



Características de la combustión con aire enriquecido con oxígeno y perspectivas de aplicación en PYME con procesos de alta temperatura [

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Analítica

ABSTRACT Small and medium-sized enterprises (SMEs) having high temperature processes, such as heat treating and melting, are socially and economically important for developing countries. Consequently, their competitiveness must thus be increased to guarantee their permanence in the market. As these companies are thermal energy intensive, their competitiveness is affected by obsolescence and the low efficiency of older combustion devices, thereby making research necessary and being open to and aware of new technologies. With this aim in mind, a review of the state of the art regarding oxygen-enhanced combustion (OEC) is presented, highlighting its productivity and environmental benefits. A brass melting process in a self-regenerative furnace is shown to account for its potential, in which 28%, 43% and 34% reductions in fuel consumption, process time and CO₂ emissions were obtained, respectively, and a 30% increase in efficiency, by increasing the oxygen content in the oxidiser from 21% to 35%. However, increased O₂ supply cost constitutes an obstacle to applying this technique in SMEs

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