



# FocusFAA

## FAAer Recognized for Work on Aircraft Engines Safety

**May 6, 2013** – *FocusFAA invites you to honor your fellow FAA employees for the work they do each and every day for this year's Public Service Recognition Week. Recognize your colleagues by sharing their story with FocusFAA.*



A William J. Hughes Technical Center project manager has been recognized for his leadership of a research team that studied ways to more quickly detect cracks and other safety risks during aircraft engine inspections.



Cu Nguyen (middle) pictured with his award with his Tech Center colleagues, Tech Center Director Dennis Filler and former Tech Center Director John Wiley.

developed technologies resulting in more cost-effective inspection of aircraft, aircraft components, or aircraft systems.

Airlines for America (A4A), an industry trade organization, presented the 10<sup>th</sup> annual Better Way Award last December to Cu Nguyen, an employee in the NextGen office, and other members of the Siemens Acoustic Thermography (SIEMAT) Demonstration team.

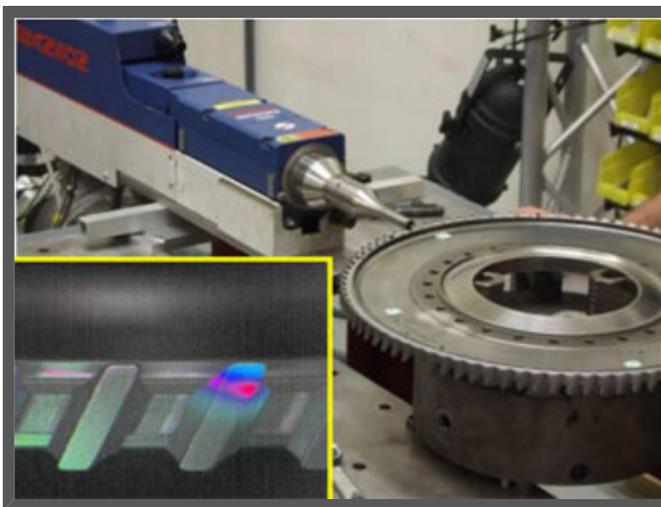
The Better Way award is designed to recognize teams, consisting of representatives from industry, government, and academia, that have

The 20-member SIEMAT team — which consisted of representatives from the FAA, Siemens, Delta Air Lines, Wayne State University, Rolls Royce, Florida Turbine Technologies, Sandia National Lab, and the U.S. Air Force — researched a developing technology to improve safety inspections of aircraft engines at a lower cost.

The technology — called Sonic I/R —uses an external ultrasound energy source to excite engine components. The energy source causes an increase in local heating which allow infrared cameras to detect very small cracks and other structural defects which other techniques currently cannot do.

The technology has been under development for the past 12 years for power generation industry, and the FAA partnered for three years with industry, airline, and academia representatives to evaluate the technology on aircraft engine disks, a critical engine component.

“If something goes wrong with an engine disk, you have a catastrophic problem,” Nguyen said.



A photo illustration of Sonic I/R, a technique used to inspect engines using an ultrasound energy source to heat engine components.

The SIEMAT team evaluated the inspection system on aircraft engine parts and developed a test procedure that has been validated. It hopes to have the process eventually implemented by commercial airlines and other companies.

“We tried to develop technology and write a specification, so others can benefit from what we do,” he said. “We tried to develop new and emerging technology that would allow us to find very small cracks and anomalies as early as possible.”

Nguyen received an award plaque and a letter signed by A4A and FAA representatives. He first received the award in 2004 for his work with another aviation research team to improve fluorescent penetrant inspection’s cleaning and drying process for critical engine components.

“I’m very pleased with the teamwork,” he said. “The team earned the award.”

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