

Rapid Electro-Magnetic Heating of Nozzle in Fused Deposition Modeling

Disclosure Number

201303000

Technology Summary

The present invention comprises apparatus and method that electro-magnetically heats of a metallic material guide and a print tip instead of conventional heating methods. The coil stays at much lower temperature than the metallic guide and polymer within the guide. Therefore the thermal mass of the system is very low, thereby enabling significant enhancements in precision and accuracy of polymer deposition. It is possible that existing FDM machines could be retrofitted with this electro-magnetic heating system or only small changes to the design would be necessary with more optimized design.

Inventor

KUNC, VLASTIMIL

Materials Science and Technology Div

Licensing Contact

DETRANA, ALEXANDER G

UT-Battelle, LLC

Oak Ridge National Laboratory

Rm 139, Bldg 4500N, MS: 6196

1 Bethel Valley Road

Oak Ridge, TN 37831

Office Phone: (865) 576-9682

E-mail: DETRANAAG@ORNL.GOV

Note: The technology described above is an early stage opportunity. Licensing rights to this intellectual property may be limited or unavailable. Patent applications directed towards this invention may not have been filed with any patent office.