



Problem

- The ability to produce and deliver cast parts on time and with the required quality is thwarted by unexpected process complexities and associated manufacturing difficulties

Objectives

- Develop software that will predict the manufacturing process complexity using a cost model which estimates variable costs

Benefits to Warfighter

- Will provide design and manufacturing technology by:
 - Identifying alternative manufacturing routes
 - Improving the speed, quality, and predictability of production
 - Minimizing operation and sustainment costs of the weapon system through better reliability of replacement parts

Description of Project:

This project will identify possible manufacturing routes, improve the speed, quality, and predictability of production, and minimize the operation and sustainment costs through better reliability of replacement parts

Team:

University of Alabama-Birmingham, Steel Founders' Society of America

Milestones / Deliverables

- Fundamental-cost scaling variables over a variety of casting geometries
- Software and interfaces for enhanced casting-cost simulation
- Case study on simulating the estimation of selected cast-component cost.
- Gating and rigging system recommendations