METAL CLAY CONNECTIONS

the PMC Connection quarterly newsletter

Volume 3 – April 2007 – Keum Bo

In this Issue:

(click on an item to jump there)

Welcome to Metal Clay Connections...

Thanks to all of you for your kind words and support of our fantastic newsletter. Many people have requested subscription. Remember right now subscriptions are free. To get yours click here and just put **SUBSCRIBE** in the subject line:

I WANT TO SUBSCRIBE TO METAL CLAY CONNECTIONS

Once you subscribe you will receive an e-mail announcement when a new issue is available. If you got the announcement letter you do not need to send me an email to subscribe. Metal Clay Connections is a valuable resource and information portal by which we can learn from each other, sharing valuable lessons and experiences.

If you are already a subscriber, I would love to receive your comments about the newsletter. So do not hesitate to write me. If you have ideas, tips, techniques, projects, photos or articles you would like us to consider for MCC, please just sent them along. We look forward to your submissions. Please include your name, description of PMC work, a short bio, address, e-mail, and phone. Articles and photos should be attachments. Image resolution should be 300 dpi for a 3" by 5" image size. Mail us a CD if the image is over 4MB.

Water etching, carving and negative space will be the focus of the July issue. We are taking submissions now.

Linda Bernstein, Editor

Mission Statement

The purpose of this newsletter is to inform and educate. To this end you will find herein some of the following areas:

- Major articles by Senior Instructors and others
- Editorial
- Interviews
- Projects
- Gallery section
- Event announcements
- Hints and Tips
- New products
- Technical information
- PMCC news
- Senior Instructor News
- PMCC Certified member news

PMC Education

PMC Connection Announces
New Educational Program

PMC Connection has now redesigned the Educational Program and even though shorter, the classes have the same techniques presented as the three day classes. We are intensifying rather than relaxing the requirements for completion of these classes.

PMCC Certification
Level 1 and Level 2

News Flash!
PMCC now offers Level 3 Certification

Register on line for certification classes click here

Tips and Techniques: Using Keum Bo on PMC

by Alice Alper-Rein

Keum-Boo is an ancient Asian metalsmithing technique that uses heat and pressure to permanently bond specially rolled gold foil to the surface of metal, usually fine silver. The raised, crystalline structure on freshly fired metal clay, before it is burnished is ideal for accepting this layer of gold.

1. Create the perfect work area for Keum-Boo by setting your heat source on an oversized ceramic tile, 12" x12" or larger (or use several small tiles nested together) This will give you enough room to work and allow for a heat proof surface to set down hot tools. In addition to common sense safety precautions, like tying back long hair, setting the burner at a comfortable working height and protecting your hands and feet and eyes from flying hot metals, PROTECT YOUR CORNEAS from the heat by wearing oversized protective glasses not hovering directly over the work area.

2. Protect your hands from the heat of the burner by wearing an inexpensive pair of leather or suede gardening gloves. Choose a pair that fits well to allow for maximum dexterity while holding tools and manipulating the gold foil.

3. Here are some heat source considerations: In addition to single or double coil electric burners (use with a fabricated steel or brass coil cover,) electric burners are also available with enclosed coils. Consider using a table top granulation kiln with special brass inserts specifically for Keum-Boo. Electric stoves can also be used. Gas stoves can be used but because they require the user to work over an open flame, the other choices are wiser and safer. When applying gold foil to extra large pieces, a jeweler's torch might be necessary for proper bonding of the gold to the silver. When using a jeweler's torch, increase the thickness of the gold foil used, since thin gold foil will diffuse more readily into the silver when exposed to the heat of a torch.

4. For precise placement of Keum-Boo gold foil, position the gold foil on the project before turning on the burner. When the temperature reaches about 500°F-700°F use a burnisher to tack the gold foil in place...then go back and burnish each area. A wood stove thermometer can be placed on top of the burner so the user will know when the proper temperature has been reached. Here are some other alternatives for gauging the proper temperature: It's hot enough to begin tacking the gold to the silver when a toothpick or wooden shish-ka-bob skewer touched to the silver chars (Keum-Boo on Silver, Celie Fago) or when a piece of steel placed on the burner turns from yellow to brown to blue (The Complete Metalsmith, Tim McCreight)

5. While beginners find it easier to add gold foil to the piece before the burner is turned on, experienced users are able to use a tweezers to add pieces of gold foil to the already hot metal clay piece. Some users find it easier to use a dampened paintbrush to pick up and apply the gold foil to the work. With practice, users are able to pick up a piece of gold foil with the tip of a hot stainless steel burnisher and add it to an already hot piece.

6. Want to add an area of gold to an already burnished and polished metal clay project using the Keum- Boo foil

method? First, run the piece through a kiln cycle to remove all traces of oil and patina. This will also restore the raised, crystalline structure found on freshly fired metal clay, which is ideal for accepting a layer of gold foil.

