

Carbon Footprint Reduction Using Cleaner Production Strategies in a Otoshimi Producing Plant

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Abstract : In this work, a study was conducted to evaluate the feasibility of using Cleaner Production (CP) strategy to reduce carbon dioxide emission (CO₂) in a plant that produces Otoshimi. CP strategy is meant to reduce CO₂ emission while taking into consideration the economic aspect. For this purpose, a CP audit was conducted and the information obtained were analyzed and major contributors of CO₂ emission inside the boundary of the production plant was identified. Electricity, water and fuel consumption and generation of solid waste and wastewater were identified as the main contributors. Total CO₂ emission generated was 0.27 kg CO₂ per kg of Otoshimi produced, where 68% was contributed by electricity consumption. Subsequently, a total of three CP options were generated and implementations of these options are expected to reduce the CO₂ emission from electricity consumption to 0.16 kg CO₂ per kg of Otoshimi produced, a reduction of about 14%. The study proves that CP strategy can be implemented even without any investment to reduce CO₂ for a plant that produces Otoshimi.

Keywords : carbon dioxide emission, cleaner production audit, cleaner production options, otoshimi production

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