

Apisit Meepat 2010: Design of Experiments for Optimizing Parameters in the Transfer Molding Process : A Case Study in a Semiconductor Factory. Master of Engineering (Industrial Engineering), Major Field: Industrial Engineering, Department of Industrial Engineering. Thesis Advisor: Associate Professor Prapaisri Sudusna-na-Ayudhya, Ph.D. 70 pages.

A transfer molding process of plastic compounds in the electronic industry causes the environmental problems due to composition in the compounds. European Union (EU), therefore, issues the Restriction of Hazardous Substances (RoHS) specification. According to RoHS, a new compound is developed by changing some substances in the compound, which leads to major defects in the molding process. In this research, the design of experiments was applied to study significant factors and optimize the parameters setting of the molding process using the Box-Behnken design in order to reduce the defects and improve the efficiency of the transfer molding process. After the improvement, it was found that the defects in the production were significantly decreased by 8.34-19.8 %.

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Thesis Advisor's signature