



We Manufacture Innovation

Robotic Arc Directed Energy Deposition (DED) Additive Manufacturing (AM) for Shipbuilding

Team: EWI | Austal | Navus | NSWCCD | ABS | Ingalls | NASSCO



RA Project Workshop

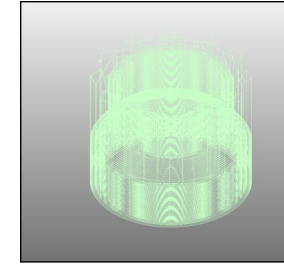
- EWI (Columbus, OH) & Virtual
- June 23rd & 24th

Open to the NSRP Community

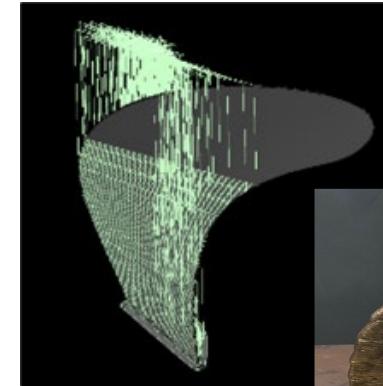
- Must register to attend



Large Scale Multi-Process Robotic Gantry DED System

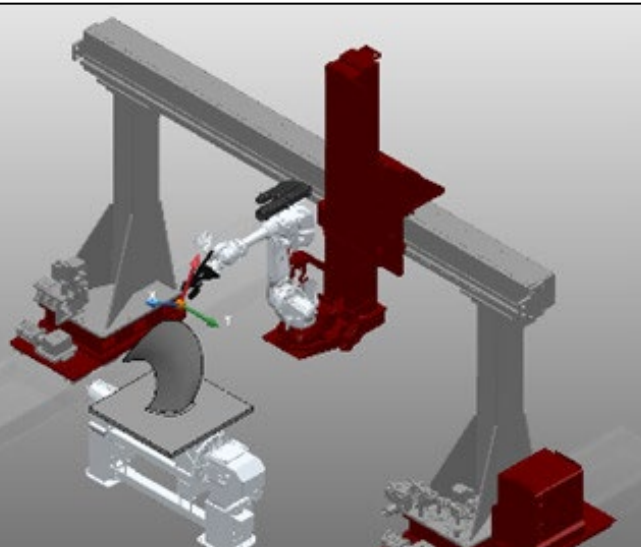
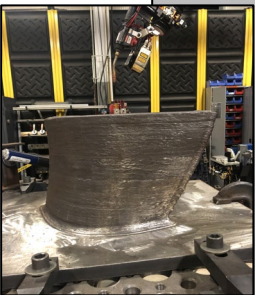


Coupler



Sub Scale Propeller Blade

Full Scale High-Skew Propeller Blade (In-Process)



Autodesk PowerMill Additive-DED Build Categories

1 – Linear 2.5D extrusions – walls and bricks 	2 – Surface of revolution – buckets 	3 – Features – on cylinders, planes and arbitrary bases 	4 – Surface coating – patches and single layers 	5 – Coaxial features – 360deg
6 – Blades and blisks – varying X section 	7 – Multi axis sweep – varying X section tubes 	8 – Non adaptive repair 	9 – Adaptive repair 	10 – Artisan