Nueva publicación científica: “Fuel savings and carbon dioxide emission reduction in a fired clay bricks production plant using olive oil wastes: A simulation study”

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Resumen:

Olive oil production is a major food industry especially in Mediterranean countries. Considering that only 20% of olive fruits is oil, the remaining material constitutes currently a waste that must be adequately handled because of its high polluting capacity.

As part of a broader work in which the technical feasibility of using wastes from the olive oil industry for producing fired clay bricks was demonstrated at laboratory scale, this work presents a simulation study for a whole industrial plant under seven different scenarios. The effects on brick properties and plant operation, especially concerning energy requirements and effect on carbon dioxide emissions were examined. The produced bricks meet all requirements based on mechanical properties. The use of such wastes can represent an important saving in gas consumption (2.9–18%) in plant operation. Furthermore, a reduction of up to 13% in the actual emission rate of carbon dioxide can be reached. This can also alleviate the environmental problems derived from olive oil wastes handling and disposal.

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