

National Energy Globe Slovenia 2020

(Project ID: 23176)

Winner: Slovenian Tool and Die Development Centre - TECOS

Project: LIFE CEPLAFIB - Implementation of a new Circular Economy through the valorisation of postconsumer PLastic waste and reclaimed pulp FIBer

Short facts

- Transformation of plastic waste and newspapers into recycled products
- Postconsumer plastic is reinforced with reclaimed pulp fibres
- Combination of low value plastic waste with recovered fibres
- Transformation of 40% of the municipal solid waste
- Entire recycling chain is involved

Short overview

LIFE CEPLAFIB is an international partnership alliance between six partners from four European Union member states. The project is coordinated by the Tool and Die Development Centre (TECOS), a Slovenian company that focuses on the development of new products from recycled materials for the automotive industry. Plastic and newspaper waste is transformed into primary resources for a high added value, using recycled fibre reinforced composite materials.

Problem (Initial situation)

Plastic is widely used for production in many industrial sectors, thereby causing a rise in its use, which in turn results in massive plastic pollution. According to a report by the Plastics Recyclers Europe, less than 30% of all plastics waste streams in Europe are recycled. This is a waste of resources since the plastic's unique properties such as strength, rigidity and flexibility combined with affordability and durability make it a perfect alternative to other materials such as glass, wood and metal.

Solution

The CEPLAFIB partnership is directly addressing plastic waste recovery targets by involving the entire recycling chain. It aims to orchestrate a new circular economy in which recycled postconsumer plastic will be reinforced with reclaimed pulp fibre. This improves the plastic's end performance and stabilises the recycled flows for their direct use in mass application sectors such as the automotive, caravanning, packaging and construction industries.

Innovation

The innovation potential of this partnership arises from the novel circular economy concept of the recycling value chain that unites two diverse waste flows into new recycled composites that are sustainable and cost competitive. The knowledge, skills and expertise of different partners are combined in the consortium and solutions are provided on how to reduce the cost-to-performance ratio of recycled plastic via an integrated approach. For instance, the partners combine low value plastic waste with recovered fibres derived from paper waste with near to zero waste leftovers.

Jury Statement

The uses of plastic vary, making the product one of the most widely used products in the world. However, plastic also contributes to most of the landfill pollution in the world. This problem prompted the Energy Globe Award national winner in Slovenia to form a partnership with other companies from Europe in a bid to recycle huge amounts of plastic waste in order to make useful products for industrial use. This is a good project that will divert plastic waste from reaching the landfills, thereby reducing land pollution in Europe. Congratulations on your initiative!