Step by step explanations for Tini Muira's demonstration

1. Cover design in scale 1:1.
2. Transfer of design to Washi.
3. Affix Washi to covers.
4. First tooling, hot tool on dry leather through Washi.
5. Second tooling directly on leather with hot tool.
6. Moisten cover leather evenly.
7. Third tooling with warm tool.
8. Fourth (fifth, sixth) tooling with increased heat.
9. Tooling with hot brass tool on dry covers to complete blind tooling.

Gold Tooling

10. Trace impressions with glaire, let dry.
11. Trace impressions a second time.
12. Cut gold.
13. Apply sweet almond oil to areas to be gilt.
14. Place gold onto impressions.
15. Press down with cotton ball.
16. Repeat steps 14 and 15.
17. Heat brass tool, gilt.
18. Remove excess gold with cotton cloth.
19. Use erasure to clean pores of gold dust.
20. If design consists of gilding only repeat steps 10 - 19.

Gold Tooling With Onlay

I. Place wet only leather on form on cover.
II. Press down with palm.
III. Tap down with brush.
IV. Tool with warm tool.
V. Remove only leather, let dry.
VI. Scrape surface of leather on cover inside tooled form.
VII. Cut onlay exactly in tooled lines.
VIII. Wet onlay's good side, paste out flesh side.
IX. Wet scraped surface on cover.
X. Paste onlay down onto cover.
XI. Trace impressions through thin Washi with thin bone folder.
XII. Tool impressions with warm tool.
XIII. Let dry under weight.
XIV. Repeat steps 10 - 19 for second gilding.
XV. Press each cover separately between chromed plates.
XVI. Polish covers and spine.

Blind Tooling With Onlay

A. Proceed with onlay technique after step nine, using steps I to XIII and XV to XVI.
Execution of Cover Design

The cover design is done on a sheet of white paper that has the exact size of the book's covers and spine. A Japanese paper, not too thin, is placed over the design. The height is that of the book, both front edges are ca. 2 inches longer. An ink pad is used to transfer the design onto the Japanese paper. Write the numbers of gouges and pallets used onto the Washi at their correct positions. Wrap the Japanese paper lightly around the covers. The turn-ins at the fronts are held in place with scotch tape. If the design is very intricate, cut small pieces out of the Washi, before the wrapping. Once wrapped around the covers, scotch tape is also applied over the cut out squares, thus holding the Washi in place, while the first tooling through the Washi on the covers is executed. This first tooling is done with a hot brass tool through the Washi onto the dry leather of the cover. For the tooling of the design on the spine you need to place the book into a finishing press.

Take the book out of the press, remove the Washi and begin the second tooling. This is done with a hot tool directly onto the dry leather covers. To determine the right heat you touch the heated tool to a wet sponge. Generally, just when the "sizzling" sound is about to stop the temperature is just right. (The impression from the first tooling are easily visible).

For the next step you moisten your leather with a brush for small areas or with a sponge for larger ones. If you only have a few impressions to tool, you can moisten the whole cover for your blind tooling, but if the design is complex and takes a long time to tool, just moisten parts of your leather. (If you wait too long with your tooling after the leather has been moistened, the impression might have disappeared). Remoisten the leather one more time if necessary and continue your blind tooling by gradually increasing the heat of your tool. To get a beautifully blind tooled line you need to tool about five times every time increasing the temperature. If you work with morocco, this step is especially necessary because the grain is very uneven in height. The surface of the leather has to be "crushed" down to an even level throughout the lines that will be gilt, so that an even gilt line is ensured and not one that shows "cracks" because the gold could not reach down deeper than the impressions made with the brass tools. Only through moisture, heat, and pressure can this be accomplished.

The final blind tooling is now done when the leather has dried. A hot tool is now used and after the tooling is done a rich dark brown "shining" line is visible.

With a fine brush the tooled lines are traced using glair, once dried a second coat is applied.

