UAV & Other RTM Applications

Fiber Dynamics, Inc. (FDI) specializes in Resin Transfer Molding (RTM) of composite parts and assemblies. Our unique technology and processing capabilities offer improved quality and consistency over conventional composite fabrication methods using pre-impregnated or "wet" material. We maintain low "total cost" for our customers and provide higher levels of quality.

Who We Are

Design through production — we're the RTM experts!

RTM Is Our Specialty

We specialize in Resin Transfer Molding (RTM) of composite parts and assemblies. In simple terms, the RTM process uses dry composite material, infused with resin, and cured without an autoclave.

RTM Advantage

The RTM process combined with our unique and proprietary capabilities offers improved quality and consistency over conventional composite fabrication methods using pre-impregnated or "wet" material. We maintain low "total cost" for our customers and provide higher levels of quality.

Solutions

Our job at Fiber Dynamics, Inc. is to solve customer problems. With composites, problems often involve multiple dimensions where customers do not have the technical knowledge or experience to solve their problem in a way that yields an optimum solution. That's where Fiber Dynamics, Inc. comes in. We combine our materials and design expertise with our unique processes and manufacturing experience to give customers comprehensive, optimized composite solutions.

- Program management
- Component design, modeling and analysis
- Prototyping
- Tool design and fabrication (CNC machined metal and "soft" tooling)
- Part and assembly fabrication (complete layup, molding and finishing facilities)

Contact Information

3730 Midco
Wichita, KS 67215
TEL 316.264.9541  FAX 316.264.9513
Email: info@fiberdynamics.net
www.fiberdynamics.net
“One-Shot” Integrated Structures

How can I capture the potential advantages integrated structures can offer?

Is there a company that can design and produce hollow cavity, integrated composite structures?

Fiber Dynamics, Inc. has developed the unique ability to economically produce complex, “one-shot” integrated structures. We create seemingly impossible to produce hollow cavity components using our proprietary Lost Core RTM Process (LCRTM).

Fiber Dynamics, Inc.

Automotive Intake Manifold

Honeywell T-Hawk

FM

Fan Duct

General Atomics Predator® B MQ-9 Reaper

Landing Gear Strut

“One-Shot” Advantages:

• Cost savings to customer
• Simplified component / assembly design
• Weight reduction
• Elimination of secondary manufacturing operations
• Reduced production cycle time

The optimum balance of performance and cost!

USF1 Motorsports Wings

Raytheon Missile Systems MQM-107 Streaker®

Flap, Aileron & Rudder

AAI Corporation Shadow®

TUAS Flap & Aileron

General Atomics

Predator® C Avenger® Tail Spar

14’ tail structure in “One-Shot”!

Over the past 20 years, Fiber Dynamics, Inc. has developed three distinct process capabilities to address the needs of customers.

Conventional Matched-Die RTM Process

• For complex, lightweight cored and solid laminate structures
• Economical, high volume production capability
• Excellent surface finish and structural properties

Vacuum-Assisted RTM Process (VARTM)

• Achieves quality parts of a fraction of the cost
• Outfits a series finish — minimal finishing required for paint prep
• Use integral stiffeners and cores when extra stiffness with minimal weight is required

Lost Core RTM Process (LCRTM)

• Proprietary manufacturing process
• Complex manufacturing in one step — hollow interior cavities with internal stiffeners
• High volume in a cost effective manner
• Offers intricate assemblies involving metal skins, inserts, and internal stiffeners with no secondary bonding or fastening
• Excellent control of wall thickness in critical thin-wall applications

We find ways to do the impossible!

14’ tail structure in “One-Shot”!

Question #1

Question #2

Answer

We find ways to do the impossible!

We find ways to do the impossible!

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