

RAMPF – Quicker Time-to-Market At Lower Costs

Engineered solutions for aerospace composite manufacturing at PNAAC Advance 2022 in Lynnwood, WA

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Burlington, Canada, January 25, 2022. RAMPF Composite Solutions is presenting holistic engineered solutions for significantly increasing speed-to-market and cost-efficiency of aerospace composite manufacturing at PNAAC Advance Annual Aerospace Conference 2022 in Lynnwood, WA, from February 8 to 10.



RAMPF Composite Solutions based in Burlington, Ontario, Canada, is a market leader for technologically advanced aerospace composite design – from sketch to qualification.

RAMPF Composite Solutions makes composites manufacturing more automated and less costly by using

- > Cutting-edge Tailored Fiber Placement (TFP) technology
- > Tooling materials with outstanding mechanical properties
- > High-performance liquid resin systems

This enables manufacturers in the aerospace industry to utilize the low weight and mass-specific stiffness of carbon fiber and fiberglass composites for reducing weight and increasing fuel efficiency.

The groundbreaking manufacturing and process solution addresses material qualification, built-in quality assurance, and automation aspects for both structural and interior applications. The benefits of this ap-

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proach are maximized for components that exhibit high structural, geometrical complexity (undercuts, compound curvatures, pockets, etc.), and functional complexity (EMI shielding, static discharge, impact, flammability compliance).

This way, the manufacture of complex composite parts becomes a cost-competitive, one-shot solution.

> TFP – maximum speed, maximum accuracy

The advantages of TFP for lightweight construction using composites are striking – mass-specific stiffness and strength are maximized by selectively placing and orienting the carbon fiber and fiberglass filaments where strength or weight optimization is required. The structural performance of the composite is optimized while also providing for greatest possible weight savings, reduced carbon fiber usage, and lower cost.

> Tooling and fixtures – outstanding mechanical properties

RAMPF offers a wide range of tooling boards and Close Contour materials specifically designed for composite modeling and mold engineering. These feature outstanding physical and mechanical properties and are used for master patterns, direct tooling, trim and bond fixtures. Close Contour pastes and castings also significantly reduce the amount of production waste as well as material, milling, and finishing that is required.

> High-performance liquid resins – effective and fast infusion

Liquid resin systems (with/without FST properties) with low temperature processing characteristics, for example resin infusion at 40 °C, as well as excellent wetting properties guarantee the effective and fast infusion of the components. This goes together with the automation of performance-critical process steps such as mixing, degassing, and dispensing. Furthermore, qualified material properties allow for an easy process transfer to new products, applications, and manufacturing sites.

Larry Fitzgerald, CEO of RAMPF Composite Solutions – “As the aerospace industry resumes a growth trajectory, we are ready to support our customers with their critical projects. We have expanded our footprint during the pandemic and are ready to take flight. Our engineered solutions offer a shorter path to production-ready parts utilizing a process that allows the use of less expensive tooling and enables shorter lead times. With RAMPF, customers get to market quicker and at lower cost.”

Visit RAMPF Composites Solutions at PNA A Advance Annual Aerospace Conference 2022 in Lynnwood, WA, from February 8 to 10 – Lower Concourse, Booth 30!

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RAMPF Composite Solutions, based in Burlington, Ontario, Canada, is a leading expert in the design, engineering, and manufacture of composites parts for the aerospace and medical industries. By providing highest levels of technology and innovation, the company enables its customers to differentiate themselves from their competition.

RAMPF Composite Solutions provides engineered solutions through innovations in advanced carbon fiber and fiberglass composites using cutting-edge technologies.

Core competencies include composite manufacturing to very tight tolerances utilizing the out-of-autoclave VARTM process, resin infusion, metal plating, and value-added assembly.

The company is completely vertically integrated, offering project management, product development and engineering, tool design and manufacturing, as well as dedicated new production introduction.

Extensive research and design development are the drivers of innovation, and long-term relationships focused on close cooperation fuel the optimization of existing processes and the development of new products.

RAMPF Composites Solutions is a company of the international **RAMPF Group** based in Grafenberg, Germany.

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