7. Troubleshoot these issues if the gold doesn't bond: 1. Is the burner hot enough? 2. Is the silver clean- free of finger prints and oils? 3. Has the gold foil made surface contact with the silver?

8. Keep a straight pin ready for poking the gold foil in case an air pocket forms as you work.

9. Did you know that gold can be applied to both the front and back of a project using the Keum-Boo method? Turning a side which already has the gold foil fused to it to the heat source as the other side is worked won't hurt it.

10. Be creative when choosing tools for burnishing the gold foil to the silver. Standard metal and agate burnishers are perfect for no texture or low relief textured areas. Consider adapting stainless steel spoons, butter knives and forks, bending and sanding them to shape, if necessary, for areas with deeper crevices. To burnish the gold foil into deep recesses, use stainless steel ball stylus burnishers, available in various sizes (traditionally used for paper embossing.)

11. If you find that your stainless steel burnishing tools are snagging or tearing the gold foil, lightly sand them until they are free of burs using progressively finer wet/dry polishing papers.

12. Save every scrap of Keum-Boo gold foil and have these slivers ready to use for filling in areas that need more coverage due to a tear in the foil or movement during placement.

13. Although the gold foil can be cut as it is, it is easier to control the cut and prevent wrinkling of the foil if the foil is first sandwiched at the fold of a piece of typing paper. This method is especially important when using paper punches to cut shapes from the foil.

14. Keep paper punches sharp and lubricated by periodically punching through aluminum foil and then through wax paper, especially if you use the same punches to cut through unfired PMC sheet clay.

15. Consider using both the negative and positive images that result when cutting the gold foil with a paper shape punch-the image itself and the outline of the image.

16. Add a variety of scissors to your Keum-Boo tool kit. A small pair of pointy manicure scissors works wonderfully for cutting small defined shapes from the foil. A long paper shears will make it easier to cut long strips of foil. Use decorative paper-cutting scissors with scalloped or deckled edges, for example to cut the gold foil to add lots of interest to the project.

17. Cut the gold foil with tiny circle punches (1/16th, 1/8th or 1/4th) and other small shapes of paper punches in anticipation of burnishing the foil into deeply textured areas in the silver. A ball stylus works well for accomplishing this.

18. Don't confuse the 24K gold foil jewelers use for the Keum-Boo technique with gold leaf used for decorative gilding on home goods. 24K gold foil is rolled from pure gold. It requires a heat application and pressure/burnishing technique to bond it to pure silver. It's available in several thicknesses which are all thicker than gold leaf. Gold leaf is much thinner than the gold foil used for Keum-Boo and will be absorbed into the silver when heated. Gold leaf is usually applied to any surface using sizing (gluey material) and is often a composite material (not actually pure gold)

19. Since soldering operations like attaching pin backs or earring posts are best accomplished on metal clay pieces that have first been fully burnished to close all pores and the Keum Boo technique is best accomplished on metal clay before it has been burnished (straight from the kiln), here are some creative solutions to allow for both soldering and Keum Boo gold applications on the same piece: Solution 1: Use a stainless steel burnishing tool to thoroughly burnish just those areas of the work where solder will be applied. Perform the soldering operation(s) and then add gold foil using the Keum-Boo method on other areas of the project. Solution 2: Apply a slightly heavier application of gold foil to the desired areas of the project in their "fresh from the kiln" state. Burnish and then tumble the project in mixed stainless steel shot and then solder on findings or other elements. The thicker foil is necessary since some of the gold will likely diffuse into the silver during the soldering operations. Pickle as necessary.

20. In addition to creating a depression or two in the brass or stainless coil cover on your heat source to hold dimensional work as gold is applied, consider drilling a few holes to accommodate earring posts.

21. Did you know that since metal clay is porous, hollow forms created with metal clay don't need air holes to allow gasses to escape during firing? BUT, once metal clay has been fired, air holes are necessary to allow gasses to escape during other operations requiring heat, like soldering, Keum-Boo or enameling. The air trapped inside will expand during the heating process and could cause the hollow form to explode. Prevent this by integrating air holes into your metal clay design or plan on drilling some (conspicuous or inconspicuous) after firing to prepare the work for additional processes requiring heat applications.

22. To create different shades of gold on the same piece, apply one layer of gold in some areas, two layers of gold in other areas and so on until the contrast is evident. Kiln firing work that already has an application of gold bonded to it, will result in the gold being absorbed into the silver so it is not evident or will create a "green gold" which is not always attractive. The silver in the areas where the gold has absorbed will patina differently for some interesting effects.

23. Remove any marks on the gold that remain after burnishing by brushing the piece with a stainless steel brush or a soft brass brush dipped in soapy water or dampened pumice powder. This will leave a matte finish on the piece. For a high shine, tumble the work in mixed stainless steel shot and soapy water.

24. Want to use the Keum-Boo method to add gold foil onto sterling silver? Depletion gild the sterling silver by heating and pickling it several times, until it no longer blackens. This process will raise a layer of fine silver to the surface of the metal, readying it for the Keum-Boo process.

