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WASTE COGENERATION IN THE MIROSLAVA COMMUNE, IASI COUNTY-ROMANIA

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Abstract

Technical solutions are pyrolysis and gasification of waste with heat production and fuel gas to be burned in internal combustion thermal machines. To produce electricity or steam, use heat generated from the process and the fuel gas produced by the plant. Gasification is a thermal treatment method that can be applied to convert organic waste into a medium calorific value gas, recyclable products and residues. Gasification is normally followed by the combustion of the produced gas, in a furnace and in the internal combustion engines or in simple gas turbines, after a proper purification of the gas produced. The coarse chopped waste, sometimes from the pyrolysis of waste, enter into a gasifier where the carbon containing materials reacts with a gasifying agent, which can be air, O₂, H₂O or CO₂ in the form of steam. The process takes place at 800-1000°C (oxygen breathed in flow gasification can reach 1400-2000°C) depending on the calorific value, and includes a number of chemical reactions to form the fuel gas with traces of tar. Ash is often, vitrified and separated as the solid residue.

Key words: cogeneration, gasification, Miroslava commune, pyrolysis, solid waste

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