



Glossary

Anticlastic – “anti” – different, “clast” – curve, a form with opposing radii, such as a saddle or pringles potato chip. A form that cannot hold water.

Synclastic – “syn” – same, “clast” – curve, a form with radii in the same direction, such as an elliptical bowl or vessel.

Coining – A highly detailed process requiring extreme pressure. The metal is pushed into a hardened steel die creating a form with a flat back or two different forms on either side. We use a reservoir of metal in this technique to flow the metal into the die. Roller printing is another form of coining. This gives us the finest detail, most pressure, limited volume and depth.

Forming – the 3-dimensional “bending” of metal. This is a very vague term describing many processes. In our class we use it to describe a process where the metal is pushed into a form of some kind and keeps the same general thickness. It conforms to the die creating “mountains” and “valleys” on both sides of the form. Embossing, bracelet forming, silhouette die, non-conforming die, etc. are all examples of this.

Deep draw – a method of creating lots of volume for creating vessels and tubing. The dies required are more complex but the end result has an even wall thickness throughout, unlike raising. Can be used to pre-form vessels for raising, spinning, or for creating seamless ring stock.

Blanking – the rapid cutting of flat forms. This process uses simple steel dies to cut out different forms from sheet stock in varying levels of complexity. More complex form requires more complex die. More complex dies can be used to cut 3-D formed metal as well.

Urethane – or poly-urethane, is a polymer that maintains a constant volume, it is not compressible. It behaves as a solid-liquid. Used extensively on the hydraulic press as a mate to our steel dies. It conforms to the shape of the die forming the metal against it. Durometer is the measure of how hard it is which gives us different working properties, we use 60D to 95D. 60D is the softest and is useful in creating volume. 95D is the hardest and tends to give more detail but less volume.

The **ARCH** – first popularized by the romans, it can make delicate things strong, in many cases when we are forming metal we are creating arches, giving strength to thin metal. We use this to our advantage in techniques such as embossing and anticlastic and synclastic forming.

Containment – For certain processes we contain the urethane in a steel box of some kind to maximize efficiency and control the flow of the urethane. Without containment the urethane takes the path of least resistance. We see this happen in every process and use it to our advantage. We do not use containment with some techniques.

Delrin (trade name, common name - acetyl)- an industrial hard plastic used for its lubricity and easy machining capabilities. Can be used as a die to shape metal.

Matrix die – aka **Silhouette Die** – generally an acrylic die, can be metal as well, that is simply a cut out silhouette of a shape. This technique creates a simple pillowed form with a specific outline