

Technical and Business Challenges for Infrastructure Scale Near Net Shape (NNS) Components Workshop



American Foundry Society (AFS)

- Largest domestic metalcasting professional society for all alloys, production methods
- Membership-based community, 986 Corporate members, 6333 individual members as of Sept 30, 2022
- 502 Foundry Corporate members (remaining corporate members are suppliers, casting buyers/designers, or universities)
- Focus is to Educate, Innovate, Advocate
- Part of previous DOE funded research, technology development, and supply chain initiatives

Current Industry Status



- Mass consolidation and loss over the last couple of decades to overseas producers including the majority of Windmill hub tonnage.
- In 2022, domestic industry is averaging 10.5% growth and with revenues increasing from \$42.3 to \$47.7 billion p.a. Growth is split between tonnage and inflation.
- Remaining metalcasters have strong backlogs and are cherry-picking opportunities.
- Unskilled labor is biggest systemic problem in industry, skilled labor is second biggest and problems are worsening
- Labor shortage is a hurdle to some expansion. Capital is not a current hurdle but is predominantly focused on replacing or maintaining labor.
- Metalcasters are mitigating its own supply chain issues on materials, equipment
- Majority survivors are quick to embrace technology (e.g, additive manufacturing) when labor is available to implement
- Capacity issues are generally not centered around melting, molding, capabilities, etc., it is mostly labor-intensive processes and to a lesser degree, handling limitations

Government Castings

- Viewed as less favorable customer relative to private industry
- Growing demands in security, reporting, etc., conflict with labor availability to transact
- A support team of SME's for answering questions on time would help immensely
- Inconsistent demand perceived as culprit for several foundry closures
- Situation could get less favorable without a plan
- Most important suggestion is an equitable sharing of "risk"