25. Using Liver of Sulfur or another blackening agent on a project which contains both silver and gold, will greatly increase the contrast between the metals and make the gold element stand out since only the silver will take the patina.

For more in depth information on the Keum-Boo technique and the tear-away technique as they relate to metal clay, consult a copy of Keum-Boo on Silver by Celie Fago

Alice Alper-Rein
Senior Instructor
PMC Connection

Jewelry By Y2A, Ltd
Alice Alper-Rein

Gold Lined Pod

by Sherry Viktora

This butterfly flower (Asclepsias tuberosa) pod was grown in my garden, and like so many other pods, was destined to become jewelry. It is 3”long and ¾” wide and was formed by coating the outside of the pod, using several coats of PMC paste. This type of pod has very interesting shaped stems which are quite woody, so I also pasted the stem which became the bail.

After firing in the kiln, I decided to make add the gold to the inside. In order to be sure that the gold bonded

well, I covered the inside of the pod with 3 coats of PMC3 paste, then 3 coats of gold paste made from gold clay, making sure each layer was dry before adding the next one. I then torch fired the pod, polished it and wore my plain gold lined pod happily for a couple of months. Of course, like many of us who like to modify our creations, I wasn't happy with it for long. "It needed something more". I have a VERY large (some of you have seen it) box of organic pieces which I have pasted and fired, ranging from mushrooms to leaves, just waiting for a time like this.
So, I dug through my box of "silver organic goodies" and picked the silver leaves. After filling the inside of the pod with soft fiber blanket, I formed the decoration on top of it, using the pre-fired leaves, PMC3 syringe and paste to attach the decoration to the pod. The fiber blanket not only supported the syringe "stems", but I believe helped insulate the gold somewhat, so that when the pod was-fired in the kiln again, the gold remained un-changed. .The same process could have been done using a torch also, since the fiber blanket was under the decoration that needed firing. After washing out the fiber blanket and polishing the pod again, it is now complete……maybe?

Speaking from experience, I would not recommend that you try this on the INSIDE of a pod with a great deal of texture, such as a milkweed. The gold paste absorbs right into the little crevices, and you get very little gold color. Being somewhat stubborn, I used over 2 grams of gold paste before I accepted that fact.

Sherry Viktora
Senior Instructor
PMC Connection

SherryLVRN@charter.net

Out on a Limb

Sherry Viktora
Senior Instructor
PMC Connection

Sherry Viktora
Out on a Limb

Notes on Keum-Boo By Sherry Fotopoulos

Keum Boo is the ancient Korean technique for attaching thin gold sheets to the surface of other pure metals. It is widely used in various Asian cultures and in the west historically to adhere gold to iron and steel. Many Greek and Roman artifacts have been found that were gilded in this manner.

Metal clay offers the perfect surface for Keum Boo because it is pure silver. If sterling silver or gold under 23kt is used as a base they must be depletion gilded by repeated heating, quenching and pickling to bring up a layer of fine silver or fine gold to the surface. It is interesting to note that Keum Boo works very well on aluminum (another pure metal) as well as standard and colored gold alloys, palladium, white gold and platinum.

Typically the gold sheet is very thin so large areas may be covered without incurring great expense. It is a straightforward process that allows artisans to incorporate colors into their work. Keum Boo is typically applied to finished objects but with good adhesion metal can be prepared with patterns of Keum Boo and used later in traditional metalsmithing fabrication. Most instructions for Keum Boo recommend using gold foil instead of gold leaf because gold foil is quite a bit thicker than gold leaf. Typically three layers of gold leaf are needed to produce the same deep gold coloring as one layer of gold foil. That said, if gold leaf or enameling gold foil is used it is so thin that it will have a green tint from the silver beneath. When a second layer is applied that overlaps portions of the first layer the color is intensified to a deeper gold where the overlap occurs. Subsequent layers will produce ranges of color from the greenish tint through brighter gold to the deepest gold of three layers. One last note about gold leaf is that it can be difficult to use due to its tendency to tear, drift and otherwise fall apart because it is so thin.

Let's take a quick trip through the process! You'll need the following:

Metal clay piece (fired and cooled but with no alterations to the surface from brushing or tumbling. Also avoid applying body oils by touching the pristine surface.)
Gold foil
2 burnisher tools (steel and/or agate)
Tweezers (fine and clean for picking up gold foil)
Holding tool (cross-lock tweezers with heat resistant handles work well)
Scissors (for cutting gold foil)
Container of water (for cooling steel burnisher and/or holding tool)
Heat source (Single burner, open coil hot plate)
Metal plate (to cover hot plate coil and diffuse heat evenly)

Thermometer (wood stove type is best)
Leather or clothe gloves
Optional: Pencil (for drawing designs to cut out), sharp paper punches

NOTE: As with all dangerous processes in the studio use your good common sense to protect yourself from injury. Prepare an uncluttered area for this high heat process and wear appropriate clothing and shoes. Good lighting is always a plus!

