Constellium

PRESS RELEASE

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Constellium Drives Digital and Modular Innovation for Smart Aluminum Automotive Structures with ARENA2036

Paris – Constellium SE (NYSE: CSTM) is proud to announce the successful completion and publication of the FlexCAR project, its latest innovation effort with ARENA2036*, Germany's leading research campus for future mobility and production technologies.

The FlexCAR platform envisions a future where major vehicle systems—such as the drivetrain, energy storage, and interior—can be easily configured or updated. Constellium worked alongside project partners such as Mercedes-Benz, Siemens, Bosch, and the German Aerospace Center (DLR) to complete this publicly funded, five-year project.

To help ensure that the structural backbone of this open architecture meets the highest standards in safety and performance, Constellium developed a modular sill concept using aluminum extrusions made from Constellium HSA6™ high-strength aluminum alloys featuring significant recycled content. Designed to support various powertrains—including battery electric and hydrogen fuel cell—the sill structure offers enhanced crash performance, design flexibility, and a lower carbon footprint over the vehicle's lifecycle.

"FlexCAR shows how modular thinking—combined with the performance and sustainability benefits of aluminum—can revolutionize vehicle design, enabling longer lifespans, greater adaptability, and lower environmental impact," said Patrick Böhler, Director of Sales & Product Development for Constellium Automotive Structures. "Collaborations like these are how we turn ideas into real-world innovations."

Media Contacts

Constellium also previously collaborated with ARENA2036 on the Digital Fingerprint innovation project, developing a digital twin of an aluminum component that tracks its performance across its full lifecycle—from design and production to on-road use and end-of-life. As part of this project, completed in 2024, Constellium engineered a smart aluminum housing for a power control unit, embedding sensors to collect crash and field data in a Mercedes-Benz test vehicle. This approach supports predictive maintenance, accelerates development cycles, and unlocks the full potential of connected, data-driven manufacturing.

Constellium is a full-service supplier of rolled and extrusion-based aluminum solutions for the global automotive market. We help automakers produce lighter, safer, and more fuel-efficient vehicles, as well as electric vehicles with greater range.

*ARENA2036 (Active Research Environment for the Next Generation of Automobiles) is a research campus in Stuttgart-Vaihingen, Germany designed as a highly flexible and future-oriented research platform for mobility and production. Constellium has been a contributing member since 2018.

About Constellium

Constellium (NYSE: CSTM) is a global sector leader that develops innovative, value-added aluminum products for a broad scope of markets and applications, including aerospace, packaging and automotive. Constellium generated $7.3 billion of revenue in 2024.

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