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“CLEANER PRODUCTION TOWARDS A SUSTAINABLE TRANSITION”

Mitigation of Barriers to Implement Cleaner Production in a Small Metallurgical Company

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Abstract

The Cleaner Production is an interesting approach to be applied in small and medium sized enterprises, providing viable alternatives for improvements in their manufacturing processes, generating both economic and environmental gains. It is a strategy that prevents environmental risks, allowing an increase in the efficiency of production processes, improving product quality and services. The aim of this study is to analyze if the opportunity to obtain economic performance with the adoption of Cleaner Production principles could motivate the managers of a small metallurgical company to deploy them. Specifically it aims to analyze the main barriers that affect the decision of implementing cleaner production and assess the possible economic and environmental advantages that this company could get. A case study using semi-structured interviews and analysis of data through environmental and economic evaluation was developed. For the environmental impact assessment it was applied the Mass Intensity Factor (MIF). The results showed that the economic, financial and technical barriers are the most striking ones. Furthermore, with the implementation of the Cleaner Production principles it was possible to reduce 83.8% of the losses in terms of water and oil consumption, resulting in cost savings of around 25%. This would make it possible to obtain economic gains for investment in machinery and equipment for reducing the environmental impact.

Keywords: *Cleaner Production, Barriers, Small and Medium Business, Economic and Environmental Advantage*