CAST-IT Develops Sources for B-1 Aircraft Critical Castings

The American Metalcasting Consortium (AMC) CAST-IT Team working with the Defense Logistics Agency (DLA) Aviation Forging and Casting Assistance Team (AFCAT) was asked to investigate delinquent contracts for Ram Air Scoop castings on the Air Force’s B-1 Lancer. The Air Scoops had never been replaced since the B-1 was fielded in the mid-1980’s and engineering assessments determined that the parts needed to be replaced fleet-wide. The parts were large, complex (multiple section thickness changes and very thin airfoil shapes), forty pound aluminum investment critical castings requiring a demanding qualification procedure. Surface finish requirements were for very smooth surfaces for unrestricted and undisturbed air flow. The Technical Data Package (TDP) contained 359 separate documents with conflicting casting requirements, and there were only 2D drawings available, as no CAD model was created originally.

“The parts had been on contract between 2008 and 2010, but all suppliers failed to deliver, causing the parts’ supply posture to be in trouble,” said AFCAT/CAST-IT member Keith Sturgill. CAST-IT contacted 12 potential suppliers, and identified three viable investment casting foundries as possible sources. AFCAT and CAST-IT then served as the conduit between the sources, DLA, and Tinker Air Force Base Engineering Support Activity to clarify and provide technical support during the solicitation and bidding processes. Ultimately, two capable sources were approved by the Air Force, one of which responded to the solicitation and received a contract award. Procurement savings are $414k for the first two contracts with an overall cost avoidance impact estimated at over $4M.

“The key to this effort is credited to a group of dedicated professionals taking pride in and being dedicated to our warfighters.” Steve Connor, Nuclear Enterprise Weapon Systems PM (Former AFCAT Program Manager), Value Engineering, DLA Aviation

“This was not business as usual contracts. The team’s diligent and tireless efforts are what got these awards accomplished.” Tim Condon, B-1 Weapon System Program Manager, Customer Operations, DLA Aviation

AMC 2015 Technology Review Held in Chicago

The 2015 AMC Technology Review was held in Chicago on July 28-29, 2015. During this two day event, AMC’s Casting Solutions for Readiness (CSR) project teams presented the latest R&D results to program and research leaders from industry, academia, and government, and demonstrated how they are supporting DoD’s need for rapid production of high performance, cost effective cast parts for weapons systems.