

SPRAYTIME®

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Art and Thermal Spray

Vermont artist Kathryn Lipke-Vigessa chose Bauer Art Metal to build her outdoor sculpture, a work commissioned by a large university. The centerpiece of her design was to be a large bronze seed, broken into three segments, into the center of which was to be planted a live tree.

Bauer Art Metal, a fabricating firm located in Waterbury, Vermont, is announcing that it has received a U.S. patent on a process it has developed to build free standing objects using thermal sprayed metals on wire mesh.

See page two for the sequence of photos showing the steps of construction from model to finish piece using the Bauer Art Metal patented process.



Figure 7. The three completed seed pods on site with a chemical patina finish.

May 14-16, 2007 Beijing, China International Thermal Conference and Exposition

ITSC 2007 - The event, co-sponsored by the ASM Thermal Spray Society (TSS), the German Welding Society (DVS) and the International Institute of Welding (IIW), will be the first to be held in the vibrant country of China. The bustling automotive, aerospace and heavy equipment manufacturing sectors of China serve as an ideal forum for discussing the

latest advances in thermal spray technologies.

ITSC 2007 is an opportunity for the global thermal spray community to meet, exchange information and conduct business. It is a truly unique opportunity to be part of an outstanding program in the fascinating city of Beijing, the cultural center of the People's Republic of China.

For more information, visit
www.asminternational.org/itsc07

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The following sequence of photos shows the steps of construction from model to finish piece using a newly patented process.



Figure 1.



Figure 2.



Figure 5.



Figure 6.



Figure 3.



Figure 4.

Figure 1. Three different seed segments were shaped by the artist in large blocks of white Styrofoam. The individual segments are approximately three feet tall.

Figure 2. Stainless steel skeletons were made for each of the three different shapes. These served as a structural support for the outside shell and a base plate for anchoring.

Figure 3. Copper mesh is shaped to the models; here, the back section is shown. The mesh is easily formed, often by hand, and can be cut and joined to accommodate any contour.

Figure 4. The front half of the seed is sprayed with zinc to solidify the shape taken from the model. The openings in the mesh readily accept the sprayed zinc. The mesh becomes encapsulated when sprayed from both sides, lending great strength to the shell.

Figure 5. The front and back sections are assembled and sprayed together on the skeleton. The seams will need minor grinding to disappear.

Figure 6. The final shape is touched up and lightly sandblasted, then sprayed with silicon bronze. It is then highlighted by polishing.

Figure 7. The three completed seed pods on site with a chemical patina finish. (see page 1)

With their new process, Bauer Art Metal was able to complete this project in less time and at about half of the cost of traditional foundry casting. They are using this system to fabricate a variety of architectural items including railings, fountains, lighting, metal tiles, and murals as well as sculptural artwork.

Bauer Art Metal, a fabricating firm located in Waterbury, Vermont, has received a U.S. patent on this process to build free standing objects using thermal sprayed metals on wire mesh.

Bauer was founded by Eric C. Bauer who has been involved in architectural metalworking for 35 years. Their new process is the result of extensive experimentation with wire-arc thermal spray on a variety of substrates. Bauer has used this process to fabricate many different items ranging from bronze bowls, art murals, tiles and signage, to large outdoor sculpture. In general, the process compares very favorably to traditional foundry and fabrication methods in price and production time. Additionally, the versatility of electric arc thermal spray allows the use of almost any metal.

Bauer is currently utilizing their process in its custom architectural work as well as products designed for the consumer market.

For more information, contact Eric Bauer, tel: 802.244.4002, email: ecb@bauerfab.com, website www.bauerartmetal.com.

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