



Quartz Radiant Facility

ENGINEERING



Southern Research's Quartz Radiant Facility is primarily used to evaluate thermal response in Thermal Protection System (TPS) materials.

■ Applications

- Material heat treatment/cycling in air, low pressure air, and vacuum to temperatures as high as 2200°F (1200 °C) with automated, digital control and data acquisition of temperature
- 1-D thermal response for materials screening thermal protection systems (TPS), heat shields, solar structures)
- Survivability testing

■ Capabilities

- 10" x 12" hot zone
- Radiant heat source-15 quartz lamps (30 kW total)
- 1 atm and vacuum (10⁻⁶ Torr)
- Control and DAQ with LabVIEW™
- High heating rates possible (material specific)
- In-depth thermal measurement

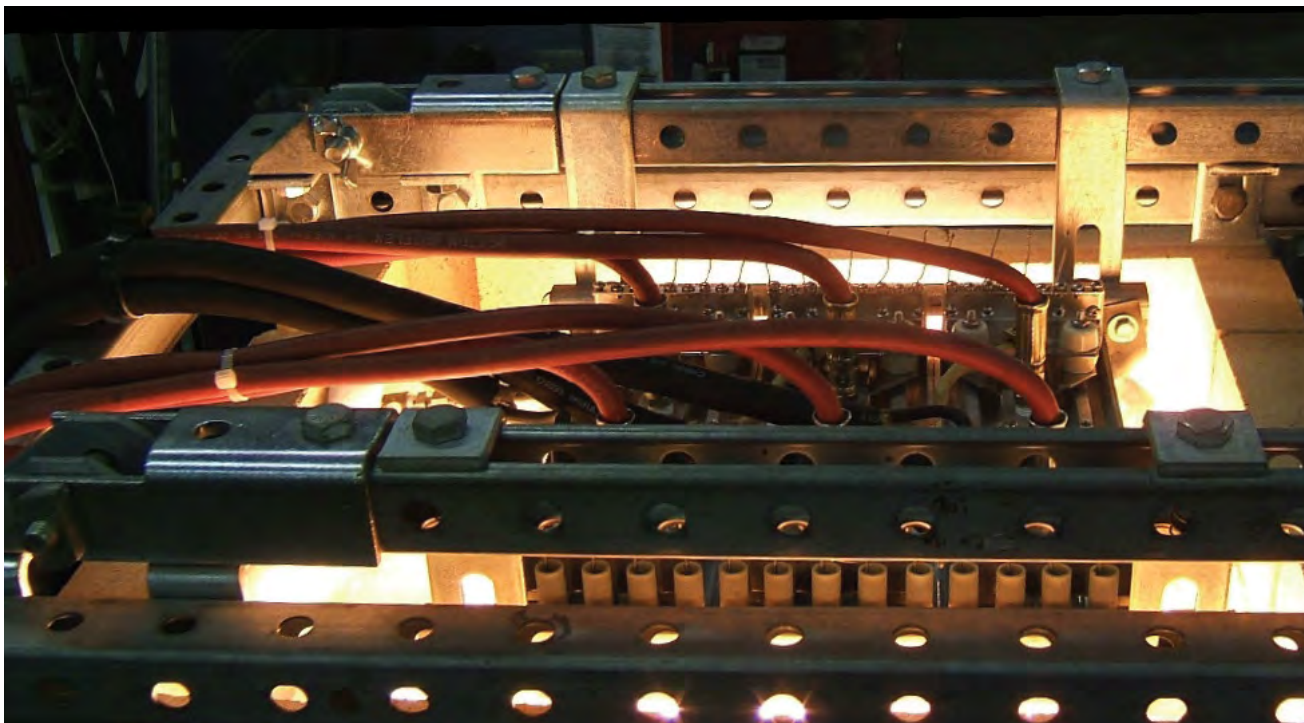


Image of Quartz Radiant Facility in the vacuum chamber



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SR

ABOUT SOUTHERN RESEARCH

Founded in 1941 in Birmingham, Alabama, Southern Research is a scientific and engineering research organization that conducts preclinical drug discovery and development, advanced engineering research in materials and systems development, and energy and environmental technologies research. SR supports clients and partners in the pharmaceutical, biotechnology, defense, aerospace, environmental, and energy industries.

We pursue entrepreneurial and collaborative initiatives to develop and maintain a pipeline of intellectual property and innovative technologies that contribute to the growth of the organization and positively impact real world problems.

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