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EXERGOECONOMIC ANALYSIS in A CEMENT PRODUCTION PLANT

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Abstract

A dry-type Cement Production Plan of 151 Tons per hour was taken as a case of study to implement an exergoeconomic analysis. In this paper, the exergy destruction and the investment costs of the system's units were calculated to obtain accurate information about the performance of the process, from the exergoeconomic factor and the relative difference cost. Conventional exergoeconomic analysis showed that the total cost of exergy destruction is 4206537 USD/h. The Calciner and the Rotary Kiln cause 62% of the total cost of the exergy destruction. The lowest values of the exergoeconomic factor were calculated for Calciner (0.01%), Clinker Cooler (0.01%), Rotary Kiln (0.02%), and Raw Mill (0.04%). The