

Developer Roller Developing Technique

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ABSTRACT

Recently, The material cost and environmental consciousness have raised, laser printer cartridge throw away after used that had made waste of natural resource and impacted environment awfully in the world. With the support of the environmental groups and the great benefit of the business, the aftermarket and compitable cartridge market have had great development and brought the great need of the market for the developer roller. Developer roller is a semiconduct roller and used by the toner cartridge of the black and the color laser printer. It is applied to attract and to bring the toner to the OPC drum for developing in accordance with the principle of the potential difference between the developer roller and OPC drum. This paper uses the cheaper NBR rubber to replace the OEM material of silicon rubber to change and improve the electric property of the developer roller. The process for making the developer roller is about rubber compound and injection molding and coating and electric resistance measurement and print test and print test pages judgement act. To correct the percentage of the material by comparing the experimental data with the data of OEM developer roller, we can create a stable and uniform property about the electric conduction of the developer roller. OEM developer roller is made of silicon rubber. The silicon rubber has a shortage for ageing and wear so it can't satisfy the user with high print pages. It is the goal of the research that how to control the electric property, increase the wear of the developer roller, test the developer roller, improve the rate of the error, lower the cost of the materials, increase the print pages and even get to beyond the life and the quality of OEM developer roller.

Keywords : Developer roller ; Toner Cartridge ; Aftermarket ; Laser printer ; Compitable Cartridge

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