Place the metal cover on the open coil of the hot plate, place your metal clay piece and the thermometer on the metal cover and turn the hot plate on to high. Diffusion bonding of the silver and gold takes place between 650°-850° F (340°-450° C). My personal method is to begin Keum Boo at slightly over 800° F.

While the piece is heating, cut one or more pieces of gold foil. Gold foil generally arrives in a packet. It has an outer stiff paper layer on both sides. Inside are two layers of paper on each side of the gold foil. Lay the packet on a flat surface and remove the top stiff outer layer and one layer of the inner paper. Pick up the gold foil keeping it between the two sheets of paper that are on each side of it. This prevents fingerprints and other contaminants from soiling the gold. It also makes it easier to cut the foil and to use paper punches for creating shapes.

When the temperature is sufficient, pick up the gold foil with clean, fine tweezers and hold it right over the area of your piece where you want to Keum Boo. Use a burnisher to gently tack the gold in place by tracing an "X" in the middle of the foil. Set down the fine tweezers and use a holding tool to steady the piece while applying gentle, firm pressure with the burnisher to attach the entire piece of gold foil. Begin in the middle and work towards the edges using small circling strokes. This will help prevent air pockets and bubbles between the silver and gold. Take special care to completely burnish the edge of the gold all the way around.

The silver and gold adhere by diffusion bonding. When heated the molecules of silver and gold begin spinning faster and faster. Under pressure some of the molecules of silver migrate into the gold and some of the gold molecules migrate into the silver. This takes place on a microscopic level so you cannot see or feel it, but when cooled the silver and gold are permanently bonded.

During burnishing the burnisher tools become heated as well. If they become too hot (especially the steel burnisher) the gold will attach to the burnisher! The burnisher should always feel like it is gliding over the surface of the gold. If your burnisher begins to drag or feel "sticky" it has become too hot. Dip the steel burnisher into water to quickly cool then continue rubbing the gold. Small drops of water will not affect the process. If using an agate burnisher, lay it aside to cool. NEVER cool agate tools in water, as they will shatter.

When you are satisfied that the gold is attached, remove your piece from the heat and allow to air cool (do not quench!). Under good light check the gold surface for bubbles or air pockets. Check the edges by trying to lift the gold with your fingernail. Should you find loose edges or bubbles, prick the bubble in the middle with a tiny sharp pin, place your piece back onto the heated metal plate and re-burnish. If gaps or tears are noticed, add slivers of gold and burnish into place.

Now you may finish your piece any way you desire. Remove burnishing marks by scrubbing lightly with a brass brush and soapy water. You may color your piece with liver of sulfur patina, which will result in glorious gold against colored/darkened silver. You may use pumice, very fine steel wool, or even tumble polish your piece. Whatever you decide to do, you'll want to come back for more!

Gold foil is available at www.pmcconnection.com.

A lovely Keum Boo Kit is available at www.pmc123.com. It contains a single burner, open coil hot plate,

stainless steel fitted coil cover, wood stove type thermometer, one flame-tip agate burnisher and one knife-tip agate burnisher.

Sherry Fotopoulos
Senior Instructor
PMC Connection

210-656-8239
sherryfotopolous@hotmail.com
www.pmc123.com

Your Golden Opportunity

by Linda Bernstein

Gold has been worshipped for centuries. Now you have the golden opportunity to easily add this magical metal to your work. There are several ways to do this: Keum Bo which is discussed at length in the article by Sherry Fotopolous, gold paste which is covered in this issue by Mary Ann Devos and Sherry Viktora. Also, as simple as it may seem, using gold clay in the clay form. I will tell you more about this golden opportunity now.

First some important information. When gold clay was first created it was a richly colored 24K, fired to 1830F for 2 hours and shrank about 33% (my observation). This was very hot, a long time, large shrinkage and could not be fired with PMC3. A few of us are lucky enough to still have some of this truly precious material. I personally wish they still produced it. I love the color of 24K. Some say it looks fake but this is what pure gold looks like.

Now we have the new 22K gold clay, officially called **PMC Gold**. It is not pure gold but has some silver in it ergo 22K. It is not as rich in color, fires at 1650F for 10 minutes or 1290F for 90 minutes, shrinks about 17% and can be fired with PMC3. The tensile strength is 128 as compared to 24K being only 76. Hardness is 40 on the Vickers scale vs. only 19 for 24K. One could say it is a gold version of PMC3.

