

ARTward bound

Santa Fe: Liquid bronze dazzles visitors at world-class foundry

BY MANDY MARKSTEINER

Shidoni Foundry's first bronze pour was in May of 1971. Founder Tommy Hicks sold a piano for \$350 to move his family from Amarillo, Texas to the village of Tesuque, just five miles north of Santa Fe. His new foundry was in an old chicken coop, the burn-out furnace was made of fire bricks and old vacuum cleaner motors, and he used cheap plaster for his mold investment. After inviting people from local museums to see it, the molds all exploded the second the bronze touched them!

Even though it was a failure, that first pour made it clear that people love to watch the flow of liquid bronze.

Thirty-seven years later, Shidoni is one of the top foundries in the world. Every month they pour over 9,000 pounds of bronze at their 1,400 square-foot facility. The gallery and sculpture garden represents 147 artists, and the foundry is staffed by working artists.

Ede Ericson Cardell, the foundry manager who has several sculptures at Shidoni, explains lost wax bronze casting.

First the artist creates an original sculpture out of wax or clay. A rubber mold captures every detail of the artist's work. Molten wax is poured into the rubber mold.

"It's like a chocolate Easter bunny, with a seam down the middle that they later remove," said Cardell. "All the wax becomes bronze."

After the wax figure is removed from the mold, a trained artisan finishes it, making it a perfect copy of the original sculpture.

Wax rods are attached to create a plumbing system that allows the bronze to flow evenly. This step is called "spruing." The bronze will be poured into a sprue cup.

With the sprue system in place they make a ceramic shell "investment" by repeatedly dipping the wax statue in liquid ceramic and then sand. After the investment is cured for several days, the piece is fired in a kiln, baking the shell, melting the wax and leaving a cavity for the bronze.

When the ceramic shell is removed from the kiln, molten bronze is immediately poured in at 2100° F.

Once cooled the ceramic shell is broken away to reveal a bronze sculpture. The sprue system is cut away. The pieces are welded together, sanded and polished to look exactly like the original. It can be treated with chemicals and heat to become whatever color the artist chooses.

The foundry completes every step of the process in house to ensure quality. The cost of a bronze piece comes down to labor, hours from start to finish, and the



POURING THE BRONZE IS AN EVENT IN ITSELF.

pounds of bronze used. Shidoni helps their employees (most of them are emerging artists) build a body of work by letting them cast their pieces at cost instead of retail.

"We're very proud of our 'Made in the USA policy,'" said Cardell. "It's really important to keep jobs here and to keep our people employed."

Shidoni has done well inviting collectors and visitors to see the behind-the-scenes process. "We've actually made a few collectors that way. They saw it and were hooked," said Cardell.

At a Saturday afternoon pour in December, Tommy Hicks personally leads the crowd of people into the facility.

Hot air, green light and energy "whoosh" out of the stove. A worker wearing earplugs, silver protective pants, a long silver coat, helmet and thick gloves dips a thermometer the size of a weed whacker into the mouth. The temperature is 2154°.

Our attention turns to the monstrous

burn-out furnace, with the word "hot" scratched onto the surface. An elaborate pulley system slowly lowers a platform of piping hot ceramic shells and places them on a sand pit, center stage. Using the pulleys, the workers guide a cauldron around the shells and pour bronze into each sprue cup, muttering, "you're good" and "up a little bit" or "down a little bit."

Spectators click pictures and gasp when glowing bronze almost splatters a boot. When it's over, everyone applauds.

For more information, visit Shidoni.com.

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TOMMY HICKS AND A FRIEND POSE AT SHIDONI FOUNDRY.