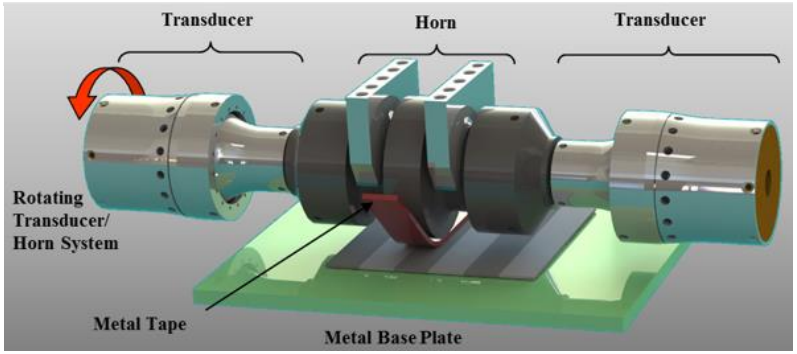
TEAM: FABRISONIC

Composite Reinforced Conductor Material by UAM

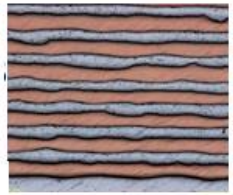
Ultrasonic Additive Manufacturing (UAM) is a 3D Printing technique based on ultrasonic welding of metal foils and CNC contour milling. UAM can join dissimilar metals including aluminum and copper and metal matrix composites (MMC). It can also be configured to weld in a reel-to-reel configuration for creating continuous material.

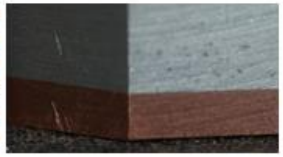
UAM has been used to create electrical devices and heat exchangers for improved lightweighting and thermal conductivity.

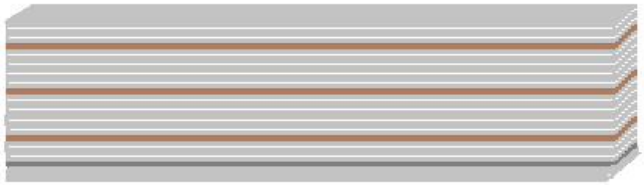
We propose using UAM to produce a new hybrid cable that optimizes strength with improved conductivity.

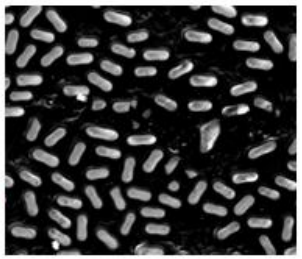


Various options of Aluminum and Copper









Aluminum based metal matrix composites strengthend with ceramics such as SiC or Al_2O_3

IMPACT

- Less wasted energy
- Less materials
- More Reliable
- Lower Cost

For additional information on UAM's ability to 3D print optimized multi-material designs with Copper-Aluminum-MMCs for improved electrical or thermal conductivity, contact Sarah Jordan, 614-688-5135 or sjordan@fabrisonic.com