The Virtual Foundry Develops Radically New Custom Materials for Additive Manufacturing

The Virtual Foundry develops custom AM materials for NASA, Mitsubishi, DOE and many more.

STOUGHTON, WI, UNITED STATES, January 15, 2020 /EINPresswire.com/ -- Until recently, engineers and designers were limited in the materials they could use for additive manufacturing. That's because the catalogs of the major 3D printer manufacturers tend to focus on the most popular, high-volume materials. These creators now have another option: Custom metal, glass and ceramic materials from The Virtual Foundry, specially formulated to help solve specific design and engineering challenges.

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> *Tricia Suess, President*

"Our focus is on advancing the science of powdered material technology. We apply this unique knowledge to the production of plastic-infused filaments of exotic materials," explains Tricia Suess, president of The Virtual Foundry.

The company has developed a patented approach to infuse metal, glass and ceramic materials with plastic binder and form them into filaments, so they can be used to produce parts on any FDM printer. After printing, a debinding and sintering process is required to remove the plastic and join the molecules of the base material together.

This breakthrough makes it possible to print parts from these materials at a significantly lower cost than powder bed fusion and other expensive metal printing technologies.

The Virtual Foundry has already received numerous requests for exotic materials, including:
- Corrosion-resistant metals for use in producing nuclear reactor components,
- Metals impregnated with carbon fibers for added strength,
- Metals that can't be cast, because melting alters their physical characteristics, but can be successfully printed and sintered,
- Powdered metal mixed with an additive that can be used to create extremely strong tool steel, and

- Metals that are too brittle to be machined after they're cast – but they can be printed with the required finish.

“From defense and aerospace agencies to auto manufacturers and foundries, we’re helping a variety of customers solve some of their biggest design and engineering challenges,” Suess explains.

The Virtual Foundry’s current materials catalog lists 13 stock Filamets™, including aluminum, bronze, copper, high-carbon iron, stainless steel and tungsten. But she emphasizes that this is not the limit of the company’s capabilities:

“The Virtual Foundry is a materials company. Developing new materials for additive manufacturing is our sole focus. If you can’t find a material that meets your needs, bring us your design challenge,” she encourages.

Contact The Virtual Foundry’s sales team to discuss your needs at (608) 501-1568 or via its website: https://www.thevirtualfoundry.com/contact-the-virtual-foundry.

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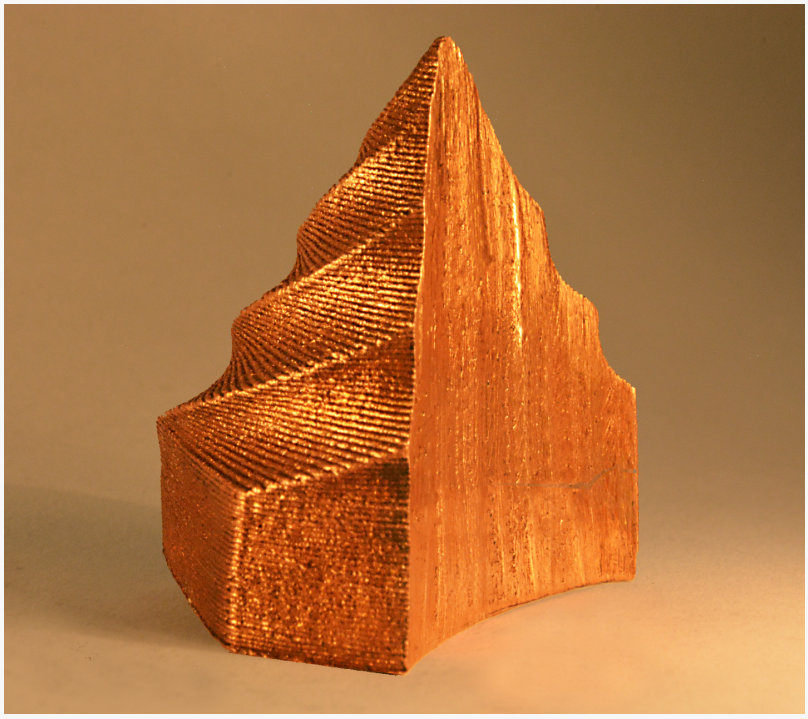

Pure metal example.