

metal finishing

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Fantastic Finish

*P.K. Selective Redefines the Art of
Aluminum Anodizing*

Aluminum Coatings Turn Green

Metal Cleaning Made Easy

Shedding Light on Radiation Curing

How to Make Great Sludge Cake

Fantastic Finish

P.K. Selective redefines the art of aluminum anodizing.

By Greg Valero

Wow!

This may be the initial reaction of P.K. Selective Metal Plating customers when first viewing the colorful and lustrous product finishes made possible by a proprietary multi-color/splash anodizing system. The firm continues to push the envelope for this process with national and international customers. "Over the years, we have continuously improved our anodizing, to stay on the cutting edge, as well as expanding our services to our customers," said owner Peter Kellett.

P.K. Selective was founded by Kellett in his parents' garage about 28 years ago, when a garbage can served as an anodizing tank. Since its humble beginning, the Santa Clara, Calif.-based company blossomed into arguably the largest and most innovative anodize shop in Northern California. The company's unique anodizing system—called Anographics—was cited as helping stimulate the multi-colored craze in the aluminum paint guns industry about 12 years ago.

"We approached an East Coast paintball manufacturer about anodizing their paint guns, since we had done about six for a local company," Kellett recalled. "The customer wanted a wild splash effect in bright colors."

These colorful samples were



Selective has done silk screened images on aluminum guitars, such as this "Flamingo" design.

well received, to say the least. A few days after submitting them to the customer, Kellett said, P.K. received an order for 300 pieces; 50 of the gun barrels were to be anodized in six hues. "We've done tens of thousands of paintball guns the last 12 years and it has spawned anodizers from around the world to try their hands at the process."

One of those customers is Delta Plat (Oakley, Calif.), which utilizes P.K. to anodize approximately 10,000 paintball guns a year. "What they do is a little bit different than anyone else," observed Bob Long, owner. "They are very well known in the paintball industry for doing splashes, fades and some really, really wild stuff."

The most common techniques used on the paintball guns are fades and splashes. The fade technique is when the gun is dipped into various water dye tanks, with each dye coloring a part of the gun to create a fade effect. "The splash effect is achieved by dyeing the various parts a solid color, followed by the application of an anodizing masking resist in random fashion and extracting the non-resisted area," Kellett explained. "Then you recolor the parts and repeat the resist techniques until the desired result is achieved."

According to Kellett, there are numerous techniques used to create visual effects. For

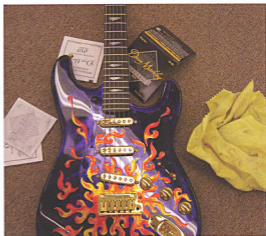
example, one involves fading the gun first, resisting the part, removing the dye from unresisted areas, followed by over-dyeing the part. "This gives a faded effect through the splash area of the gun," he said.

High-end finishes applied to paintball guns sell for as much as \$900. These products are hand engraved, polished to a mirror finish, anodized using techniques such as silk screening, airbrush, fades, hand painting, resists over dyeing, bead blasting and, on a few occasions, include electroless nickel in some areas. "It's a time consuming and expensive process," Kellett observed.

While Kellett declined to reveal specifics on P.K.'s multi-color anodizing, he did say the process is conducted at 85 degrees F, about 15 degrees F higher than conventional systems. "This gives you a much clearer coating," he said of operating at a higher temperature. "When we put our colors in, they are very vibrant. Plus we can get a much thicker coating."

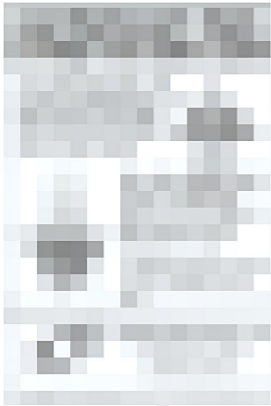
RAINBOW OF POSSIBILITIES

The system is utilized for other end uses as well, such as semiconductors, firearms, wheelchairs, custom trucks and cars, drywall equipment and sun-



Guitars is just one of many potential applications for free form coloring and use of silk screening techniques.

glasses. "Multicolor anodizing not only gives your product a protective coating, but is also a unique, colorful and artistic way for a company to represent itself through its products," Kellett explained.





Owner Peter Kellett stands beside one of P.K.'s nine anodizer tanks. The company offers customers superior color quality and thick, hard coatings on Type II and III anodizing.

