

Technology Transfer

Area of Technology: Electronics & Communication Engineering

Title of the Innovation: A DRUM DRIER FOR OPTIMAL PREHEATING OF PLASTIC SCRAP

Brief About Innovation

In the present scenario, the plastic plays an important role in different sectors; the use of plastics varies from general day to day life to complex packing of items. The industries that use plastics are packaging, logistics, manufacturing etc. Also, it is quite evident that plastic is the main cause of environmental pollution, and it is very dangerous to living being and affects the ecological system directly or indirectly. The consumption of plastics has several benefits such as in medical and packaging of various items such as surgical items and alike. The quality of plastic is measured in microns, and they should be under 40 microns, as under 40 microns they can be decomposed into the soil after a specified time period. Plastics items that are above 40 microns e.g., toys, beverage bottles, etc. are very common. Therefore, they should be recycled in order to have a safe environment.

Salient Features:

- The present invention relates to an apparatus for recycling of plastic scrap. More particularly, a drum drier for optimal preheating of plastic scrap without losing the strength of the product.
- The present invention discloses a drum drier for optimal preheating of plastic scrap and that is uses at small scale industries, as such types of industries largely uses sun drying method for heating the plastic scrap.
- The limitation of such method is that the time taken to heat the scrap is quite large and also porosities remain inside the plastic scrap, these porosities create voids in these scraps that reduce the strength of the final manufactured plastic item in operations like injection moldings.
- In one aspect of the present invention provides a drum drier for optimal preheating of plastic scrap without losing the strength of the material, The steps involved in present invention are collection of plastic, sorting, shredding, washing & cleaning, pre-heating in drum drier and followed by molding to obtain the final product.

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