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HYDROGEN PLASMA CONVERSION SYSTEM OF MUNICIPAL RECYCLABLE WASTE IN ENERGY

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Abstract

The paper presents a synthesis of the main technologies used in municipal waste management, highlighting the main technical characteristics, advantages and disadvantages, the main objective is to improve the technical and economic performance of a plant that uses an innovative and environmentally friendly technology based on hydrogen plasmas for the processing of municipal recyclable waste as a source of renewable and cheap energy.
Plasma gasification is a innovative process, efficient technically and economically, with low impact on the environment and facilities using this technology have reduced carbon footprint. The main equipment of the installation is the assembly consisting of the reactor equipped with plasma torch and the hydrogen plasma gas purification system, powered by power sources controlled by automation devices controlled by advanced control algorithms that act online and anticipate thermal processes and chemicals that occur in the reactor.

Key words: hydrogen, liquid waste, management, plasma, PID and one-step predictive, recycling, systems design, zero emissions

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