

OUTLOOK

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Specialty Materials That Make Our World

Spectre Artists Turn Ordinary Titanium into a

Black-Ti™ **Affair**

Page 2

Business partners Edward Rosenberg's and Mirella Connor's Black-Ti™ jewelry line has been a hit with customers, breaking into the prestigious fine jewelry niche once reserved for silver, gold, and platinum.



INSIDE THIS ISSUE

4 Case in Point:

ATI 425™: A New 130 ksi UTS Alloy for Pressure Vessel Applications

7 Corrosion Conference:

Drawing Attendees from Around the World



8 Technically Speaking:

Heat Treating Fabricated Reactive Metal Equipment

13 Alloy Substitution

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Spectore Turns Ordinary Titanium into a Black-Ti™ Affair

BY: KIRK RICHARDSON — *Wah Chang*

It wasn't long ago that most people primarily associated titanium with aerospace, medical, golf, or industrial applications; either that or they had never heard of the metal at all. Play a word association game with someone other than a metallurgist or an engineer, throw out the name "titanium", and you might just get a blank stare.

My how a little bit of time changes things: today titanium is so popular that its name is on everything from plastic credit cards to high end watches. Though demand for titanium is skyrocketing, and its price per pound is tagging along, innovators are not shying away from trying the lightweight, high strength metal in new applications.

The name titanium comes via the Titans of Greek mythology, known for their extreme and superior strength, an attribute the metal shares. Titanium belongs to a category of elements known as refractory metals. One of the more outstanding characteristics of these materials lies in the refractive properties inherent to their oxides. By applying heat or electricity, one may unleash its refractive properties, inducing various oxide thicknesses on the material surface. According to artisans, "the resulting titanium oxide causes an optical interference with a

purity and vivacity much the same as witnessed in the luminescent colors of oil on water, a peacock's feather, or a rainbow." It's an element that's helped take technology to the depths of the ocean, the far reaches of the solar system and has elevated capabilities in medicine, industry and science. Some believe that titanium has positively and diversely impacted mankind more than any single element in history.

Edward Rosenberg is one such believer. Founder and President of Spectore Corporation, Rosenberg has managed a rare feat. He has captured jewelry industry market share, taking shelf and cyber space from other precious metals sold in brick and mortar stores as well as online. Spectore's Black-Ti™, part of the company's Edward Mirell line, and gray titanium jewelry have gone mainstream, pushed its way on to the fingers, necks, and wrists of men and women around the world.

Rosenberg's passion for anything titanium combined with his frustration over an industry that he says had grown stale and complacent, drove his desire to introduce a new noble element into fine jewelry manufacturing. "Titanium is more than another material; it is an entirely new and exciting category," he explains. According to his web site, spectore.com, "titanium would become the first such element to define an entirely new category of fine jewelry material in almost 3,000 years."

The truth of the matter is, Rosenberg didn't just stumble on the idea. Jewelry is in his lineage. "My family has been in the jewelry business since the early 1900s," says the 3rd generation jeweler/entrepreneur. "My father was a master jeweler in Austria. He came to America and opened his business in New York in 1924. My entire family is or was



Spectore offers a broad scope of manufacturing capabilities. Its core competencies include design, machining, forging, casting, powder metallurgy, forming, welding, anodizing, milling, engraving, and a host of other proprietary processes.

Rosenberg's business partner, Mirella Connor's design instincts and guidance of Spectore's craftsmen are indelible in every piece of jewelry, including the Black Ti™ rings shown below.

Connor, born in Calabria, Italy, has brought significant innovation to the manufacturing of titanium. Under her guidance, Spectore has been granted numerous patents, including the popular Black-Ti titanium.



in the jewelry business.

"I really didn't want to be in the jewelry business. I wanted to be an artist and a musician. I wanted to create masterpieces. The jewelry business like so many others was becoming commoditized. The art was secondary." It was the lure of something new, something different that ultimately kept him in the business. "Had I not discovered and committed myself to developing titanium as a new

tium into a Black-Ti™ Affair

material, I would surely have pursued a career outside of jewelry," he says.

In 1983, Rosenberg conceived Spectore, the masterpiece he had always imagined creating. "Our sole focus was and continues in the development of the artistic properties unique to titanium," he says. "Spectore Corporation is unquestionably the innovator and world leader in aesthetic titanium technology. We are the only titanium company solely dedicated and equipped to create the broad diversity of products needed to fulfill an entire merchandised titanium category. Our history in working with notable clients worldwide (a list populated with names like Tiffany's) has allowed us to develop and manufacture an extensive variety of quality titanium products. Our strategic partners are a veritable "who's-who" of corporate giants, including many Fortune 500 companies."

As deeply committed as Rosenberg is to his clients, he has never lost focus on what kept him in the family business in the first place: the alchemy of the whole process; the blending of science and art to come up with unique, exotic products. "In order to fully realize our potential we have committed ourselves to consummating the marriage of art and science and developing the creative and technical mindset of each faction as one," as he explains it. "This has proven no easy task. Neither the artist nor the scientist has the patience or understanding that allows either participant to recognize, appreciate, or value the infinite possibilities such a union could place before them. What is even more amazing is that these barriers exist through the mutual respect and admiration of what each perceives in the other as being foreign. As the jewelry industry embraced titanium, so has the titanium industry begun to recognize the direct value and rewards resulting from their involvement in consumer products."