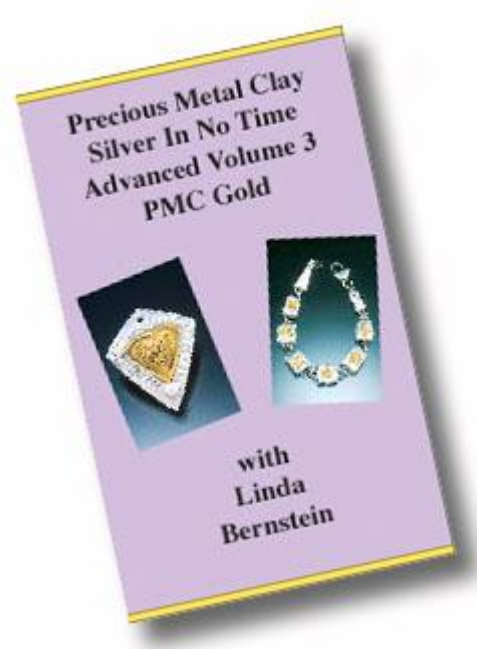
Using Gold PMC wil**l** add value to your work and the beauty of gold to your designs. Just a small amount of gold will increase the value of your piece significantly. The combination of gold and silver is quite popular now and looks classic. If you have never used gold PMC it will be something new, different and very exciting. Small amounts of Gold PMC such as ¼ gram cost as little as $10.00. This of course depends on the price of gold at the time. The workability is similar to PMC3. The same techniques are used as with PMC3. Gold PMC clay can be made into gold elements or gold paste. Elements will be discussed in more detail. It can be fired alone or with PMC3.

I like to make small gold elements and prefire them. I use cutters, stamps or sculpt them by hand. I keep them in a very small box with little compartments. I have them ready to use when ever I feel it is the time for some gold on a piece. This will work with either 22K or 24K gold clay. CZ's can be imbedded into Gold PMC just the same as in Silver PMC. Below are some gold elements I have made.

Fired gold elements are embedded in the wet silver clay by pushing them in so they are flush with the surfaced of the silver clay. After firing they are locked in place by the shrinkage of the silver clay. Here are some finished pieces made from fired gold elements inserted in wet silver clay, dried, refined and fired.

Finishing is the same as with silver PMC. Tumbling creates strength and shine. Burnish, oxidize selected areas with Silver Black and polish for a wonderful gold color.

The fear factor is what often stops PMC artists from using Gold PMC. Instruction is a great help if you have this fear. I have made a wonderful instructional video you can watch and watch again to learn techniques and get design ideas too.



PMC Gold - Video

In my video, PMC Gold, you will learn how to use Gold PMC Clay. Forming gold elements by sculpting, stamping, molds, cutters, textures and the addition of cast in place stones is demonstrated. Firing and the use of these elements is taught. Making gold paste, its application and how to fire it, as well as, making and using molds is also covered. 24K gold is used but the techniques are same with **Gold PMC**. Only the firing is different and it is easier.

Click here to purchase video

Linda Bernstein

Artique

22 K GOLD Paste

by Mary Ann Devos

We all love a touch of gold in our jewelry. The price of gold, however, is limiting. That is why making your own gold paste is a great answer. When you apply and fire the paste properly, you obtain a heavy "vermeil". This is thicker and more durable than gold plating.

It is important to follow these instructions closely.

1. Make a PMC silver piece. I always use PMC3. It seems to work best with the PMC gold paste.
2. Completely dry the silver PMC piece and test it on a mirror to make sure.
3. Mix a small amount of 22 K PMC Gold clay with distilled water to make a paste the consistency of heavy cream.
4. Apply one thin layer of gold paste to the silver piece. Let it air dry completely. Then apply a second and a third layer of gold paste, repeating the drying process after each layer. It is important to **air dry** these gold layers completely between applications.
5. After all of the layers are applied and dried completely, place the piece on a firing block and torch fire the piece with a butane torch.
6. The size of the piece will determine the length of the firing.
7. Heat the piece slowly using a circular motion to the torch flame. As the piece heats, there will be visible flames when the binder burns off.
8. Continue to heat the piece and bring it to a bright orange color. Maintain that color for the firing time, starting the firing time only after obtaining the orange color. Use the silver surface area as the temperature gauge rather than the gold area. Remember that gold is a better conductor of heat than silver and will glow orange before the silver does.
9. Fire the piece for 3 to 5 minutes, depending upon the size of the piece, maintaining the orange color.
10. After the firing is complete, burnish the piece, especially the gold area, while the metal is still hot.
11. Allow the piece to air cool.
12. Polish the piece with a stainless steel wire brush, burnish and tumble.

TROUBLE SHOOTING

1. Did the gold disappear during firing? You did not burn off the gold. Remember that gold is heavier than silver. If you overfired the piece, the gold may have sunk into the silver.
2. Did the gold layer flake off? This situation usually results from one of two events: a. the gold layers were not completely dried either between the layers or before the firing; b. the gold layers were too thick.

PMC3 works best for this application. The result of using PMC gold paste over PMC silver is a wondrous combination of metals and colors. It is strikingly beautiful and very durable. I have left PMC gold paste pieces in the rotary tumbler for over 6 hours (opps, I forgot they were still tumbling). The pieces came out of the tumbler brightly shining and the gold has remained affixed to this day.

Mary Ann Devos
Director of Education
PMC Connection

An Interview with Helen O'Neill

by Linda Bernstein

Tell me a little about your life and your family.

