

AMC

AMERICAN METALCASTING CONSORTIUM

DEFENSE MANUFACTURING CONFERENCE RECOGNIZES AMC WITH TECHNOLOGY ACHIEVEMENT AWARD



AMC's Castings for Improved Defense Readiness Program won a Defense Manufacturing Achievement Award at the 2011 Defense Manufacturing Conference, Anaheim, CA, for the development of Digital Radiographic standards for final part acceptance of aerospace castings. The acknowledgment was a joint award with the Air Force's effort on Digital Radiographic Standards. The AMC team, consisting of SCRA, the University of Alabama - Birmingham, the Defense Logistics Agency, Benet Labs, the American Foundry Society, and the Steel Founders Society of America, worked together with ASTM, the Air Force, and suppliers to create the required standards for digitized reference radiographs.

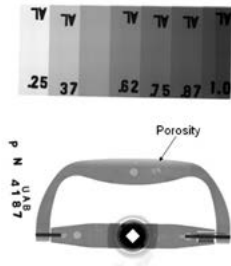
SUCCESS STORY

Problem: Digital radiography technology is becoming increasingly available as an in-house inspection tool for metalcasting quality assessment. However, the absence of digital standards from a cognizant engineering organization limits the application of the technology in many critical military parts. Film radiographic standards cannot be used to rate digital images due to spatial resolution/dynamic range issues and contractual requirements. In addition, the acceptance of current film standard images by designers requires that any digital standard images be identical to the current film standard images.

Solution: The AMC team has been working with ASTM, the Air Force, Tier 1 suppliers, foundries, and equipment manufacturer's to develop procedures for converting current ASTM film standards to acceptable digital standards. For the past five years, this collaboration has resulted in the development and production of digital standards for E155 Volume 1 (E2422), E192 (E2660), E1320 (E2669), and E446 (E2868). The DMC Technology Achievement Award was to recognize the work on the development of E2660. Work is continuing with E280 and E186.

Benefits:

- Reduction in radiographic inspection lead time by 50% on replacement or redesigned parts
- Improved probability of detection compared to single wall film
- 30% reduction in production costs
- Reduction in costs associated with processing, managing, and storing film



"This opens the door for inspecting production hardware, which was not allowed in many industries before this standard was developed."

Michael Horky, Boeing Commercial Airplanes



CONTACT AMC:
 (843) 760-3483
 AMC@ATI.ORG
 HTTP://AMC.ATI.ORG