Embracing the idea of turning titanium mill products into jewelry on a mass-market scale is one thing; turning the idea into a real, marketable product is something altogether different and exponentially more difficult. Many have dabbled in the business, and some still manufacture product out of their basements. In contrast, Spectore operates out of a 36,000 ft² facility in Deerfield, Florida that is home to Rosenberg's scientists and artists as well as millions of dollars worth of



Spectore has established many industry-leading production processes for refractory metals. The company's quality control standards are among the highest in the industry.

state-of-the-art equipment.

It's a challenging business in more ways than one. "I equate working with titanium to the surfer thinking that a tidal wave is the ultimate ride. What doesn't kill you...", jokes Rosenberg. "It is far more difficult to work with than all other jewelry materials, yet offers the most dynamic aesthetic opportunities if in the proper hands. Unlike other titanium producers, we must be proficient and have the capability to produce in the full spectrum of manufacturing possibilities and perform efficiently in a fast changing fashion driven market. Our clients expect "new collections" three to four times a year. Yes there is a learning curve...in fact there is a new one nearly every day.

"When we decided to create the first commercial line of consumer products almost 30 years ago, titanium technology was primarily focused on the aerospace industry. There was little or no information available for net shape mass production.

"Almost every process we employ today was developed within our company. We offer the broadest scope of manufacturing capabilities in the world. Amongst our core competencies, our technology pallet includes machining, forging, casting, powder metallurgy, forming, welding, anodizing, milling, engraving, and a host of other processes (many of which are proprietary)."

Though working with titanium poses many challenges, Rosenberg says that it has been well worth the considerable effort. "Titanium's high strength to weight ratio coupled with its high level of biocompatibility makes it an ideal choice as a jewelry material," he says, then boldly adds: "I believe that had titanium preceded gold and platinum in the jewelry industry, the

other materials would have had a difficult time routing themselves as a popular alternative. Titanium also offers the broadest scope of possibilities for design. Not only can the material be transformed by anodizing to create a myriad of pure optical colors, its structural integrity at low weight offers a broadened scope of architecturally inspired design options with unsurpassed comfort."

According to Rosenberg, few elements offer the depth and breadth of possibilities

[continued on page 16]

Rosenberg On Collaborating with ATI Wah Chang

"Wah Chang not only "gets it" they rise to deliver it. Their capabilities match our current and future needs. We fully expect this relationship to flourish and be a most enjoyable experience for everyone. Not only is there great value to both participants, we get to script the future of an industry or 2 together. Writing history is a rare opportunity few have the good fortune to enjoy."

Edward Rosenberg, President, Spectore Corporation

Spectore Turns Ordinary Titanium into a Black-Ti™ Affair

[continued from page 3]

that titanium presents. "Its natural resemblance to platinum and the expansive spectrum of anodized colors and finishes offer an unsurpassed diversity," he says. "Coupled with the virtues inherent in the material, titanium has repeatedly proven its superiority in product and industry. Titanium is the only element offering this unique combination of beauty, strength, reduced weight, and biocompatibility.

"Aside from the aforementioned virtues, unique to titanium is the superior durability to conventional jewelry materials," he explains. "Platinum, gold, and silver are soft and heavy. They mar easily, deform, and wear poorly. Designs blur with time and wear. Pins wear and break, clasps get loose. Titanium is far more durable and comfortable than any conventional or other jewelry material."

Spectore specifies a few different alloys for its products. "For our gray products, we use CP Grade 2 titanium," says Rosenberg. "It offers the best balance of purity and hardness. It also offers the jeweler the ability to engrave and cut off rings with conventional jewelry tools. Grade 2 also works best with a broad variety of finishes and works well in machining, forming, stamping, casting, and striking. Our Black-Ti™ line is an alloy that, by nature of process, forms an extremely hard black ceramic finish yet maintains sufficient ductility to allow for tension setting (as does the CP).

The optimistic entrepreneur sees a lustrous future for titanium jewelry. "I believe that the possibilities alone and in combination with other stones and materials are as infinite as our imagination," he says. "I don't believe we have scratched the surface of possibilities in product applications in and outside of jewelry and accessories.

Ever the innovator/artist, Rosenberg believes that a masterpiece, like the Black-Ti titanium ring shown here, can only be defined in the heart and mind of the individual. "It is the single most logical explanation of why a person walking down a crowded beach will bend to pick up a particular shell, the same shell which was ignored by the multitude of passers by before him," he explains.



"As we enter 2006, with the multitude of endorsements from notable retailers, personalities, and industries we anticipate escalated demand for our products and technological advancements. We are committed to advancing our brands through our strengths in innovation both in design and

It (titanium) is far more difficult to work with than all other jewelry materials, yet offers the most dynamic aesthetic opportunities if in the proper hands.

capabilities. We look ahead to continued growth and market penetration. We are also planning to further expand our product offerings into other consumer products arenas. We will continue to meet consumer expectancy for titanium products in the future. Titanium is an accepted jewelry material that is not only here to stay, it has only just begun to take its rightful place as a jewelry material alongside gold and platinum."

If it's not obvious by now, Rosenberg is absolutely passionate about his business — it's his angel and his demon. "I love to create and watch things grow," says the dynamic innovator. "First is not just a place, it is a state of mind and a commitment to achievement. I have a long list of the "next things" we want to build and introduce. I doubt I will see them all to fruition, but I promise I'll give it a go. The problem, or blessing (depending on how you look at it), is that I keep adding more to the plate."

What a 1st century sage once observed seems to hold true today, at least in the case of Edward Rosenberg: "The artist finds a greater pleasure in painting than in having completed the picture." In fact, he's having the time of his life.

For more information about Spectore's titanium jewelry, visit them online at www.spectore.com. ★

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