I was born and brought up in The Netherlands by a Dutch mother and English father. My father's work took him around the world and I was educated at boarding school in England. After obtaining a European Business degree I went into the world of marketing, where I met my husband Kevin, and worked until I had my second child. My job was great but I always seemed to be working away from home and finding that I was spending most of my Saturdays at the supermarket! It was when I had my third daughter I decided I needed a change of direction in my professional life.

What inspired you to become involved with PMC?

Some girls love shoes, other like handbags. I simply love jewellery, and necklaces in particular. However, I often found that I wanted to modify them to suit my own style. This drove me to make my own. I spent a fortune experimenting in order to get it absolutely right. Along the way people would often ask me to make something for them, which I was happy to do, but I didn't really want to go into the business of mass production. Subsequently I started to offer lessons to teach others what I had learnt, which became quite successful.

It was whilst I was perfecting my techniques that I heard about precious metal clay and decided to find out more, as I was having difficulty in sourcing particular sized beads and clasps. Perhaps I could make my own? I took a number of classes – some more successful than others – but unfortunately found that I couldn't progress as much as I had wanted. The pieces I made were very disappointing, and have never left my cupboard. However, that didn't deter me. I wanted to find out more about this exciting new medium and continued searching, eventually contacting both the Artclay and the Precious Metal Clay distributors. As the PMC company was in London, nearer to my home, I decided to take my level 1 Certification with them. The rest they say is history, as this is where I met Mary Ann Devos who persuaded me to take on the UK distributorship, as the previous owner was no longer interested in running the company.

It is now nearly two years since we started The PMC Studio.

What do you like best about PMC?

Like most other artists who have worked with this material, it is probably the versatility of the product that I find the most fascinating. I especially love the way the new PMC3 works with glass. What an improvement on the PMC+, which although is ideal for enhancing definition, is fairly limiting because of it's high firing temperatures.

What inspires you when you create?

I am fortunate in that I work with the clay almost every day, and the more I work with it, the more I am convinced that it has a personality of its own. Some might say that I have been working with the stuff too long, and that I should get out more! However, I am finding that it responds to my handling quite differently each time I use it. For instance, depending on the temperature, the condition of my hands and how I work it.
It is for these reasons that I find it is the clay itself that inspires me as soon as I take it out of the packet. I simply 'go with the flow'. My favourite pieces are always those I haven't worked out beforehand.

What is your favorite PMC technique?

I simply love Keum Boo. 24k gold compliments PMC so well. It's quick, relatively easy to work with and can turn a really good design into something quite stunning and beautiful. To me it's a bit like putting the icing on the cake.

What advice would you give to a new PMC artist?

Save yourself time, money and frustration and take a basic course from a good instructor. Good technique means you won't learn any bad habits. Your finished work will look so much better, you get to know exactly what tools work for which job, and more importantly, you won't waste any clay. A good course may cost a little more, but is a sound investment right from the start. Cheaper courses will likely mean more students per class, less materials and tools to work with and possibly the need to invest in another course to give you the confidence to go it alone.

Another piece of advice I give anyone starting out is keep your work simple and keep it small. You may be pleased with your first efforts but once you have mastered the basic skills well, your work will look so much better, and you will find that you won't want to wear anything that looks over-fussy or has obvious mistakes in it, such as a wonky stone or a crooked bail.

Keep your clay in optimum condition by rolling it out no more than 3 times (UK weather conditions prevailing of course). It also helps to use a pack size relative to the design you are creating, as once the pack is opened, it only has a certain shelf life. The last thing you want to do is to have to store half-used packs of clay.

What do you see as the future of PMC?

Up until now it has been a matter of just letting people know of it's existence and showing how just about anyone can get a professional result with some good education. Obviously PMC isn't going to replace traditional sheet silver and other jewellery making methods but it can be used hand-in-hand with these traditional techniques. I hope, and in fact believe, that PMC will in time become an acceptable and integral part of jewellery making as a whole.

As the demand for individual, high quality jewellery increases I envisage the demand for PMC increasing also within the jewellery-making community. There are ways in which PMC is particularly time-effective for the traditional silversmith, such as producing masters for casting and one-off pieces.

The discerning customer in the UK is, nowadays, far more prepared to pay for good design instead of mass produced items from India or the Far East.

How is PMC different in the UK from the US in terms of teaching, business and style?

Teaching

Student expectation is quite high in the UK. They want to make a piece they can wear or sell straight away. They are eager to learn and want to get it absolutely right. Also, the older the student, the more confident they are of their ability! Last week I had a lady on a course who was a complete beginner but had signed onto quite an advanced course. Her words were: "Well I am quite good at making jewellery so I don't need to learn the basics! "

Although I have taught many courses, I still enjoy it immensely. Each class is very different. My favourite course to teach has to be the Level 1 Certification. You get to know your individual students quite well. From meeting them on Day One when they are quite hesitant and unsure, you watch their confidence grow, so that by Day Three they are astonished by their capabilities. For most people it is an amazing journey, and for me personally it is very self satisfying to watch their transition.

