Utilization of Energy in Municipal Solid Waste Landfill

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Abstract

In developing countries the landfills stand out as a way for final disposition of the urban solid waste by showing the lower cost and the engineering techniques that aim the minimization of the impacts to the public and environmental health. In this sense, this study makes the emergy synthesis of a landfill in the city of São Paulo. That has a project of environmental compensation and electric energy generation by burning biogas. The total emergy of the system equals $1,22 \times 10^{20}$ sej. And the specific emergy of the USW are equivalent to $8,36 \times 10^{11}$ sej/m³ and transformity of the electric energy that was produced is $4,67 \times 10^{3}$ sej/J.

Keywords: emergy, landfill, biogas, environmental