

Bunny Love

CASTING A NATURE-INSPIRED SILVER BEAD



When taking design cues from nature, the inherent intricate details and contours can raise a lot of red flags for casting. Often, the more proactive you can be in the modeling process, the fewer hiccups you'll have when casting the piece. CAD designer Kitty Hundley of Sierra Design Studios in Philadelphia took a proactive approach when modeling the one-inch Bunny Bead for the Oji Jewelry line, which she produces with her business partner, caster Gabe Sider of Sierra Design Studios in San Francisco.

Before beginning the actual CAD work on the bead, which measures about 1 inch and weighs 25.5 dwt, Hundley considered the fact that it would be a production piece that would possibly be cast in two different metals, not a piece that could be grown then cast whole and only once.

Working in Matrix, Hundley made "big chunky bunnies," manipulating the completely solid forms. "I had to work backward and establish the seam almost last," she says. "But it was in the forefront of my thinking as I designed." Keeping the two halves together as long as possible assured her of their eventual fit.

Anticipating a common problem—creating an even thickness of the bead's walls—Hundley chose not to wait until she finished modeling to cut out the middle of the bead. She instead made a copy that was 1 mm smaller in all directions at the very beginning, and grouped this neg-

ative shape along with the positive. Changes on the positive—except for definition on the outside, such as the ears—happened to the negative as it held the same shape. "In the end, I was able to remove the negative shape from the positive shape, leaving behind a 1 mm thick wall," she says.

One of the potential issues Hundley foresaw was the two bunnies accidentally locking together: "The two rabbits needed to fit together well visually as well as from a production standpoint," she says. "I was working from really broad strokes until I

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had created a seam between bunnies that didn't lock. It's such an undulating parting between the two that we made sure none of those areas would lock; we wanted to make sure we could pull them apart as they were worked on and that no undercuts would stick together in a funky way."

Even with experience and skill on Hundley's end, Sider offered some input when he began to work with the casting side of the project, as he anticipated two potential problems. "I molded the first resin prototypes and experimented a bit, discovering that the walls were a little too

thin to get good injections in places," he says. "Kitty adjusted it, thickening the areas between the ears and beneath one of the paws that were not filling properly, and I remolded the subsequent new resin prototypes."

The second potential problem arose during soldering. Sider cast the bead in sterling silver in two pieces. After soldering the two halves together, he became concerned that the holes for the cord on each side might make the bead weak. He found a solution for this soft metal: "Kitty made the two halves fit so well that it was

easy to weld them together in wax and cast the bead as one unit," he says. "They cast just as well as one form, and they're less costly than to silver solder each piece." However, having the model in two parts enables Sider to easily execute a bi-metal version of the bead.

Forethought went a long way to preventing issues both during casting and beyond. "The whole point of CAD is to use it to solve your casting problems," says Hundley. "A lot of things can be done in the design phase that can prevent problems for the caster."

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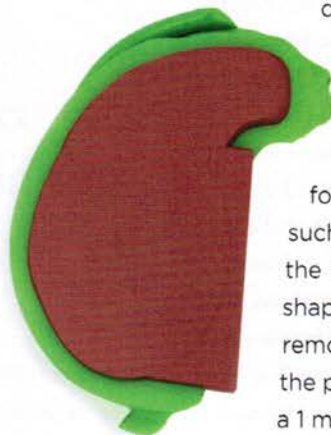


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The fine details are what bring this piece of metal to life—and some turned out to have a purpose beyond the decorative. "I knew I wanted the bunny to have paws, as it's one of those things that would make it read as an animal," she says. "The feet needed to be somewhere along the seam, and that turned out helpful because it obscured the seam and was one more point of registration."



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