

Veelo Technologies to Spotlight Advanced Materials and Manufacturing Technologies for Composite Systems at SAMPE 2022

Veelo to feature Out-of-Autoclave heating and composite repair solutions and lightweight lightning strike protection materials for aerospace and defense systems

CINCINNATI, OH, UNITED STATES, May 5, 2022 /EINPresswire.com/ -- Veelo Technologies will exhibit in booth #T20 at SAMPE 2022 and will feature new Out-of-Autoclave (OoA) heating and composite repair solutions, as well as lightweight lightning strike protection materials for aerospace and defense systems.



Veelo at SAMPE 2022

Veelo's featured technologies will include [VeeloHEAT Caul](#), a new OoA heating solution that allows hot debulk and compaction processes to be performed at the tool (in-situ). The technology eliminates the need to move tools in and out of the oven, saving considerable time and money. The technology was featured by the F-35 program due to its uniquely flexible and pliable design, heat uniformity, and ability to accommodate complex shapes and large tools.

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Shasta Haddad

VeeloHEAT cauls are controlled by the [VeeloHEAT Controller](#), a modernized digital control solution capable of controlling up to 16 or more zones. The digital IoT controller can store data and receive updates locally or via the cloud, is highly customizable, and integrates into

factory 4.0 and digital twin architectures.

Veelo will also feature its VeeloHEAT Blanket, which is used to bond structures, accelerate adhesive cure, and repair composites. The innovative design of the VeeloHEAT Blanket results in

a conformable, drapable blanket that form fits to complex geometries and provides a highly uniform and controlled heat source. The technology utilizes a pliable electrothermal film between multiple silicone layers without stiff and breakable wires.

Also spotlighted at the show will be VeeloVEIL, a lightweight, multifunctional conductive material that meets Zone 1A lightning strike protection requirements at 50-70% weight savings vs expanded metal foils. The metalized nonwoven is applied at the surface of the air vehicle and is integrated into qualified surfacing films and film adhesives. VeeloVEIL is in multiple stages of qualification for future aerospace and defense platforms and is applicable to thermoset and thermoplastic systems.

VeeloVEIL has a 3-100x lower sheet resistance than other metalized nonwovens at similar areal weights and shows 4.5-300x higher specific conductivity. It is 50-75% lighter and produces superior shielding performance (>100 MHz) when compared to expanded copper foil (ECF) alternatives. It features low resistivity, 2-40 mΩ/□; a low basis weight of 20-80 g/m² (dry); edge-to-edge electrical uniformity of <5% COV; and electrical anisotropy (MD/CD) of less than 2:1.

Veelo will exhibit in Booth T20 at SAMPE 2022, which is being held May 23-26, 2022, at the Charlotte Convention Center in Charlotte, NC.

[About Veelo Technologies](#)

Veelo Technologies, a General Nano company, is an innovation company that develops advanced materials and manufacturing solutions for the fast-growing aerospace and defense composites industry, as well as for medical, battery, and electric vehicle applications. With headquarters in Cincinnati, Ohio, the company's core competencies include chemistry, materials science, custom formulations, scaled manufacturing, and systems and application engineering.

Veelo Technologies' advanced material solutions include lightweight, multifunctional conductive materials that protect composite air vehicles from lightning strikes and electromagnetic effects and enhance survivability; lightweight heating solutions that enable out-of-autoclave (OoA) and out-of-oven (OoO) composite processing; and non-metallic, next-generation de-icing solutions.

The company's team of scientists and engineers work side-by-side with technologists at the Department of Defense and global aerospace and defense companies to develop next-generation advanced materials and manufacturing solutions.

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