



Problem

- Rapid response and more suppliers are needed in the replacement of critical cast components for legacy weapons systems

Objectives

- Enhance the use of AM by:
 - Determining the factors that are preventing or inhibiting the use of additive / new manufacturing technology for metalcasting in foundries
 - Transitioning new additive manufacturing technology into foundries to increase the number of quotes on DLA small quantity orders
 - Minimizing costs and lead times

Benefits to Warfighter

- Enhanced supply chain
- Reduced costs and lead times by utilizing printed tooling

Description of Project:

Enhance the use of additive manufacturing technology in the casting industry to meet the rapid requirements for small quantity orders of DoD legacy weapons systems

Team:

University of Northern Iowa, Steel Founders' Society of America



Milestones / Deliverables

- Benchmark state of the industry for additive manufacturing technology
- Review current and past additive / new technologies for investment castings
- Improve surface roughness of castings produced using printed sand
- Improve / develop process to produce ink jet powder bed printed casting shells for investment metalcasting applications

