

Machines, Hands and Wedding Bands

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If you have never manufactured with platinum and you think that you are ready, if you manufacture with platinum, but you have not capitalized on the growing potential of the bridal market, even if you are successful at manufacturing platinum bridal jewelry, I hope some of what is contained in this paper will be of help to you.

I have been involved in wedding ring manufacturing for about 25 years. For the last eight years, I have committed a majority of my time to designing in platinum, and platinum and 18-karat gold combinations. I have always looked at my designing successes in our industry and equated them with my desire to explore. As a result of my last decade of studying, platinum and I have become great friends.

Philosophy

Where platinum and long-term business profitability is concerned, my philosophy is that we should share, care and be aware. Follow the actual meanings of these simple words and we will all serve our own best interests:

1. Share what you learn with the rest of our industry. We want to put platinum on the map because without a map, all of our businesses become harder to find. Now, I am not suggesting that we give away every trade secret we develop, but we all need to realize the advantages of industrial cooperation. This has a lot to do with eliminating the waste of time and the reinvention of the wheel.
2. Care about the perceptions that you create when you market your platinum product. Take a little extra time to refine your products before putting them on the market. Do not forget to communicate with the middle class because they carry a tremendous amount of buying clout.
3. Be aware of the great potential that we have with this product. We need to be careful that we do not commercially exploit something when we do not need to. We should develop the mass market through education and advertising. In the past, we have had manufacturers in our industry who resorted to making things cheaper because they lacked the vision necessary to make it better. This way we all get hurt, so let's use better judgment. When you commit to getting involved in platinum, draw a line in the sand and stay on this side of integrity.

Platinum has had a wonderful resurgence in the American jewelry industry and we need to keep the momentum growing. It would be a big mistake for us to take growth for granted. Likewise, it would also be a mistake for our

industry to allow our technology growth to come to a standstill.

If we look in parallel at other businesses, we find that the true growth companies are ones who have a constantly evolving product base. Try to imagine the pharmaceutical industry without a flow of new drugs to offer the consumer. How motivated would we all be to trade our old car for a new one if the new ones were exactly the same? Again, think of the fashion, computer or even food industries without their annual barrages of upgrades and new products.

Taking all of this into consideration, we begin to see the reasons that jewelry manufacturers have had success with platinum. It has pushed our industry into new product development. It has forced us to experiment and upgrade our knowledge base. Specifically, it has given us a new medium for design, a different palette with which we might create jewelry. And when the end user sees a healthy change, he usually is stimulated to buy.

Agenda

I have structured this paper to mirror the process of development or line of thinking that can lead you to a successful platinum strategy. Some of the topics I will cover are:

1. Reasons to design and manufacture wedding bands in platinum
2. Different manufacturing techniques
3. How to start your design base and where to target your first platinum products
4. How to develop your own new technologies

5. Successful marketing and where to go for help with marketing

Reasons to Design and Manufacture Wedding Bands in Platinum

Let's start with the reasons that we have for manufacturing wedding rings in platinum. The first reason is the obvious one: the metal itself. Wedding bands are an everyday piece of jewelry, so attention should be paid to the practical durability of the medium. Platinum fits that bill quite nicely and it also makes a beautiful statement. If you are not setting stones in it, as is frequently the case with wedding bands, then combining platinum with gold is a wonderful option. You now have a limitless amount of design possibilities.

Another important reason we create bridal jewelry in platinum is to increase sales, margins and in the perfect scenario, our profits. Strictly speaking, as a wedding ring manufacturer, I can tell you about a time not so long ago when wedding rings were the stepchild of some retail jewelry stores. It was something that they felt that they had to offer to service their customers. It was a sale that they considered somewhat a waste of a salesperson's time. Their margins were very small. As a result, the manufacturers were hammered for lower prices. With lower prices came lower quality. Another problem was that some of the retailers did not want to stock wedding rings that they could not sell right out of the showcase. The manufacturer began to put sizing bars on their already lower quality product. We all stagnated there for a while

with no profit, no new technology worth mentioning and of course, no product growth.

Then a few of us rediscovered platinum. It was somewhat of a vague product, so it allowed manufacturers to make a fair margin again. In return, it forced the manufacturers to expand their technologies to accommodate platinum. And the manufacturers learned: you need to refine your work habits in order to include platinum into your working facility!

Cleanliness, focus and specialization should be the end results. If you do not develop these qualities, you will not make a lot of money working in platinum. The best reason to work in platinum is that you are forced to learn and the things that you learn are easily applied to everything else that you manufacture. At my company, we have watched our machinists get more exacting. Our polishers have become much more quality motivated. Our setting department is much better for having worked with platinum. In our design department, the parameters have expanded. The jewelry department is always evolving and our hand craftsmen have gotten "craftier." All of these are good reasons for working with platinum. Across the board, all of our products have gotten better attention as a result of our employees' platinum learning experience.

