

Microwave assisted curing for carbon fiber reinforced epoxy composites

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Researchers at the Technological Institute of Plastics (AIMPLAS) in Valencia, Spain, with the support of ICT-Fraunhofer in Pfinzthal, Germany, will develop a technology suitable for carbon fiber reinforced composites manufacturing based on microwave curing of its raw materials, which will include the selection of the proper additives (dipole organic molecules or nanostructured magnetic materials) and the preparation for a set up of the system at pilot plant level.

A better understanding of potential distortions and residual stress effects of MW will be obtained by using Fibre Bragg Grating technology. Tooling materials and their geometrical limitations will be obtained as well.

Finally, an assessment on the final properties of the composites and the benefits of this technology in economic and ecological terms will be also carried out.

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