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Detailed Evaluation of Cleaner Production in a Red Ceramic Industry in the State of Paraíba

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Abstract

This paper is based in technical, economic and environmental strategies application integrated to process and products on a red ceramic industry with the objective to increase the efficiency in the use of raw materials, water and energy, through reduction, no generation or recycling of wastes and emissions generated, with environmental, economic and occupational health benefits. The Cleaner Production program aims to identify actions of ecoefficiency in the areas, processes and machines of companies, in order to generate economic results, reduce the consumption of resources and prevent environmental impacts generated from inputs of processes. An evaluation methodology was developed by University of Applied Sciences Northwestern Switzerland to determine the potentials through the QuickScan Report and the software EcoInspector. Next step was the quantification of inputs, outputs, mass, energy flow, identification of opportunities to improve the performance through research, presentation of the best technical alternatives, economic and environmental feasibility. The stages of the productive process that were detached as eventual potentials of Cleaner Production are: preparation of the raw material, drawing, cutting and burning. 28 options were identified and 01 option was rejected, 21 options of immediate implementation, 06 feasible options, 03 options were implemented by company, being: to cover the clay with canvas, to use cut wire of 0,9 mm and levelling of drying area. One of the options of immediate implementation was to arrange an employee to clean the clay, this option represented reduction in electricity consumption, and an increase in the production. After the approval of the options by the company, it was set an action plan in order to certify the implementation of them.

Keywords: Red Ceramic, Cleaner Production, Energetic Efficiency, Ecoefficiency.
