



Advanced Pen Making & Casting

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Background – Mark Dreyer

- Pen Making For Over 25 Years
- Demonstrator
 - AAW (Atlanta / Portland / Virtual Feb IRD)
 - Woodturners Worldwide
- Penmakers International
 - Midwest Penturners Gathering
- Regional Symposiums
- Local and Virtual
- “10 Minutes To Better Penmaking” - YouTube

Agenda

- Basic Color Casting
- Standing Apart In Wood and Acrylic
- Casting
 - Embedded Objects
 - Label Casting
- Interactive
 - Questions Are Encouraged

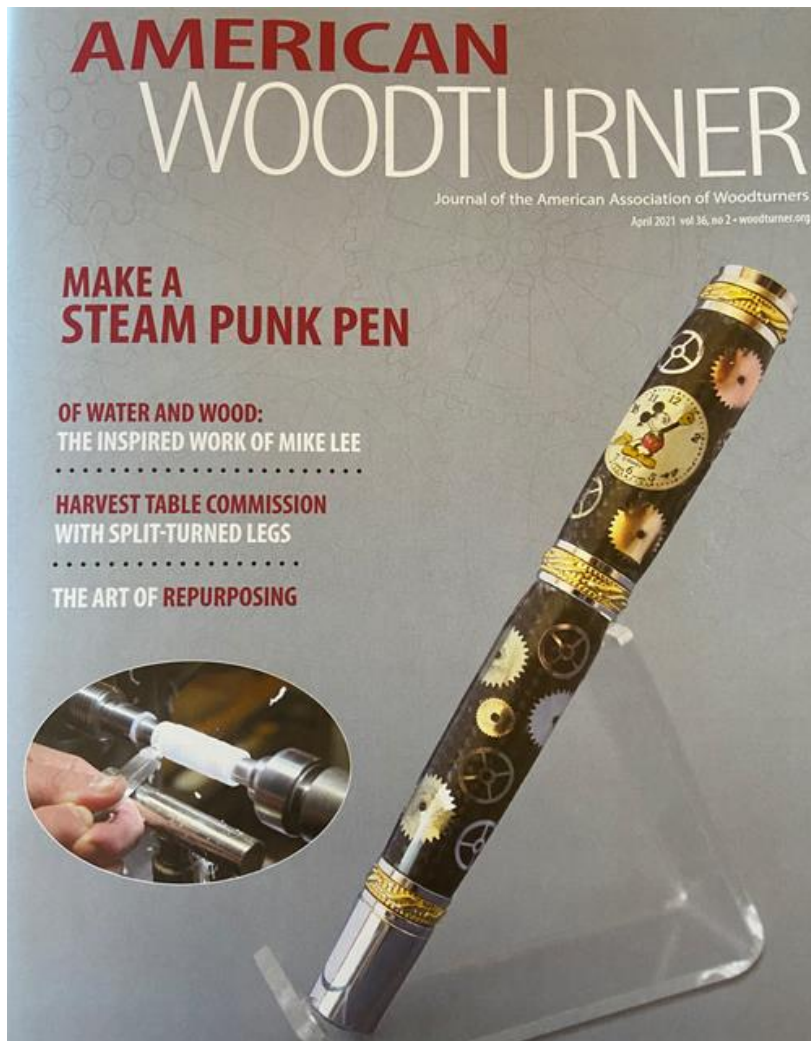


Personal Disclaimer

- These Are Just My Techniques
- Enjoy The Journey
 - Figure Out The Best Way For You
- Take A Hands On Class
- Teaching Kids Vs. Mentoring Adults
 - Watching Over
 - What Am I Doing Wrong
- Love Of The Game



Background



Inspiration



Types Of Materials



Inspiration



Inspiration



Let's Get Started



Safety



Color Casting - Demo

- Molds
- Getting Ready For The Pour
- Mixing – Your Thumbprint / DNA
 - Per Color
 - Per Batch
 - Sequence
- Release Spray
- Pressure Pot



Tools Set

- Safety Equipment
- Mold
- Scale
- Paper Cups
- Resin
- Colorants
 - Mica Powder
 - Dyes
- Drill / Bit
- Pressure Pot
- Air Compressor

