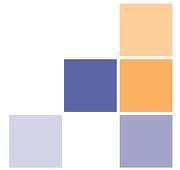


Consultant Rein van der Mast of SOLide (SOLutions in design engineering) reports how he made his own individual cufflinks utilising EnvisionTEC's AUREUS 3D Printer.

Case Study



Perfactory® AUREUS I WIC100

A simple experiment: printed silver cufflinks

Recently I took a shirt with double cuffs out of my closet. It requires cufflinks. All the ones I had looked like gold or even were gold. Beautiful, however silver suits me better. And besides, where is the personal touch, the 'personalization'? What followed was an interesting little project.

Last year I made me a monogram. It had to become the 'knot' of my cufflinks. There are the characters R, v, d and M, united in a sailboat, a reference to Willem van der Mast. He gave the family its name. William was a mast maker in Workum (Friesland, NL). The rest of the silver cufflink, the mechanism, was available at a wholesaler's.



STL

I gave the monogram a little thickness using Rhino. I added some reinforcements and a connection to fix the mechanism. The result I put into a *.stl and I improved it with Magics. Nowadays Shapeways provides 3D printing of silver parts so I sent my file there to get the job done. They do it by the lost wax method; according to LayerWise



'selective laser melting' in silver and gold is possible, however it takes quite some pretty expensive powder to fill the machine with.

Details

Unfortunately I got a reply telling me the details were too small to print. Apparently no EnvisionTEC machine is to their disposal. Luckily I found Maarten van Teeffelen of Brilliant Technology willing to participate. He printed the set on an EnvisionTEC in wax, and sent it to Atze-Jan de Vries of Nova Casting, the caster of the jeweler with whom I work, Brigitta Sueters.

Not expensive

The pieces of metal I polished myself after adding the mechanisms. All in all a relatively inexpensive method, especially in comparison with conventional jewelry. And Colorit (a kind of enamel) can be used optionally to color slightly deeper areas.

As a result the costs are primarily the creation of the (virtual) 3D model. The method is very well suited for small series, exclusive cufflinks. Those who are interested, and have such a monogram, family weapon other image are very welcome!



EnvisionTEC GmbH

Brüsseler Straße 51 D-45968
Gladbeck • Germany
Phone +49 2043 9875-0
Fax +49 2043 9875-99

EnvisionTEC USA

15162 S. Commerce Dr
Dearborn, MI 48120 • USA
Phone +1-313-436-4300
Fax +1-313-436-4303

www.envisiontec.com
info@envisiontec.com

Contact

Rein van der Mast (SOLide)
Dordrecht | Netherlands
com@solide-tct.nl
www.solide-tct.nl

Distributor

Brilliant Technology | Benelux
's-Hertogenbosch | Netherlands
info@brillianttechnology.nl
www.brillianttechnology.nl