Subject: My first upload: Alchemy Iron pendant in steel
Posted by Schaeffer on Sat, 08 May 2010 18:12:46 GMT
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It was my first upload when I discovered and signed up with shapeways not long ago. I had to wait a bit to have enough to fill the minimum order amount but here it is

I'm so happy, it turned out really nice and finally having an object to compare to my polygon model choices is awesome.
I think I will adjust it slightly just to sharpen up the details in some area's some bevels and such could be a little thicker now that I see it for real. The hidden assassin's creed-ish like alpha symbol is still visible but should be sharper.

Sorry for the bad pictures, I only have an LG Renoir camera phone here at the moment, I will try to get some pictures with a decent camera when I visit my mother later or tomorrow.

It looks a lot grittier on my phone's photo's than in real life, I think that's an effect of it's heavy compression artifacts even on high quality settings.

I don't have much time at the moment but I just had to post some pics although I do have 1 immediate question.
One side of the model is a lot rougher than any other side, I'm assuming this is due to the production process. On the pendant the rough area ended op on its side but still on a visible plane if worn as a pendant, I much rather have had the rough side on it's back which would be hidden by your chest when worn.
Is there any way for a designer to have some control over where this rough side will end up in stainless print?

I will try to get better pics and post some observations for designers soon.

Edit:
An added question, I'm having some difficulty gettng a very detailed spindly design through the manual check for printing after trying several tools and the built-in tools in max to find the problems without any success.
I've downloaded an evaluation copy of Magics RP which is the same tool shapeways uses and it found quite a few potential problems.

Not all of them technical problems with the 3d model but among them should be the ones causing my troubles. But I'm not sure which of the potential problems. Just to see one problem-free file before trying to fix anything I've opened my stl from which this now verified printed pendant was made and its not completely problemfree according to magics but there was no autocheck or manual check failure of the stl and well the printed model is visible in the photographs in this topic.

What I'm wondering now is what are the critical errors one should watch for in magics? Some problems it seem to indicate don't seem to actually present a problem for printing (or e.g. subd smoothing in 3d max.) I just need to figure out which ones they are so I don't waste time on things that aren't actually a problem.
(e.g. It doesn't like one object sticking into another while the actual printer would just make an object out of the intersecting objects according to replies on the forum.)

And does anyone know what the absolute minimum thickness is shapeways checks for on stainless steel?
We all know the 3mm one but the steel page states walls can be below 1mm on object smaller than 5x5x5cm but it doesn't state any real figures.
It would be really neat to know as magics has a wall thickness check but it's only useful if you know all the figures to watch for.
e.g. on the spindly model they indicated 2 legs that would break, out of 8 legs. But all of them are ridiculously thin for a metal print and I cant really find a thickness to test for in magics that gives me a comparable result of only 2 legs being too thin at the .. err ankles..

I think magics might be well worth the high price but how usefull it will be depends for a large part on information from shapeways and how they test.
Maybe shapeways can put some exact information online on how they test? for those of us lucky enough to have magics for example. It would save both the designer and shapeways time I think.
(Thinking they likely have some data sheet or some such anyway for the people that check problematic models?)

Edit, here is another picture taking with a somewhat more decent camera.

EDIT:

It took a moment but I found some time today as I couldn't sleep again anyway haha.
My eye measurements were a bit off in my reply below, but I don't have a hmm the english word is eluding me now "schuifmaat" in dutch. I eyed it with a cheap ruler.

Here are 2 images, I hope they may be off help to my fellow shapers regarding small stainless steel objects.

First my eye estimates with a cheap plastic ruler:

and some actual measurements of the 3d model as it was uploaded at shapeways.

I heightened the face extrusion details a little bit (sub mm change), there is a bar extruded on the bottom a well which was just 0,1/0,2 mm thicker and made for a far sharper look but doesn't look at all much thicker than the top extrusions.
So I adjusted the top to match for future prints.

Hope it is of some use to someone
It's amazing what works below 1 mm I'm really hopeful for the future of the material. I only adjusted the top extrusions 0,1 or 0,2 the effect the 0,1 mm difference has on the bottom is kinda like a sharpen filter on a photo, nothing really changes but it makes a lot of difference.

The pendant shows just a wee bit of warping from the heating process but nothing too bad. In fact with this model I think it works quite well with the warping, gives it sort of character. It's supposed to be an old symbol made in less high tech era's anyway