GE Aerospace

Advanced Thermal Solutions

Products across nearly every industry face thermal challenges that limit performance and impact life and cost. Novel ways to move, spread, and store heat are required for differentiated products. The Advanced Thermal Solutions Team at GE Aerospace, Research have the breadth and depth of expertise to provide the right solutions.

The Thermal Management Team

Thermal management is at the core of GE Aerospace products and enable them to operate at the edge of what is thermally possible. The Advanced Thermal Solutions team at GE Aerospace, Research has unparalleled experience providing thermal management solutions to fit all sizes, scales, pressures, temperatures, speeds, and fluids.

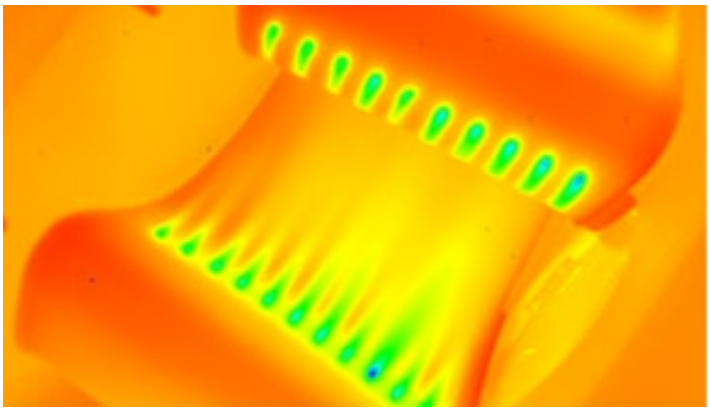
Our team is at the forefront of developing thermal solutions supporting today's products and services, tomorrow's mission, and defining the future of power and propulsion. These products seek to achieve greater fuel efficiency, reduce carbon emissions, and enhance national security across a broad range of applications.

Additionally, our thermal management experts partner with the aerodynamics, combustion, mechanical, materials, electrical, manufacturing, & digital teams to create multi-disciplinary solutions which truly differentiate GE Aerospace products. The team understands the best approach and utilizes its world class test facilities, advanced simulation tools, analytical methods, and artificial intelligence to solve the problem.

Our Capabilities

Design

From system modeling to cutting-edge simulations, our team can design and analyze the most challenging thermal problems to spread, move, and store heat in novel ways that increase the thermal performance, extend the reliability/lifing, and reduce cost at component and system levels.



Prototyping

Delivering working prototypes of thermal devices or systems by utilizing GE Aerospace, Research's expertise in aerodynamics, combustion, mechanical systems, materials, electrical and digital systems, and manufacturing including world class additive manufacturing.

Validation

Our world class testing facilities at Research Aerospace, Research enables a full spectrum of design conditions, up to full engine conditions. Our cutting-edge measurement and advanced optical diagnostic tools guide our understanding, validate our design tools and simulations, and optimize component and system performance.

Differentiating the Future of Flight with Thermal Technology

We understand the full spectrum of thermal management technologies, including Gas Turbine Hot Section, Thermal Management Systems (TMS), Advanced Propulsion (High-Speed Flight and Hydrogen), Hybrid Electric, Additively-Enabled Components, Avionics & Power Conversion etc. We also leverage the full breadth of expertise at GE Aerospace, Research to tailor thermal designs with the right materials and manufacturing approach.

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GEA35273 (06/2023)