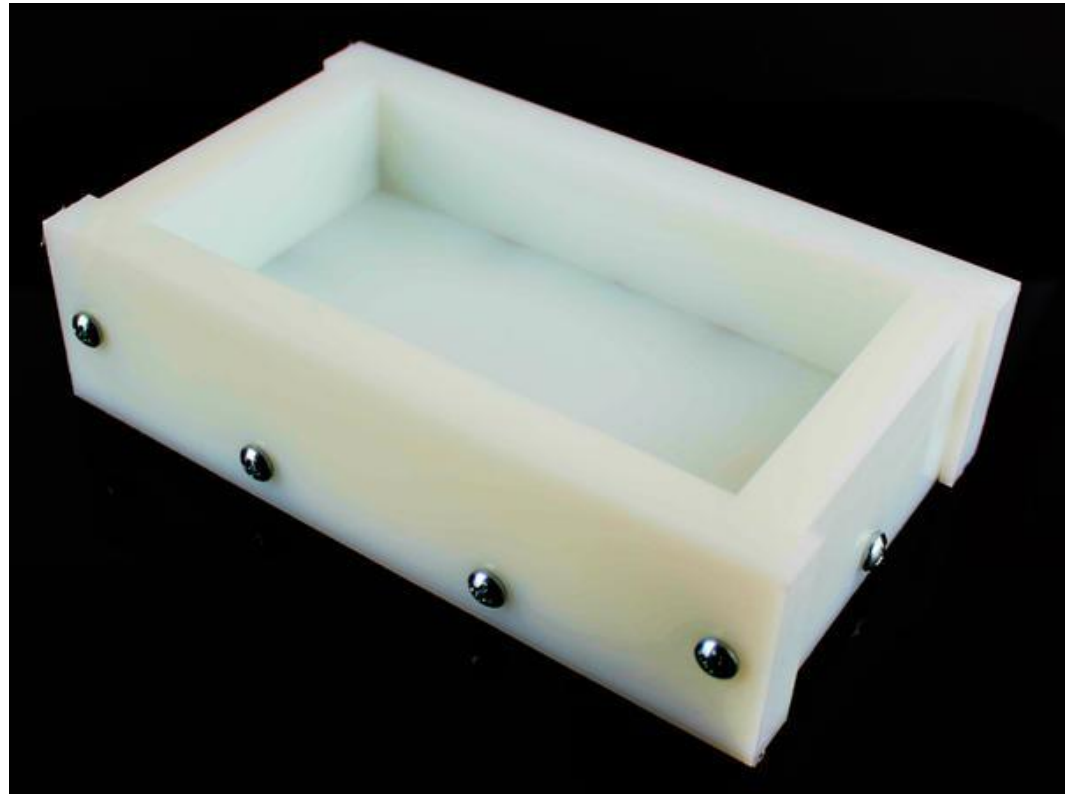


Color Casting



Making Your Own Molds

- HDPE Cutting Board



Other Techniques To Stand Out

- Coloring Wood
- Segmenting
- Natural Solid Materials
 - Deer Antler
- 3D Printing
- Stabilization
- Metals
- Closed End

Coloring Wood

- Coloring (Demo)
 - TransTint
 - Dye
- Bleaching (Demo)
 - Wenge
 - Black Palm



Standing Apart In Acrylic



Standing Apart In Acrylic

- Painting The Hole (Demo)
- Tubes Vs. The Hole
 - Effectiveness of Light Passing Layers
- **Understanding Light**

■ **Style**



Segmenting



All Pens Created And Photos:
Mark James

Stabilization

- Allows for turning of wood that would be impossible to turn otherwise
- Dry the blank
- Stabilization “Juice”
- Vacuum Chamber



Basic Steps

- Select seven or eight pieces to be your “test group”, weigh it and record.
- Dry all the wood at about--215 degrees Fahrenheit for several hours. Wood is dry when your “test group” does not change weight between tests (one test each 90 minutes or so.
- Place blanks in vacuum chamber and weight down
- Add stabilizing resin to completely cover blanks 2-3” over the blanks
- Apply full vacuum to chamber and keep your vacuum pump running until bubbles stop (being careful not to allow the juice to bubble into the vacuum connection and run up the hose)
- Release vacuum and soak blanks for at least twice as long as you had them under vacuum (can go days)
- Remove blanks
- Wrap in foil
- Cure at 190-200° F (87-93° C) until cured (3-4 hours)
- Remove foil
- Allow to cool to room temperature

3D Printing

- PLA Filament vs. Resin
- Single Cast Blanks
- Double Cast Blanks



Other Techniques

- Non “Man-Made” Materials
 - Antler
 - Deer / Elk / Moose / Caribou
 - Corian
 - Aluminum
 - Other Metals
 - Baskets Of Illusions
- Closed End Pen Making
 - The Grabber
 - Dedicated Mandrels