By Level 2 Certification, groups often exchange contact details and stay in touch with each other, or meet up at one of our Monthly Master Classes. It is very rewarding for me, as a teacher, to be part of this whole process.

Business

Our business operates on many different levels. As the main distributor for the UK and Eire we spend a great deal of time developing the market and providing information.

In addition, we offer a wide range of PMC, tools and equipment via our website and studio, to the general public, stockists and educational institutions.

We publish a bi-monthly newsletter full of useful information, including articles on subjects such as hallmarking, new products, exhibitions and demonstrations etc, etc. So far it has proved very popular with our customers judging from the good feedback we have received.

Equally important is our education programme. We offer a very comprehensive training and development programme in the UK. We currently run over 100 courses and hands-on demonstrations per year. Our approach is based on a modular system, where you can pick and choose your courses depending on your ability and interest. We offer a basic range of courses aimed at complete beginners or those wishing to refresh their skills, and intermediate courses for their on-going development, plus Certification courses and monthly master classes for those who want to continue their learning. We continually update our courses as there is always something new to discover in the world of PMC.

Style

Although PMC lends itself very well to organic forms, the style in the in the UK tends to be more clean and contemporary, using natural shapes but without fussy detailing. This is particularly noticeable in the classes I run. Students, on the whole, tend to opt for designs using shapes from nature, simply enhanced. I am constantly surprised at how students, who feel they have no design skills, suddenly pull unique creations out of nowhere!

Is there anything else you would like to share with us?

Last year we launched an annual PMC Design Competition. The closing date is 1 June. It is for the UK only. The award ceremony and exhibition will be at a new restaurant/gallery in Hatton Garden (London's Jewellery district). This is owned by our sponsor J. Blundell and Sons which is one of the UK's oldest jewellery suppliers dating back to 1839! Go to the link for more information:

PMC Design Competition UK

Thank you, Helen for your in depth revealing answers. It is very interesting to hear how things are different in the UK. We wish you the best and only great success with your new business. You really know how the give your customers the super service.

Go to:

PMC Studio to see what's happening in the UK.

From the Editor

The Fusion of Technology and Art

Art as communication started with cavemen drawing pictures many thousands of years ago. These simple drawings on cave walls made from soot from a fire and natural pigments told the stories of hunting, gathering and survival. As time progressed the symbolic art picture of drawing known as hieroglyphics and Sanskrit recorded more complex information allowing written language to develop. These pictures were much more clear in their meaning even though it remained unknown for centuries.

Monks in the dark ages kept knowledge alive through their artistic manuscripts of the bible. Handwritten they lovingly labored over each page with ink and quill pen. These masterpieces preserved written language, religion and art as well.

In 1440, thanks to Gutenberg, the printing press allowed mass production of the written word. We now can have printed books, flyers, ballots, illustrations and more. Technology allows communication and art to take a giant step forward.

It has been suggested that the Great Masters used mirrors and viewing devices as aid to their creations. Here technology was an assistant but certainly technique was at least as important.

The introduction of acrylic paints was resisted by traditional oil painters. The technology of chemistry allowed drying time to be shortened and colors to be intensified with acrylic paints. This new medium was frowned upon and rejected by traditional oil painters and well as the art community in general. Slowly it gained acceptance and now is respected as much as oil paint.

Another example of technologies effect on art is polymer clay. Polymer is still fighting the battle of acceptance with sculptors of the more traditional ceramic clay, stone, metal and wood. Polymer clay, created about 1950, is inexpensive, requires only a toaster oven to cure, comes in all colors, metalics, and even faux stone. It is highly versatile and can be used for many things: sculpture, cane work, faux techniques, beads, jewelry and decoration of useful items such as picture frames and purses. It is enjoyed by young and old alike, being a favorite for children to make little animals and such. This sadly enough has not helped polymers acceptance by the traditional art community.

For the last 10 years we have enjoyed working with PMC. It also was brought to us by the modern technology of molecular chemistry. Through the process of areosolization we now can make "clay" that become pure fine silver or gold. Sounds like magic but gives us the "golden opportunity" to create precious metal items using clay techniques. When I heard about this I knew my life was going to change forever. As a ceramic and polymer artist who wanted to make silver jewelry this truly was my golden opportunity.
Some metalsmiths have a different view of this new material. After thousands of years of doing things in their traditional ways some feel PMC is less than metalsmithing. I feel in the long run technology will prevail, PMC will be accepted and technique will elevate it to the level of respect it deserves. It truly is metalsmithing. It is my observation that generally individuals with traditional metalsmith training create a better final product.

The technology of electronic imaging has provided us with high resolution photography. A far different quality from tin types of the 1800's. With digital art we now have video games. They are still improving rapidly and are hardly 25 years old.

Now we have entered the next era: internet and electronic communications. The artist now puts technology to work. Our web sites show our work, advertise our classes and sell our products. Second Life(www.secondlife.com), a whole digital world, makes me feel like The Matrix is not so far away. Whither are we drifting?

