RECYCLING A SUPERMATERIAL: CARBON FIBER COMPOSITE SCRAP REPURPOSE DEAL SIGNED

Finnish composite solutions manufacturer Exel Composites and Fairmat, a pioneer in deeptech specializing in recycling carbon fiber and manufacturing advanced recycled materials, have announced a partnership to close the loop of carbon fiber waste. Fairmat will recycle Exel Composites' carbon fiber composite scrap at its Nantes manufacturing facility to produce second-generation CFRP Chips, high-performance composite units, significantly reducing waste. Beginning in Q2 2024, the carbon fiber composite scrap will be transferred to Bouguenais from Exel Composites' two plants in Finland.

Traditional waste-management techniques involving pyrolysis or solvolysis use significant amounts of energy, mitigating the environmental benefits of recycling used carbon fiber. In contrast, Fairmat's reconstitution process uses proprietary cutting technologies, using robotic tools equipped with machine learning to dissemble carbon fiber components and convert the pieces into CFRP building blocks.

"Fairmat's innovative recycling methodology enables its products to retain the high strength and stiffness of the original embedded fibers," explained Kim Sjödahl, senior VP of technology and sustainability at Exel Composites. "This is often compromised by other recycling methods that involve chopping and milling carbon fiber.

"Combined with its minimal energy input, Fairmat's process is genuinely game-changing for sustainability in the composites industry. What's more, the successful recycling of process waste also opens possibilities to recycle the end-of-life waste from our customers".

"The partnership with Exel aligns with our mission to build a closed-loop ecosystem that keeps high-value products from going to waste." said Benjamin Saada, founder and CEO of Fairmat. "Fairmat is here to enable a wave of sustainable progress, putting advanced recycled materials at the heart of forward-thinking industrials worldwide, to make product manufacturing more circular."

Using AI tools such as digital twins to model different 3D arrangements during the design phase, Fairmat can assemble its CFRP Chips into a variety of layouts and structures. These simulations enable it to customize the mechanical properties of the resulting product, such as extremely low weight for transportation components and localized, unidirectional strength for impact surfaces.

Click to learn more about Exel Composites' approach to composites sustainability and follow this link to read more about how Fairmat gives carbon fiber scrap a second life: https://www.fairmat.tech/recycling-service/

Ends: 335 words

Editor's note: If you want to ensure you keep up to date with press material, opinion focused blog content and case studies from Exel, visit the website here: https://exelcomposites.com/events-and-insights/.

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About Exel Composites
Exel Composites is one of the largest manufacturers of pultruded and pull-wound composite profiles and tubes and a pultrusion technology forerunner in the global composite market. Our forward-thinking composite solutions made with continuous manufacturing technologies serve customers in a wide range of industries around the world. You can find our products used in applications in diverse industrial sectors such as wind power, transportation and building and infrastructure.

Our R&D expertise, collaborative approach and global footprint set us apart from our competition. Our composite solutions help customers save resources, reduce products' weight, improve performance and energy efficiency, and decrease total lifetime costs. We want to be the first choice for sustainable composite solutions globally.

Headquartered in Finland, Exel Composites employs over 600 forward-thinking professionals around the world and is listed on Nasdaq Helsinki. To find out more about our offering and company please visit www.exelcomposites.com.

About Fairmat:
Founded in 2020 by Benjamin Saada, Fairmat specializes in recycling carbon fiber, manufacturing advanced recycled materials and providing connected industrial solutions. Fairmat partners with clients across industries, from electronics and mobility to sports and lifestyle. Headquartered in France with a

manufacturing facility, an office in Spain and over 130 dedicated employees, Fairmat is actively expanding in the USA and globally. For more information, visit www.fairmat.tech/.

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