

« Demonstrative pilot plant for the valorisation of non-ferrous metal waste (LIFE 13 ENV/ES/000173 GREENZO) »

PROJECT LOCATION: Ibi (Alicante)

BUDGET INFO:

Total amount: 1.062.170€

% EC Co-funding: 49,98%

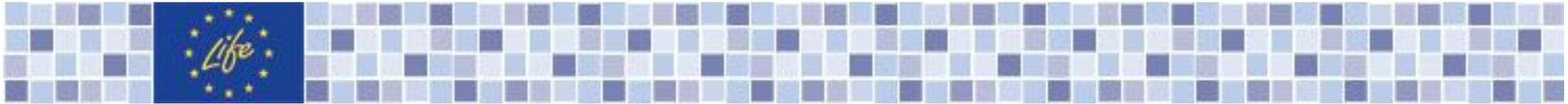


DURATION: Start: 01/06/2014 - End: 31/05/2017

PROJECT'S IMPLEMENTORS:

Coordinating Beneficiary: Asociación de Investigación de la Industria del juguete, conexas y afines (AIJU)

Associated Beneficiaries: Cauchos Karey S.A, Consejo Superior de Investigaciones Científicas (CSIC-ITQ), Wort Europ S.L

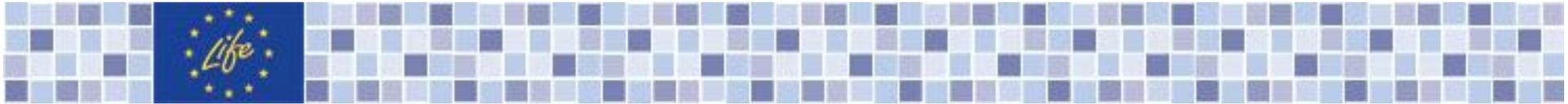


BACKGROUND and AIMS:

- *Zamak (Zn, Al, Mg and Cu alloy) is processed by injection molding pressure and is used in various industries (toy, automotive, metalwork, etc) due to its properties.*
- *Consuming and processing companies of such non-ferrous metal (zamak) generate waste accounting 1 million tons per year at European level, such smelting slag and sludge vibrated.*
- *This type of hazardous waste is deposited in landfills with the corresponding environmental impact that entails the generation of lixiviates, besides mineral resources contained therein are wasted.*
- *The main aim of this project is the material valorisation of a category of non-ferrous metal waste generated by the industrial processes of Zamak transformation, by means of the development of a demonstrative pilot plant that allows the extraction of zinc oxide (ZnO) from this waste.*
- *In addition, the obtained ZnO will be validated in two industrial sectors (rubber/EVA transformation and chemical catalysis)*

MAIN EU POLICY(IES) TARGETED:

LIFE+ Environment Policy and Governace (Natural Resources and Waste)



MAIN ACTIVITIES:

- *Establishment of specifications.*

- *Design, development and tuning of the pre-industrial pilot plant.*

Currently it doesn't exist any process for obtaining ZnO from non-ferrous metal waste generated by the industrial processes of Zamak transformation.

- *Development and validation of the demonstrators with the ZnO achieved.*

The first process for hydrogen production in which the catalyst (ZnO) and the supply (bioethanol) are renewable.

- *Dissemination and after-life communication plan.*

EXPECTED RESULTS:

- *Development of an eco –sustainable technology that turns a residual current into profitable by-products.*

- *Creation of a new source of supply of resources (ZnO) from waste.*

- *Reduction of the waste going to landfills as a final management methodology.*

- *Development and validation of demonstrators in the sector of manufacture of rubber/EVA and chemical catalysis by reforming of bioethanol.*

- *Increasing competitiveness/sustainability of the industrial processes involved (both waste producers and validators).*