Press Release

High-Performance Tooling Materials & Holistic Composite Engineering Solutions

RAMPF at CAMX 2022 – Tooling boards, Close Contour materials, liquid systems / Engineered solutions for composite manufacturing

Wixom, MI, USA; Burlington, Ontario, Canada, October 13, 2022. The international RAMPF Group is presenting high-performance tooling materials and engineered solutions for composite part manufacturing at CAMX 2022 in Anaheim, CA, from October 17-20 – Booth S42.

RAMPF Group, Inc. – RAKU® TOOL boards, Close Contour materials, and liquid systems

RAMPF Group, Inc. is a leading developer and manufacturer of modeling and mold engineering materials based on polyurethane and epoxy for the automotive, marine, and aviation industries, amongst others. The company headquartered in Wixom, MI, offers customized solutions that are tailored to meet the specific requirements of customers throughout the entire production chain – from prototyping, model, mold, and tool construction to production.

The product portfolio encompasses

> Tooling boards made from polyurethane and epoxy that exhibit outstanding mechanical properties, finest surface structures, and high dimensional stability. The boards are easy and quick to machine and compatible with all industry-standard paints, release agents, and epoxy prepregs. RAMPF boards are used for the manufacture of styling, master, cubing, and presentation models, negative molds for casting, design and form studies, and lay-up tools. High-performance RAKU® TOOL adhesives matched in hardness and color are available.

> Close Contour materials that significantly reduce the amount of material used, production waste, and time spent on milling and finishing. The product range includes Close Contour Pastes (two-component epoxy systems which are applied to a close contour substructure by hand or CNC machine), Close Contour Castings (semi-finished polyurethane products supplied as three-dimensional castings that are already close to the final contour), and Close Contour Blocks (polyurethane or epoxy systems which are produced to customer specifications and delivered as unmachined rectangular blocks).

> Liquid systems based on polyurethane and epoxy for various manufacturing techniques, build-up methods, and applications. The range of products encompasses gelcoats, laminating resins and pastes, casting resins, infusion systems, as well as liquid resin systems for structural and interior aerospace composites applications, including materials with FST properties.

RAMPF Composite Solutions – Engineered solutions for composite part manufacturing

RAMPF Composite Solutions designs and manufactures some of the world's most complex lightweight composite products for the aerospace, defense, industrial, medical, high-end consumer, and green transportation industries – from sketch to qualification.

The company based in Burlington, Ontario, Canada, makes composites manufacturing more automated and less costly – including for complex parts – by combining

> Low-cost tooling and fixtures
> High-performance structural resins
> Structural optimization via Tailored Fiber Placement (TFP) Technology

This way, the full potential of composites manufacturing for both low-volume production / early product development and series production is utilized.

RAMPF Composite Solutions also optimizes the sustainability of its production process. The latest Vacuum Assisted Resin Transfer Molding (VARTM) technology enables working at lower temperatures and pressures, significantly reducing both tooling and energy costs.

Exhibits at CAMX 2022 – Booth S42

High-performance composite part made using the RAKU® TOOL resin infusion systems EI-2510/EH-2990 and EI-2511/EH-2990. These feature excellent fracture toughness, viscosity, wetting properties, and fast curing at room temperature. The epoxy systems are temperature resistant up to 209 °C. Gel time at 60 °C is 110 minutes.

Radome fairing master made using the polyurethane foam RAKU® TOOL SB-0096 as a cost-effective supporting structure, two-ply-fiberglass surface reinforcement, and Close Contour Paste RAKU® TOOL CP-6070/72. Adam Gourley at WildFactory, a renowned tooling and custom fabrication company based in Camarillo, CA, which produced the part, says – “The close contour paste mixes thoroughly and consistently. Its viscosity is great for applying on vertical or angled surfaces, the flow allows for single-pass application on large areas. The fast-curing epoxy system is easy to machine and sand and guarantees for a fine, durable finished surface.”

www.rampf-group.com

The RAMPF Group stands for **engineering & chemical solutions** and caters to the economic and ecological needs of industry with six core competencies:

> **RAMPF Machine Systems** based in Wangen (Göppingen), Germany, develops and produces multi-axis positioning and moving systems, trunk machines, and basic machines based on high-precision machine beds and machine bed components made from alternative materials such as mineral casting, ultra-high performance concrete, and hard stone.

> **RAMPF Production Systems** based in Zimmern o. R., Germany, develops and produces production systems with integrated dispensing technology for bonding, sealing, foaming, and casting a wide variety of materials. The company also offers an encompassing range of automation solutions relating to all aspects of process engineering.

> **RAMPF Composite Solutions** based in Burlington, Ontario, Canada, is a holistic composites supplier to companies in the aerospace, defense, transportation, medical, and green technology industries. The company offers a complete suite of services including composite part design and engineering, and metal-to-composite conversion engineering.

> **RAMPF Eco Solutions** based in Pirmasens, Germany, develops chemical solutions for the manufacture of high-quality recycled polyols from polyurethane and PET waste materials. This company also designs and builds customized multi-functional plants for customers for the manufacture recycled polyols.

> **RAMPF Polymer Solutions** based in Grafenberg, Germany, develops and produces reactive resin systems based on polyurethane, epoxy, and silicone. Its product portfolio includes liquid and thixotropic sealing systems, electro and engineering casting resins, edge and filter casting resins, and adhesives.

> **RAMPF Tooling Solutions** based in Grafenberg, Germany, develops and produces board and liquid materials for cutting-edge modeling and mold engineering. The range of skills includes made-to-measure services and products such as pastes, large-volume and full-size castings for Close Contour models, and prototyping systems.

RAMPF has more than 850 employees and subsidiaries in Germany, the United States, Canada, Japan, China, and Korea.

All RAMPF companies are united under a holding company – RAMPF Holding GmbH & Co. KG – based in Grafenberg, Germany.

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