

Impact Testing Creates Opportunities



TECHNOLOGY

NASA Glenn's Ballistic Impact Testing facilities provide high-powered projectile guns and ultra high-speed camera equipment for materials testing needs.

COMMERCIAL APPLICATION

WebCore Technologies, Inc. develops and manufactures TYCOR™ fiber-reinforced foam (FRF) composite core materials and sandwich panels for the aerospace, defense, transportation, marine, industrial, and construction markets. WebCore recognizes the importance of both safety and affordability in these segments, and sought Garrett Morgan Commercialization



Webcore's composite panels are currently the leading design candidates for the doors in Boeing's UCAV unmanned aircraft.

Initiative (GMCI) assistance in maximizing the value of its products. GMCI leveraged NASA Glenn's ballistic impact test facilities and engineering expertise to characterize the behavior of TYCOR composite panels under high-energy impact conditions. NASA's tests provided WebCore with crucial data about their products which could not have been obtained otherwise. This data will be used to develop TYCOR panels for jet engine components and bulletproof cockpit doors.

SOCIAL/ECONOMIC BENEFIT

NASA's testing confirmed WebCore's material capabilities and also led to bigger rewards. NASA had been working with General Electric to develop new materials for jet engine housings. Through the relationship with Glenn, WebCore has received initial R&D funds and also developed a strategic business relationship with GE. This relationship creates the opportunity for millions of dollars in future sales for WebCore to the aerospace industry.

NASA APPLICATIONS

NASA Glenn uses the ballistic impact facilities to test lightweight next generation materials for aircraft engine housings. If an engine or its blades are struck by a foreign object, the casing must contain any blade fragments that could further damage the aircraft. NASA's testing evaluates whether new materials will withstand such catastrophic forces.

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