



# *Advanced Methods for Manufacturing*

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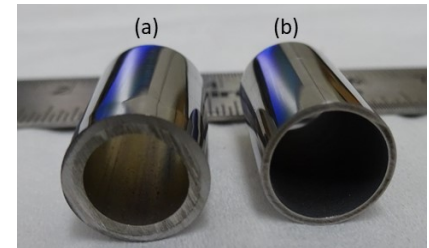
# Advanced Methods for Manufacturing (AMM)

## Vision

- To improve the methods by which nuclear equipment, components, and plants are manufactured, fabricated, and assembled by utilizing 'state of the art' methods

## Goal

- To reduce cost and schedule for new nuclear plant construction
- To make fabrication of nuclear power plant (NPP) components faster, less expensive, and more reliable



Fuel tubes produced by cold spray



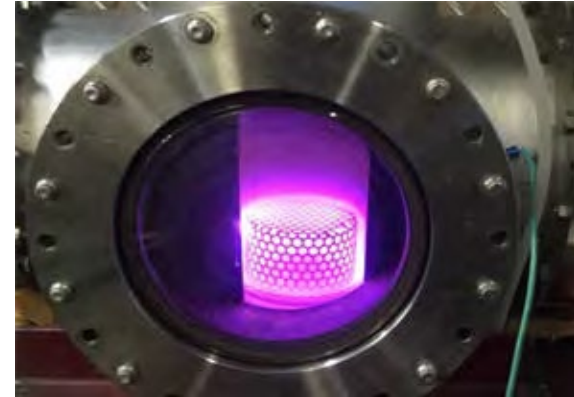
GEH BWR fuel bundle w/debris filter insert

# NEET-1 FOA Technical Focus Areas

## 1. Factory and Field Fabrication Techniques

- Surface Modification and Cladding Techniques
- Modular Factory and field fabrication

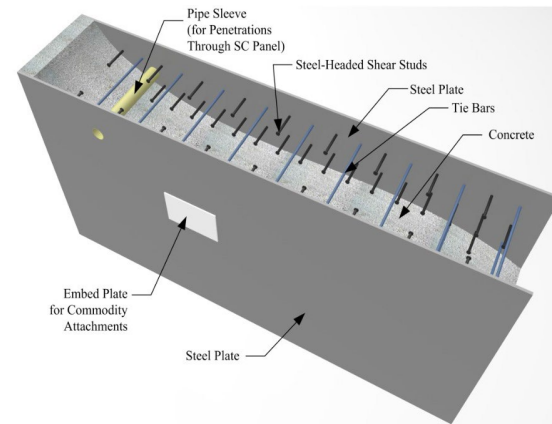
## 2. Quality Control Techniques and Qualification Methodologies



Advanced surface plasma nitriding for development of corrosion resistance and accident tolerant fuel cladding – Texas A&M University (10/1/2015 – 9/30/2018)



EPRI - Preparing RPV Head for PM-HIP



Self consolidating concrete

# NSUF-1.2 FOA Technical Focus Area

- Irradiation testing of AMM materials to demonstrate performance
- This funding supports the preparation and analysis of the AMM materials and samples, but it does not fund new AMM materials research and development activities

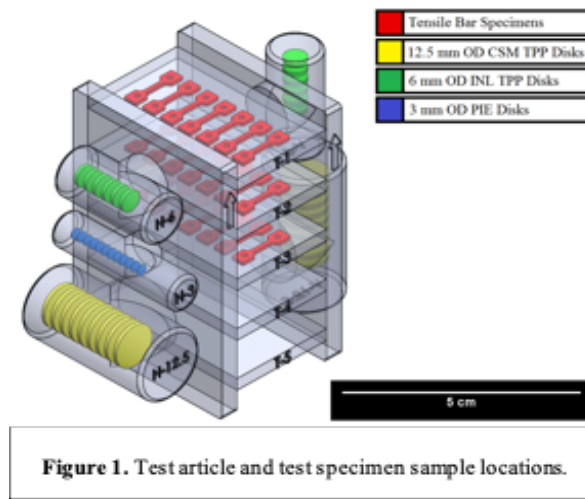


Figure 1. Test article and test specimen sample locations.

Planning for irradiation testing



# Summary of Expectations

- The technologies developed will decrease the cost of manufacturing and fabrication of components for nuclear power plants, or improve the cost and schedule for construction times.
- The development of products and components will be able to gain acceptance by the appropriate regulatory or standard-setting bodies.
- Specific products should be capable of being **deployed** in commercial nuclear power plants.



# Contact Information

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- **2019 Advanced Methods for Manufacturing (AMM) Award Summaries can be found on the NE's website under NEET documents.**