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Using the simulation of Cleaner Production Methodology for minimization of Volatile Organic Products emissions in Printing Industry

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Abstract

The main purpose of this essay was to simulate the application of the methodology of Cleaner Production in the printing sector of a Graphic Industry, located in Rio de Janeiro, Brasil, for the minimization of the emission of organic volatile products. The Cleaner Production program was implemented during a 6 months period, consisting of phases and steps which were established by UNEP. The present study used data of the production of Folder/Sheets, color 1/0, size A4, with a production of 25000 sheets, three times a week, using an Aurélia 500 Bi printer. Environmental diagnosis of the process showed several opportunities of improvement by changing technology and substituting the raw materials. A mass balance simulation showed significant reductions in emissions of volatile organic products (90%). The obstacles found in this study were based on lack of budgetary forecast implementation of these changes; an organizational culture not fully directed toward the efficient use of the resources and the difficulty in the implantation of projects that generate expenditure increase.

Keywords: Cleaner Production, Graphic, Atmosphere Emissions.
