing procedures are carried out as follows:
 - First: the method of sorting solid waste before recycling operations
 - Second: stages and steps of recycling and manufacturing for:

- 🗑️ Paper
- 🗑️ Cardboard
- 🗑️ Plastics
- 🗑️ Metals
- 🗑️ Glass

**:Keywords** الكلمات المرشدة

التصميم لإعادة التدوير Design For Recycling - المنتجات المُصممة لإعادة التدوير Recyclable Products
- تفكيك المنتج Disassembly - الخامات المُعاد تدويرها Recycled Materials