Although a great deal of time and effort is spent pushing the limits of splash anodizing, Kellett said, the industrial side of P.K.'s business also commands attention.

The company serves customers primarily in the semiconductor, medical and aluminum industries in Silicon Valley, providing superior color quality and thicker, harder coatings on Type II and III anodizing. The firm specializes in other finishing processes, such as electroless nickel, chem film, powder, liquid, Teflon and other coatings, polishing, bead blasting, graining, masking and silk screening. Its 25,000-square-foot facility maintains nine anodizer tanks totaling 16,000 amps of capacity. "We have state-of-the-art systems and solutions that provide a more durable, colorful and lustrous finish than can be achieved by other systems," Kellett said.

Coral Chemical (Waukegan, Ill.) has been a P.K. supplier for more than 20 years, providing products such as cleaners, oxidizers, conversion coating and dyes. "They run a very clean shop," observed Frank Schwab, a consultant for the firm. "Their quality control is excellent and customer relations, from what I've seen, are very good."

DIVERSIFIED SERVICES

Another area of specialty is silk screening/anographics. P.K. uses a one-color anographic/silk-screening technique, multiple dyeing and/or screening techniques to create a glowing representation of



P.K.'s sophisticated systems and solutions provide products with a durable, colorful and lustrous finish.

company logos and products. "You are able to use a burst of color to show off your product while also having a durable anodized finish that won't flake peel or rub off," Kellett said.

The firm has successfully carved a niche for cosmetic anodizing, which is used to create stereo control panels and musical instruments, among other things. "Our cosmetic color anodize is said to be the best in the country," Kellett declared. "We use a very sophisticated anodize system that allows us to achieve these results by incorporating special rectifiers, pulse units, indication banks, control panels and chemical additives."

P.K.'s cosmetic finishing services include free form coloring and use of silk screening techniques. "We combine both techniques and have produced anodized paintings that we are selling," Kellett said. "This is my focus for the business. We can do paintings for hotels, guest rooms, lobbies and photographs."

According to Kellett, there are hundreds of other possibilities in the free form area. For example, P.K. has done silk screened images on aluminum guitars. The first one, called "The Aloha," appeared at the North American Music Merchants convention. "It was a huge success, with 28 dealers wanting to buy it," he said. Since then, P.K. produced three more "Alohas" and one "Flamingo" design.

Photography is another area that holds promise for creating works of art through anodizing technology. The process involves treating the photo with different colors by hand.

"We are currently working with John Van Hammersveld, who created the Beatles Magical Mystery Tour album cover along with many others," Kellett said. "We are recreating his famous Jimi Hendrix poster in a limited edition."





P.K. specializes in various finishing processes, from electroless nickel, chem film and powder, to liquid, masking and silk screening.

Looking ahead, a major challenge facing P.K. is turning more people onto the concept.

"We've done aluminum guitars for Fender, baseball bats, wheelchairs, control panels, paintball guns, yo-yos, knife handles and paintings for Gibson Guitars," Kellett said. "It's a slow process getting people to embrace the concept, but you just have to keep pushing." *mf*

AT A GLANCE

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FOUNDED: 1976

CORE BUSINESS: P.K. Selective is positioned as one of the largest and most innovative full service anodize shops in Northern California. It operates a 25,000-square-foot facility that maintains nine anodizer tanks totaling 16,000 amps of capacity. State-of-the-art systems and solutions provide products with a durable, colorful and lustrous finish.

PRODUCTS & SERVICES: P.K. Selective provides customers with superior color quality and thicker, harder coatings on both Type II and Type III anodizing. It is the proprietor of "multi-color/splash anodizing," a process introduced a number of years ago. The firm specializes in other finishing processes, such as electroless nickel, chem film, powder, liquid, Teflon and other coatings, polishing, bead blasting, graining, masking and silk screening. It offers industrial and graphic anodizing services and cosmetic finishing.

CUSTOMER BASE: P.K. Selective serves customers primarily in the semiconductor, medical and aluminum industries in Silicon Valley. The multi-color/splash anodizing process has been used extensively in the paintball market as well as other end uses, including firearms, wheelchairs, custom trucks and cars, drywall equipment and sunglasses.

MANAGEMENT:

Peter Kellett, owner
Arnold Sanchez, general manager