One more incentive to make wedding bands and engagement rings in platinum is that sometimes the consumer still remembers his or her ancestors' jewelry. It makes it a little easier to market platinum when the end user has some familiarity with it. "Because

Grandma's ring was a platinum one," is the exact reason that I began experimenting eight years ago. We were a young, unknown company and we saw an opportunity to create a new niche market. Fortunately, other manufacturing companies were thinking along the same lines, and what might have developed as a niche product for my company has become mainstream for our whole industry.

For a moment, let's put business considerations aside. When I analyze the personal reasons that I work in platinum it becomes evident that my primary motivations are usually artistic ones. Sometimes that can be counterproductive to making money, but this time things have worked out relatively well. Artistically, the density of platinum is substantial, yet it has a special soft feminine quality. I think you will find that there are processes you can perform because of its malleability. The combination of metals that I use allows for a wide range of artistic interpretation. Some of the rings that I design even afford me an opportunity to stress out my manufacturing staff. But, after all, that is my job as the designer.

Different Manufacturing Techniques

In our factory, we now use different paths of manufacturing, totally dictated to us by the product itself. We never allow ourselves to become technically handcuffed. We will add new equipment and staff as we feel a need to head in any particular direction. Originally, our focus was on machine manufacturing be-

cause of our advanced experience there, but as we have progressed into this new market, we have found that we need to add technical alternatives so that we can accomplish a wider range of objectives. Also, we have always made it our priority to manufacture most everything in-house as opposed to contracting some jobs out. The reason for this is not because we are secretive, and it is certainly not because we are fiscally motivated. The reason is that by mixing the manufacturing technologies of machines and hands under the same roof, we can more easily combine techniques.

Let me describe the three manufacturing techniques in more detail.

a. Machines

My company started out as a wedding band machining company. We use a lot of different machines for different jobs, but our platinum work is usually done on either a lathe, a Swiss cutting machine or one of our computerized drilling and milling machines.

On the lathes we part tubing, do shaping and cut edges onto rings. Believe it or not, we also use our lathes to channel set diamonds into platinum and gold. At first, we had some minor problems because our machining staff approached cutting platinum the same way they did gold. There are some definite differences. On gold, we use carbide tooling to do some of our forming and texturing. We have found that platinum will do as much damage to most carbide tools as the carbide will do to the platinum. The only time a carbide tool seems to get the job done efficiently is in drilling

processes and when the tool is used in an automatic feed situation. Otherwise, we have settled into specifically using diamond-tooling on our platinum runs. Yes, the diamond tools are expensive, but a little care in their usage should allow you to get more than your money's worth out of them.

I have found that the most important factors to longer tool life are angle, cleanliness and the proper lubricant. Rake angle is the angle by which the tool approaches the piece of material that it is to cut. By setting the correct rake angle for the particular tool, you will reduce metal buildup, allowing heat to escape more quickly, thereby extending the life of the tool. There are some basic rules for rake angles readily available to you in literature that is put out by most raw platinum supply companies. Just keep in mind that every tool is a little different. Train the machinist to develop a feel for cut and he will be able to feel when a tool's angle is correct. He might want to measure the correct angle when he finds it so that he can reset that specific tool more easily in the future.

Cleanliness is the one theme that I will repeat over and over. No matter what process of platinum manufacturing you are in, cleanliness will avert tragedy. In the machine room, little leftovers from some previous operation melt to the workpiece and, in effect, they become a lifetime member to the host piece of platinum. You have to keep in mind that there is a fine line between cutting platinum and pushing it around. While you can tell the difference, you can have a

hard time controlling that difference. Platinum loves to bond with alien substances. Therefore, it remains logical that cleanliness eliminates risk.

Then there are cutting oils. Cutting oils can be something of a personal choice. The speed and type of tooling that you use on your machinery might dictate to some extent what cutting oil works best, but there always remains some flexibility. We have found that thin, kerosene-based oils tend to dissipate quickly. Quick dissipation is helpful in preventing platinum from sticking to the tool surface, and becomes important in extending the tool life. The oils that we use are a little more expensive than average cutting oils, but extended tool life is paramount to cost consideration.

We also use a selection of Swiss cutting machines in our machine shop. Here, all of the same rules apply. The significant difference is that the tool instead of the workpiece is moving. Consequently, it is a little easier to set the proper rake angles. Again, priority should be to keep the tool clean of build up. It might even be necessary to shut down at intervals in order to manually remove platinum from the cutting tool surface.

