

SUSTAINABILITY: CIRCULARITY

WINNER: Centre of Expertise in Advanced Materials and Sustainability (CEAMS)

The CEAMS consortium has achieved a world-first demonstration of manufacturing across multiple advanced technologies using recycled continuous carbon fibre (rCCF). The project demonstrated rCCF as a feasible substitute for virgin fibre in high-performance applications, with comparable processability and strength.

Through collaborative UK innovation, rCCF was successfully integrated into manufacturing trials using industrially relevant processes such as weaving, braiding, filament winding, and tailored fibre placement, producing components with up to 100% recycled content.

This achievement marks a major step toward circularity in composites, enabling significant embodied carbon reductions and establishing a foundation for sustainable, resilient UK supply chains across key sectors.

This collaborative project was made possible by contributions from a CEAMS consortium (NCC, Henry Royce Institute and NPL) in addition to AMRC, Cygnet Tekimp, University of Nottingham and Ulster University.

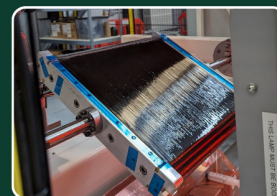
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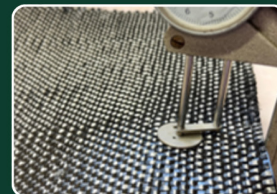
Braiding



Filament winding



Tailored fibre placement



Weaving

CEAMS