NEW PROCEDURE FOR THE ELIMINATION OF PRINTED INK FROM PLASTIC FILM

PATENTED TECHNOLOGY

EXCLUSIVE LICENSED

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ABSTRACT

The Waste, Pyrolysis and Combustion Group from the University of Alicante has developed a process for the possible elimination of printed ink from plastic films used in flexible packaging. Using this process, we can obtain an ink-free plastic film which can be easily reconverted to plastic pellets. At present there are no industrial methods for eliminating printed ink from these waste materials, and they can only be recycled with a very meagre increase in value. The process developed is completely novel and respects the environment, because it doesn't use any kind of organic solvent. The most important advantages of ink elimination are, firstly, the increase in value of the treated plastic, even equalling the quality of new pellets, and secondly the sale price of recycled plastic compared with new plastic.

The technology has been tested successfully in different printing materials, such as polythene, polypropylene, polyester and polyamide. The process is viable for both solvent and water based inks. We are looking for recycling companies that may be interested in applying this process for treating and improving printed plastic.

TECHNOLOGY ADVANTAGES AND INNOVATIVE ASPECTS

- At present printed film is only recycled for low quality applications, because the ink is not removed.
- The process obtains an **ink-free plastic film** which can easily be transformed into a **new raw material** for processing.
- The industrial process is **economically viable** because the value of the recovered material is increased.
- The process also **recovers pigments** that can be reused, so the waste generated is a minimum.
- The process for the removal of the ink is completely innovative and ecological, because it **doesn't use organic solvents**.
- The technology has been **successfully tested** on different plastics, such as **Polythene, Polypropylene, Polyester and Polyamide**. It is viable for both **water and solvent based inks**.

MARKET APPLICATIONS

- The plastic recycling industry
- The printing industry
- The packaging industry

COLLABORATION SOUGHT

We are looking for the following collaboration options:

- A license agreement for the implementation of the technology.
- An R+D collaboration to complete the development of the technology or apply it to other sectors.