I remember when I was learning to hone my trade as a machinist in this industry, I spent a lot of my time doing production and special orders on a Swiss cutting machine. I cannot remember anybody being quick to volunteer any information to anyone else, but the one rule that was given to all of us was: "You cannot cut platinum on a Swiss cutting machine." "Why?" I would

ask. "Because it ruins everything," I was told. "The tools...the machines are too delicate...your body parts can fall off..." They were uninformed, of course. The truth is that it just costs more and takes longer to cut platinum on a Swiss cutting machine. So as long as we can charge a little more, it becomes acceptable if it costs a little more to produce.

The third method that we use to machine in our factory is to drill or mill the metal. We use machinists' standard, high-quality drills and mills, all readily available at any machine shop supply house. Attention should be paid to the escape angle of the burr. You might find that sharpening your tools to a higher escape pitch might extend tool life. Again, trial and error with your particular machinery is going to be unavoidable. I would love to have a dollar for every piece of technical advice that worked somewhere else but did not float in my factory. Ask questions, but be an innovator also and you should find the learning experience pleasurable.

As far as machinery is concerned, we have considered but have not gone into higher production equipment. This is a very pointed direction that we take as a company. With platinum, we do not feel that it's good to tie up our resources by pre-producing massive quantities of like design. Of course that is a decision that we make based on our particular plans and our plans always change. However, in case one of you sees me at a machine show somewhere trying to crack a deal on a four axis monster milling machine, I should add that you may want to go state of the art

and CAD/CAM everything that you do! That is a directional flexibility that our industry allows.

For us, our ability to custom manufacture to our customers' specifications gives us our distinct advantage in the platinum marketplace. As our retailers learn how to take advantage of our machining flexibility, their sales increase and the customers with whom they work in their stores have a limited ability of challenging them on the price shopping market. The words "platinum" and "special order" seem to go together, so be prepared for a barrage of special order requests. Unless you have the kind of company that can overwhelm your competition with a financial tactic, your capacity for filling these orders will directly reflect on your success in this market.

b. Hands

One of our acquired skills over the years, is the ability to hand-make wedding rings. We do everything from the most sophisticated braid work to the most basic wire pulling and welding techniques. Based on our recent sales, this type of handmade product is on the rise. We are expanding our boundaries every day as to how far we can go handmaking combination metals. One of the beauties of hand-fabrication is the lack of metal loss in the fabrication process. Cut and shape one ring on a lathe and your losses can be upwards of 40%. On the other hand (no pun intended), a handmade wedding ring might average around a 5% metal loss. This means less recycling of metal, less refining and a smaller outlay of money for inventory.

The growth of this product in popularity has less to do with the

fiscal efficiency of its manufacture as it does with the public demand. People love these rings. They love the braids, the weaves and the wires. I have seen a tremendous growth come to manufacturing companies that specialize in this product. Do not underestimate the calling of the consumer.

From the technical side, this product holds a lot of potential for experimentation. The most important rules to follow involve cleanliness and constant annealing. Again, the rules of annealing are readily available, but you will want to flex and modify to serve your particular purpose. The rules of cleanliness are consistent regardless of your chosen path of manufacturing.

A final piece of advice on hand manufacturing would be to develop a structured welding technique as opposed to simple soldering. One of the beauties of working with platinum is its extreme malleability. Welding keeps the metal consistency available to the worker. Solder tends to join but corrode, so the cycle of malleability is broken.

As most of you know, platinum had always been the metal of choice when handmaking was the process. For too many years we forgot about how it lends itself so nicely to the many handmaking techniques. I would hope that from here on in, we continue to grow this expertise. Hopefully no more lost generations of craftsmen.

c. Casting

My expertise in casting platinum is limited and there are so many people in our industry who are much better qualified to give you advice. This is the one proc-

ess that we usually source out because of our limited experience and our desire to produce high-end product. Traditionally, we do not cast a majority of our rings, and our platinum product is certainly no different. What I can do here today is give some quick advice to those of you who will look to expand into cast platinum designs.

If you are a small- to medium-size manufacturer, consider contracting out your casting to one of the houses that have built up a reputation for their platinum work. Keep in mind that the good casting houses are constantly modifying so that they can perfect platinum casting. The honest ones will tell you that this is less than an exact science, but that we have made a ton of headway in recent years. Odds are that the platinum casters of today can give you a product that will probably be better than anything you will attempt yourself. The one thing that you will need to pay attention to is the method of spruing you use in your model making. The proper spruing architecture will go a long way towards making your product cast up consistently. Check with your casting company and enlist their help so that you can solve problems in the early stages of development.

If you are a very large company or a casting house moving into the direction of platinum, the information you need to be successful is available.