Deer Antler

- Special Alignment
- Drilling On The Lathe
 - Jacobs Chuck
 - Holding
- Leaving Some "Bark"

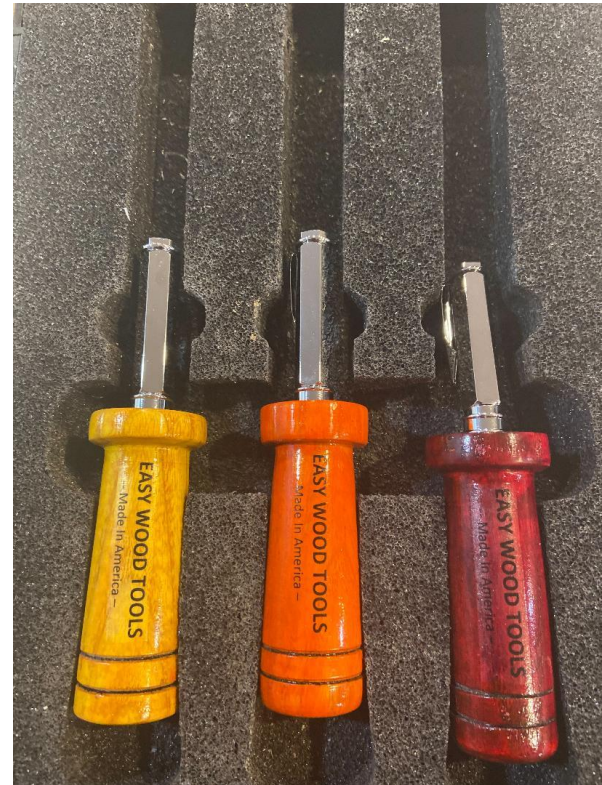


Aluminum Rod



Closed End

- Special Mandrel
- Objects Can Take On Other Forms



Casting Ideas



Photo Courtesy Of John Underhill

Casting - Ideas

- Stamps
- Stickers
- Carbon Fiber
- Snake Skin
- Watch Parts
- Alligator Jaw Bone
- Abalone
- Crushed Penny
- Sheet Music



Casting Materials – “Let The Blank Tell You What To Use”

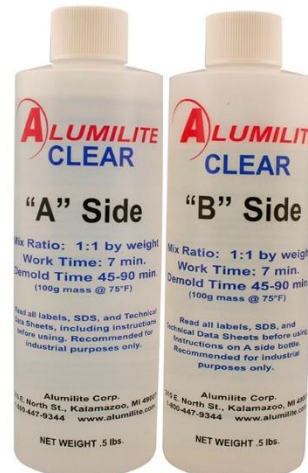
SILMAR 41 (PR RESIN)

- Longer Open Time
- More Vibrant Finish



ALUMILITE

- Embedding
- Smell
- Setting Times (Slow / Clear)
- Setting Time



EPOXY & UV

- Embedding
- Smell
- More Fool-Proof
- UV Ready In Minutes



Starting To Cast

- Color Casting
- Embedded Objects
- Clear Casting



Clear Casting Techniques

- Safety Is A Must
 - Gloves
 - Eye Protection
 - Ventilation
- Sample Blanks
- Material
 - Silmar 41 vs. Alumilite
- Molds

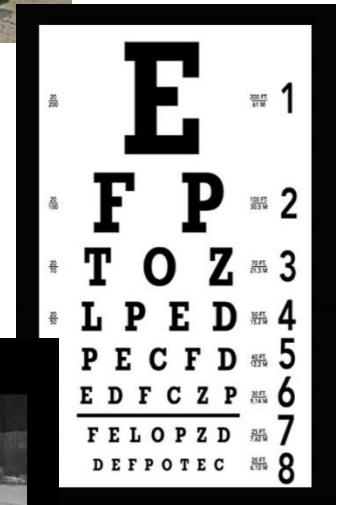
A Word On Copyright

- Cannot Simply Copy An Image From The Web
 - Sports Team
 - College Teams
- Permission From The Owner
- Applying For Copyright
 - US Government
- Google
 - Royalty Free Images



