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And much, much
more!

NADCAP Implements Shot Peening as Special Process

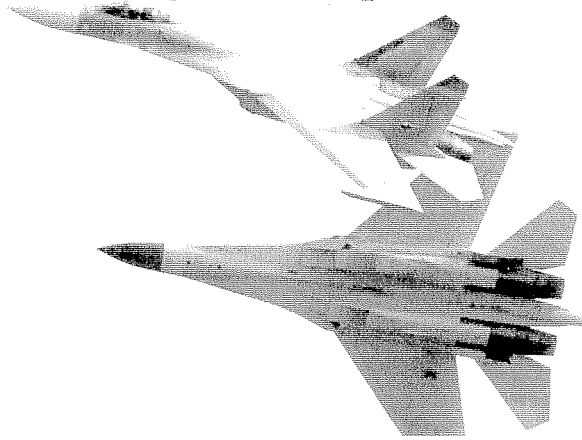
by Jeff Conrad
NADCAP Staff Engineer

PRI/NADCAP Overview

The Performance Review Institute (PRI) is a premier association dedicated to the continuous development of world-class companies. PRI offers conformity assessment and certification services to the mobility industry – especially aerospace manufacturers and suppliers. In July 1990, PRI was established as a not-for-profit trade association of the Society of Automotive Engineers (SAE). The birth of the NADCAP (National Aerospace and Defense Contractors Accreditation Program) at PRI became more than an idea when it was also launched in 1990.

NADCAP is an unprecedented cooperative industry effort to improve quality, while reducing costs, for quality assurance throughout the aerospace and defense industries. NADCAP is an industry-managed approach to conformity assessment that brings together technical experts from both industry and government in the NADCAP organization. Prime contractors, suppliers, and representatives from government work together to establish requirements for accreditation, approve suppliers and define operational program requirements. Unlike traditional third-party programs, NADCAP is an industry-managed program. This process results in a standardized approach to quality assurance and a reduction in redundant auditing throughout the aerospace industry because industry has joined forces to develop a program that:

- Establishes stringent industry consensus standards that satisfy the requirements of all participants
- Replaces routine auditing of suppliers with one approved through a consensus decision-making process of members from the user community
- Conducts more in-depth, technically superior special process audits
- Improves supplier quality throughout industry through stringent requirements



- Reduces costs through improved standardization
- Utilizes technically expert auditors to assure process familiarity
- Provides more frequent audits for primes, fewer audits for suppliers

Special Processes

Unlike other accrediting organizations, NADCAP provides process audits for

specific technical capabilities or, as NADCAP refers to them, "Special Processes". These areas include the following commodities:

- Aerospace Quality Systems
- Chemical Processing
- Coatings
- Elastomer Seals
- Fluid Distribution Systems
- Heat Treating
- Materials Testing Laboratories
- Nonconventional Machining and Surface Enhancement
- Nondestructive Testing
- Sealants
- Welding

The newest operational commodity is Nonconventional Machining and Surface Enhancement (NMSE), which was formally launched in 2002. Shot peening falls under this commodity as a surface enhancement special process.

Shot Peening - Up and Running

Major Prime contractors and government agencies determined the need to include shot peening as part of the NADCAP process at the end of 2000. 2001 was dedicated to the development of PRI Audit Criteria (AC) and the associated SAE Aerospace Standard (AS). AC7117, NADCAP Audit Criteria for Shot Peening, Peen Forming, Glass Bead Peening and AS7117, NADCAP Program Requirements for Shot Peening, Peen Forming, Glass Bead Peening were issued in June 2002.

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Continued from page one

Technical and quality experts involved with the creation of these documents included representatives from The Boeing Company, Defense Contract Management Agency, GE Aircraft Engines, Honeywell, Lockheed Martin Aeronautics Co., Northrop Grumman Corp., Pratt & Whitney, Rolls-Royce Corp., Sikorsky Aircraft Corp., and Vought Aircraft Industries, Inc.

These documents were created and tailored to meet the requirements of AMS2430, AMS2432, AMS-S-13165, as well as the many customer specifications. The scope includes automated shot peening, computer monitored peening, flapper peening, manual peening and peen forming.

NADCAP Accredited

To date, the following Primes are requiring their suppliers to be NADCAP Accredited for shot peening: Pratt & Whitney, Rolls-Royce PLC, Sikorsky and Vought Aircraft Industries, Inc. Additional Prime mandates are expected in 2003.

The first two Shot Peening (AS7117) NADCAP accreditation certificates were issued to the companies that participated as pilot audit suppliers. Hydro-Honing Laboratories, Inc., East Hartford, CT, and Metal Improvement Company, Santa Ana, CA, received the first two certificates, respectively.

"This certificate is a testament to our commitment to be a leader in the field of shot peening services," says Hydro-Honing Laboratories, Inc. President Thomas A. Beach. "We are very proud of this achievement."

Additional Information

For additional information regarding PRI, NADCAP and NMSE, visit www.pri.sae.org, www.eAuditNet.pri.sae.org, or contact Jeff Conrad, NADCAP Staff Engineer, at 724-772-1616, ext. 8113, or email at jconrad@sae.org. ○



The names from left to the right for Hydro-Honing are: Tom Beach, President; Walter Beach, QA Manager; Richard Brooks, Plant Manager; Ken Anderson, Production Manager.



The names from left to the right for Metal Improvement Company are: Robert Gonzalez, Lead Inspector and Raul Gonzalez, Quality Manager.