

ForCAST

The Newsletter of the American Metalcasting Consortium

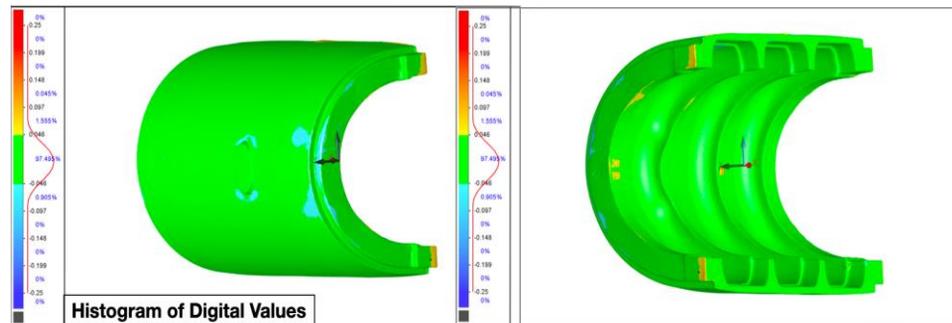
Spring 2024

AMC's CAST-IT and DLA's Aviation Forging and Casting Assistance Team (AFCAT) Support Adoption of Digital Copy Overlay Technology for First Article Casting Approvals

Many legacy aircraft replacement castings have an average lead-time of approximately 800 days. This is because castings have a multitude of features on their surface that no casting 2D drawing can properly and comprehensively define. A new technology is now available commercially as part of the Product Manufacturing Information (PMI) movement which seeks to encompass all the manufacturing information about a component in the solid model data file. A digital copy of the component formed by scanning technology is part of the pursuit of PMI, and the ability to overlay a scanned digital copy of a casting First Article on its solid model is now available. Several isometric views of a Digital Copy Overlay (DCO), as pdf files, can show the dimension versus tolerance band status of an entire casting.

AMC's CAST-IT and DLA's AFCAT saw the DCO methodology being applied in the commercial realm and the potential to dramatically improve successful First Article approval. This would result in dramatic reductions in lead-times for legacy castings sourced by DLA and needed by the Services, especially high specification airframe castings. The CAST-IT Team is working on a demonstration contract with the help of the cognizant authorities at DLA and Hill Air Force Base engineering support for the T38 airframe.

Successful 1st Article Casting Digital Copy Overlay Result Dimensional Compliance



Green: Well Centered in Dimension Tolerance Band
Yellow: At High Side of Dimension Tolerance Band
Lt Blue: At Low Side of Dimension Tolerance Band



Upcoming 2024 Events

- AFS Metalcasting Congress, April 23-25, 2024, Baird Center, Milwaukee, WI
- Joint AFCAT / MetaL FACT Meeting, April 30 – May 2, 2024, ATI, Summerville, SC
- AMC Technology Review on June 12-13, 2024, Hilton Garden Inn-O'Hare, Des Plaines, IL
- NADCA Die Casting Congress, September 30 – October 2, 2024, Indianapolis, IN
- Defense Manufacturing Conference, December 2 – 5, 2024, Austin TX
- SFSA Technical & Operating Conference, December 11 – 14, Chicago, IL



For more information about AMC go to
<https://amc.ati.org>



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