Technology is here to stay and it brought us PMC.

Thanks....

Thanks to all the contributors in this issue: Alice Alper-Rein, Helen O'Neill, Mary Ann Devos, Sherry Fotopoulos and Sherry Viktora, for their creativity, support and timely submission of their material.

Also thanks to Jake Bernstein for his help with the details of proof reading.

Thanks to those who submitted photos for the gallery: Celie Fago, Carol Augustine, Debbie Rijns, Elizabeth Glass Geltman, Susan Dilger, Hiromi Harakawa, Hattie Sanderson, Margaret Schindel, Linda Kline, Tami Morrison.

Thanks to Amy Ikenn for the PDF files for Volume 1 & 2.

Linda Bernstein

www.Artique.org

LBernstein@Artique.org

Gallery: Keum Bo, Gold and More

Locket

Celie Fago

Pod Ring

Celie Fago

Box

Celie Fago

This is a Shield Pendant crafted from metal clay, textured using a polymer clay texture plate , and accented with Keum-Bo.

Carol Augustine

Debbie Rijns

I made this piece for an exhibition called "Beautiful Things" for a very big hobby show taking place in Johannesburg next week.
I call it "Neptunes Gift". I wanted to make a piece that looked like it was found in an archaeology dig, something that came from under the deep blue sea after being there for a looooooong time!
Made from PMC3 paste over cork clay, Keumboo, and dipped into Liver of Sulfur. The bails are 1mm hammered copper wire.

 "Gilded Web"	Elizabeth Glass Geltman
 "Dogwood"	Elizabeth Glass Geltman

Box Bead

Susan Dilger

Keum Bo Mask

Hiromi Harakawa

 Empress Ring	Hattie Sanderson
 Large Pearl Silver and Gold Ring	Hattie Sanderson

Lentil Beads

I made these during a keum-boo workshop taught by Celie Fago. I'd like to give her credit, not only because she was a superb and expert instructor for this technique, but also because some of the tearaway textures I used to create these lentil beads were borrowed from her personal stash during the workshop.

Margaret Schindel

"Golden Awakening"

Linda
Kline

 Keum Bo Ring	Tami Morrison

Keum Bo Earrings

Linda Kline

Carnival Earrings

Nancy Miller

 Ginko Pendant	Nancy Miller
 Large Lentil	Nancy Miller

Lentil earrings

Nancy Miller

Ridges earrings

Nancy Miller

Links

PMCC Senior Instructor Sites		
Jewelry By Y2A, Ltd Alice Alper-Rein	**Artique** Linda Bernstein	**Out on a Limb** Sherry Viktora
MED'A Creations Mry Ellin D'Agostino	**PMC123** Sherry Fotopoulos	**Linda Kline Design** Linda Kline
Jericho Wind Arts Ruth J. Greening	**Atelier PAW, Inc.** Hiromi & Kent Hirakawa	**Silver Clay.com** Vera Lightstone
Eclectica Beads Irina Miech	**Precious Metal Clay.Net** Leslie Tieke	**Parkstone Studio** Donna Saint John
	Sage Studios Ann Phillippi	

PMC Related Sites	
PMC Connection	The PMC Connection website, owners of this newsletter.
PMC Guild	The PMC Guild is an educational organization founded in 1997 to promote instruction, research, teaching and exhibition of Precious Metal Clay.
Metal Clay "Lens" on Squidoo	A guide to metal clay resources (artists, instructors, classes, projects, suppliers, etc.)
PMC in Scandinavia	Distributor and Senior Instructor for Scandinavia
PMC Connection Hong Kong	Our partner in Hong Kong
Ceramic & Craft Centre Australia	PMC Distributor in Australia
The PMC Studio	Our partner in UK

Contact Information

Editorial Calendar

Submission Deadlines

Contacting Metal Clay Connection
Editor Linda Bernstein
c/o Mikuni American Corporation, 8900 Mikuni Dr., Northridge CA 91324
E-mail: LBernstein@metalclayconnections.com
Phone: 847-977-4444

We look forward to your submissions: PMC articles, photos and more. Please include your name, description of work PMC work, a short bio, address, e-mail, and phone. Articles and photos should be attachments. Image resolution should be 300 dpi for a 3" by 5" image size. Mail us a CD if the image is over 4MB. All articles become the property of PMC Connection.

Editorial Calendar:
April 2007 Kuem Bo
July 2007 Water etching
Oct 2007 Dichroic

Deadline for submission dates:
January issue Sept 1st
April issue December 1st
July issue March 1st
October issue June 1st

Disclaimer
Metal Clay Connections, its staff, owners, directors,editors and contributors, assume no liability for damages or injury as a result of any construction, design, use, manufacture, or any other activity arising from the use or application of techniques methods or procedures in any Metal Clay Connections or articles or issues.

Website conversion to pdf for archive performed by Amy Ikenn of Skewed Jewelry