Recommendation of energy ffficiency indexes for the coffee sector in Honduras using multivariate statistics

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Abstract

The objectives of this study were to define and determine the energy efficiency indexes that should be considered to measure and analyze the energy performance in enterprises engaged in processing green coffee for export. The investigation arose through a case study on a coffee processing plant in Honduras. The purpose of this work was fulfilled under the recommendations set forth in ISO 50001:2011, which were used as references. In addition, determine the energy structure of the company target of study, establishing the strategy to obtain daily records of the energy situation of the company and under a four-step process: energy structure of the company, daily registry of consumption, indicators of energy performance, and potential evaluations for improvement. With the observed results for more than 100 days, a model of high-quality was found with a coefficient of determination of 0.88, which helped to find and define different energy performance indicators.

Palabras clave

Coffee processing plants, Energy efficiency, Energy efficiency indexes.