DE & REMANUFACTURING FOR CIRCULAR ECONOMY INVESTMENTS IN THE COMPOSITE INDUSTRY

30 European partners from Italy, Finland, Austria, Spain, Slovenia, Belgium and Portugal collaborate within the EU-funded DEREMCO project, started in December 2022. Partners are on a mission to create a systemic, cross-sectoral and demand-driven circular economy solution that will enable the cost-effective reuse of post-use composite materials and components in new high-added value products.

ABOUT

Fiber-reinforced plastics are the structural components of a wide range of consumer and industrial goods, but managing composite products after use in accordance with the principles of the circular economy remains a significant challenge.

The DeremCo project aims to create a systemic, cross-sectoral, demand-driven circular economy solution that will enable the cost-effective reuse of post-use composite materials and components in new high-added value products. This solution will be based on the interaction between the technical and social eco-systems at the local and interregional level and will benefit the environment, industry, consumers, and the European society.

To satisfy consumer demands, two circular pilot procedures will be used:

a) mechanical demanufacturing and hybrid reprocessing,

b) thermo-chemical demanufacturing and textile reprocessing.

The circular value-chain will be changed into a “pull” system, in line with the new DeremCo Demand-Driven vision, where the demands and specifications on the materials and components to be reused are transferred directly from the demand side in terms of the qualities and functions of the high added-value products reusing them. The major objectives will be to encourage industrial uptake within local eco-systems, to de-risk future industrial uptake through private investments, and to raise awareness for more conscientious consumer behavior to assure sustainability and continuity.

FlexProtec - First Open call winner

FlexProtec is focused on Topic 6 (Output) – Prototypes/small sample of new products manufactured using injection moulding with DeremCo materials, with a goal of developing of new generation ultralight shin guard protective shell from recycled composite material in sport protective sector. Result of the project are demand driven properties according end user requests thanks to the combination of DeremCo material properties and tailor-made shape together with a 3D printed padding. Therefore, during a project, we will develop three different designs for a shin guards (different requirements for different sports) and injection mould them using 3D printed inserts from XMOLD material.

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Call: I3-2021-INV1

Topic: I3-2021-INV1-MANU

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