How to Start Your Design Base and Where to Target Your First Platinum Products

Whenever I explore the possibility of adding a new product

to our family of products, I tend to follow the same basic set of rules:

- a. Create an array of designs, all having a common thread but different enough from each other that they will pique the interest of different types of end users.
- b. Start your movement into this new product category conservatively. In other words, make your first platinum designs appeal to the basic tastes. I know that some will say that the words "platinum" and "basic" do not mix. I know that some in our industry will try to steer you into creating that illusion of exclusivity. That can be a big mistake. The fact that bridal jewelry has been the largest catalyst for platinum's growth in recent years teaches us something. Wedding bands and engagement rings are directly influenced by tradition. Having a wedding is a tradition. Wearing a wedding band is a tradition. Tradition is one of the most basic elements of human motivation. There is nothing remotely exclusive about human traditions. They are to be shared generation to generation. Your most basic designing will stand up to the test of time. As a by-product, it will help platinum's resurgence in the jewelry market stand the test of time.
- c. Examine the performance numbers from your new products. Find out which ones have the best sell-through, ascertain why and expand your product base in that direction. I always design around my most successful styles. Theoretically, I branch out from a particular

style in a flow chart pattern. I never deviate in any one direction too far from the core design from which I am starting. So in effect, the core design remains in the middle of a group of child designs gathered around it. This is a method of jewelry designing that lends itself to mass market success. Basically, what you are doing is finding different ways of capitalizing on the same success, all the while expanding your customer base.

How to Develop Your Own New Technologies

This is a topic that has a simple equation as an answer to a complex problem. The equation comes together as we study some of the basic rules of new product development.

For those of you interested in this topic, you already know the last and most important variable in the equation, "How do I develop new technologies?" Here it is: You work hard as hell to go further than the last guy. Sounds basic, right? You work hard as hell to go further than the last guy.

Now let's take a step backwards and ask, "How far did the last guy go?" The answer becomes the beginning of this magic equation for technology development. The first piece is understanding current industry limitations. At one point, I had to disprove the myth that platinum was not workable on the machinery that I knew best. Once I saw the possibilities, I worked hard to find the limitations and then challenge them.

If you understand the limitations of your competition, then you can go to the blackboard and create a wish list. That is the second variable of the equation, you create a list of unexplored technologies. Once you have your list, you can offer it up to your technical staff. A good tech staff will jump at the opportunity to talk with you about product feasibility and impossibility. Always remember that you will never expand your technology by only doing the things that are totally feasible. If they are feasible to your staff, then they are feasible to everyone.

Here is the third equation variable: refine the list to a specific goal. Take steps forward and backward until you find the right pattern of development.

Now, add the "hard work" variable to the other three and you have your equation:

Understanding current industry limitations	+	Create a list of unexplored technologies	+	Refine the list to a specific goal	+	Work hard as hell to go further than the last guy	=	How to Develop Your Own New Technologies
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Successful Marketing and Where to go for Help with Marketing

Right now, there are many people available to assist you in your marketing effort. Fortunately, you will be entering the platinum market in a climate of

positive growth. You should encounter a positive interest in your new platinum jewelry. Now you should enlist help to build up a head of steam.

The first place to go for marketing and advertising help is obvious. Your suppliers have an interest in your success. Ask them to help you build a promotional campaign. They have the experience of dealing with a number of other companies in the same market, so a little brain picking can reap great benefits.

I can definitely say that my company has built up its reputation through a very structured plan. This plan really came to fruition as the result of a kick-start that we received from a supplier. The results were positive and we kept the ball rolling from there.

Platinum Guild is another wonderful source. Their expertise in the marketing of platinum is second to none and I am sure they will be available to assist and advise you. They have a collection of educational tools available and they are always involved with a wide array of marketing projects. Talk to the people there in order to put together a soup-to-nuts directive for pushing into the market. Attend functions like this one and you will exchange information with people in various positions as applicable to this market. You can learn something from everyone with whom you talk.

Communicate with your retailers. The ones that already sell platinum have valuable experience upon which you can draw. Their guidance can be a tremendous asset as you develop new products. Ask the right questions and you will begin to see the ar-

reas of need in this new market. Go after them. The retailers that have not committed to platinum products are the people that can teach you the most. You cannot break down a wall of opposition unless you know what the wall is made from. Most retailers who do not carry platinum have very rational reasons. Isolate the reasons and then team with them in a mutually-agreed direction. Cooperation and co-experimentation build wonderful, long-term relationships.

Most importantly, you should never underestimate the value of the advertising media. My company runs very pointed advertising campaigns. We do not oversaturate, but we consistently attempt to tap into the consciousness of our potential market. We always want to let the market know that we are here waiting for them to need us. We also have had a tremendous amount of success with direct advertising to the retail consumer. Building name recognition with them will create a need. The retail marketplace will then come to you so you can help fill it.

Closing Statement

From here you will develop your own strategies based on the experience that you gather. Keep your approach tactical but keep it fun. The beauty that was once the art of jewelry making disappeared before my eyes, just as I was learning to create the beauty. Platinum has in a very real way salvaged a little bit of the art in a very business motivated industry. I challenge you to take the art forward. The numbers will follow.