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CO-PROCESSING - TOWARDS ECONOMIC SUSTAINABILITY

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Abstract

Co-processing is the process allowing the recovery of useful components from wastes. It represents a trade-off between reducing the volumes and toxicity of the produced wastes and recovery of valuable energetic or non-energetic components, ensuring that the new obtained products have similar quality as those produced from virgin raw materials with same or even less environmental impact during their life cycle. In this context, the dedicated information networks about produced wastes at national and international level is the most important element in order to integrate and optimize such process based on technical and environmental objectives. The aim of this paper is to fulfill such need at national level offering a possible general integrated waste management conceptual scheme based on technological and environmental information needed to progress towards co-processing. We designed it in two functional versions one for non-hazardous and the other for hazardous wastes. This should be the first step for developing a totally new information network concept, special dedicated to the waste management practical needs at national level. In the proposed conceptual scheme we embedded three conceptual models for gathering technical data with technological environmental - friendly options for recovery of two types of components namely "the non-energetic ones" - components that can be used as secondary raw materials to produce everything except energy and "energetic" ones to produce only energy, hoping to contribute this way to the implementation of circular economy and waste management sustainability in Romania.

Keywords: co-processing, management, recovery, sustainability, waste

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