Next the gold leaf is cut on the gold cushion with a gilders knife into appropriate sized pieces. (I always lay a second leaf of gold onto the first one before cutting (this way I make sure no hairline cracks appear when I press the gold into the
impressions). A pad is made from a cotton ball wrapped in a piece of fine cotton cloth tied up with a string onto which a few drops of sweet almond oil is applied (sweet almond oil is the only oil that will not stain leather). The oil is applied to areas to be gilt to hold the gold in place during gilding. Now the cut gold leaf is transferred with a gold lifter, a piece of bristol board, or fingernails to the oiled surface of the covers. To make this transfer possible you need to touch your instrument of transfer to your face, the oil from your skin will cause the gold to stick for the short period of time required to move the gold from the cushion to the cover. The gold leaf is now pressed gently into the impression with a ball of cotton using a rocking motion of your hand. Apply a second layer of double gold onto the first layers of gold, these four layers of gold make sure that a solid gold line is obtained after tooling. The brass tool is heated and the temperature is checked by the sizzling sound on the wet sponge. The tool is allowed to gently fall into the impression, which is easily visible, when it finds its place almost by itself and sits into the impression the tool is gripped tightly and pressure is used to finish the tooling. When the gilding is done the excess gold is rubbed off with a soft cotton cloth. The scrap gold is collected in a box that has a mesh lid through which the scrap gold filters. With a special gold eraser the gold dust that settled into the pores of the leather is removed. If necessary you can use the pointed tip of an orange stick (for manicures) which is made wet and used to clean the edges of the gilt lines.

If your design consists of gilding only repeat this process starting with the application of the glair.

**Gold Tooling with Onlay**

After the first gilding is finished take the thinly pared leather for the onlay, cut a piece that generously covers the area to be onlaid with that color, wet it on the good side with water and brush the flesh side with paste water, and lay it into place. Press gently with the soft part of your palm without stretching the leather. The impression of the design on the cover is visible through the wet onlay leather. Next, tap the leather with a soft brush on a handle to set the leather into place. The impressions are now very clearly visible. With warm pallets or gouges the form is tooled.

After this tooling the onlay leather is removed and placed between paper and boards under weights and left to dry. All parts and colors for the onlays are tooled in this way, the covers are sponged to remove traces of the past water that might have remained on the surface of the covers. The book is now left to dry between bristol board and pressing boards and weights.

The next step is to scrape the "glossy" surface of the leather where the onlays will sit inside the gild lines to ensure a solid bonding of the leather cover and the onlay.

Now the leather onlays are cut exactly on the blind tooled lines by holding your cutting tool at a 45 degree angle, so that the lighter flesh side of the onlay cannot be seen.
The onlay is then wet with water on the good side and pasted on the flesh side. The scraped surface of the cover is also moistened with water using a brush or small sponge, and the onlay is pasted into its place outlined by the gilt lines. A piece of Japanese paper is placed over the onlay and the outline is traced with a thin bonefolder through the paper. The Japanese paper will pick up any excess paste at the edges that has spread out when the onlay was pressed into place. Remove the Japanese paper and tool the outline with the appropriate gouges or pallets, doing so ensures a tight bonding at the edges. The water from the scraped part of the covers pulls the paste from the onlay into the leather of the cover where it will stick securely. This is the only way to have onlays keep from curling up at the edges when the book is handled over decades, because the edges lay securely in the lower level of the impressions made during the process of blind tooling.

Once the onlay work is completed the book is allowed to dry between bristol and boards and weights.

With the onlays secure the lines are gilt for the second time in the same way as before. This second gilding covers the edges of the onlay.

When finished each cover is pressed separately between chromed plates under high pressure for at least 12 hours to ensure an even surface.

The last step is to polish the leather with a polishing iron. It is heated but not too hot otherwise it might dry out the natural oils in the leather covers. This last polishing gives the leather a "glossy finish, while at the same time smoothing down the grain of the leather. This even surface makes the leather surface more resistant against dirt that cannot settle into the pores of the leather.

**Blind Tooling with Onlay**

If your design consists of blind tooling and onlay proceed with the onlay technique after the first blind tooling and finish up with your follow up blind tooling procedures