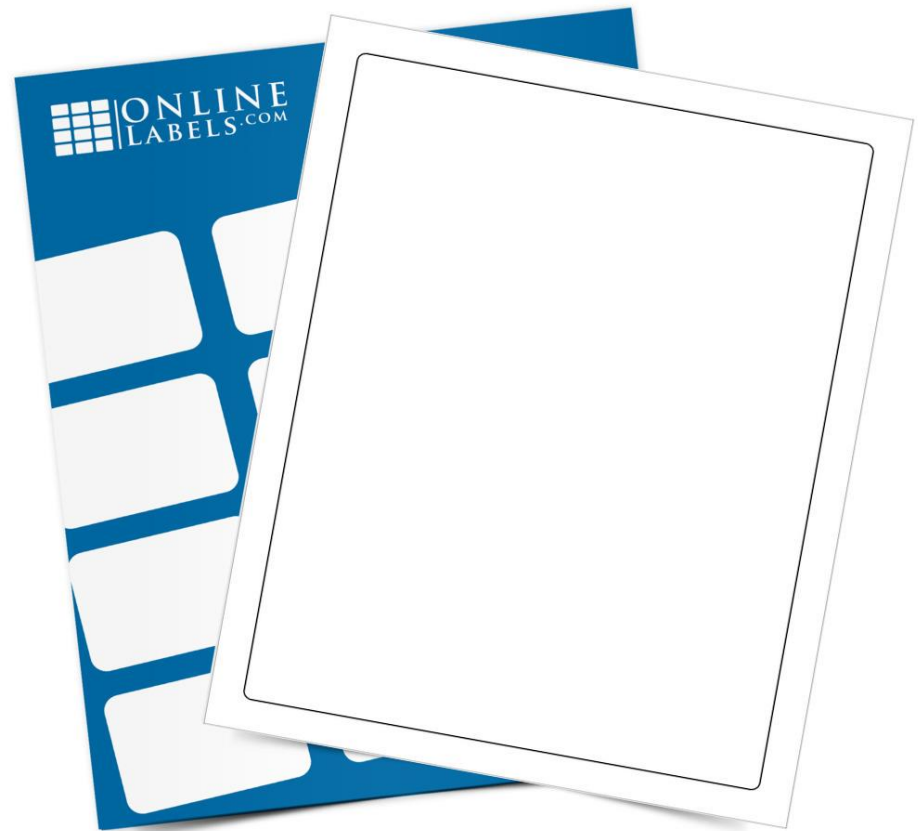
Label Casting

- Sizing The Image
 - Oversizing The Image
- Hiding The Seam
 - Borders
 - Creative Cutting
 - Synthetic Bleed
 - Sharpie
- Using Word
 - Using Borders

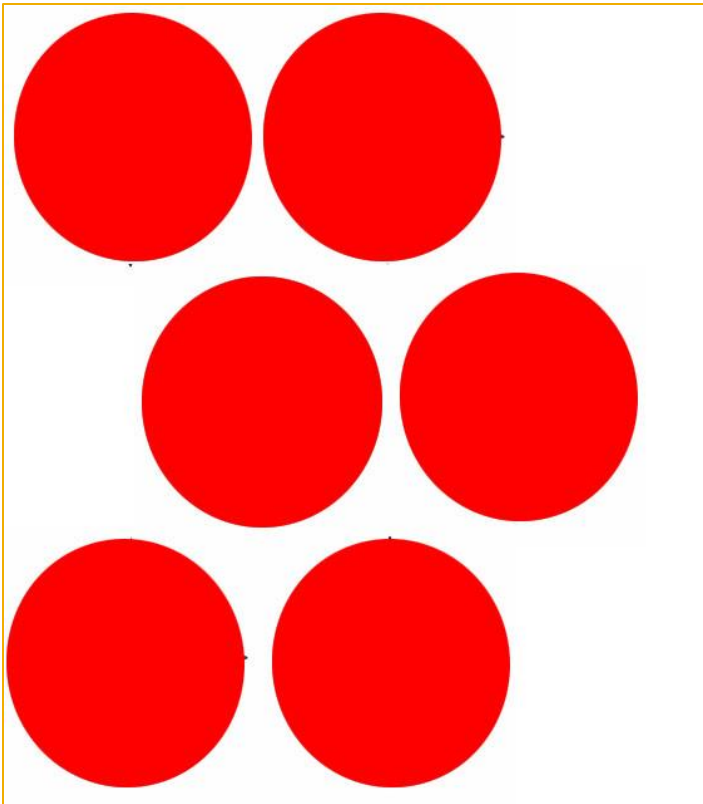


The Secret – The Paper

- OnLineLabels.Com
- Weatherproof Labels
 - Inkjet Vs. Laser
 - Matte Vs. Gloss
- Label Size
- Some History
 - Back Painting
 - Sealing



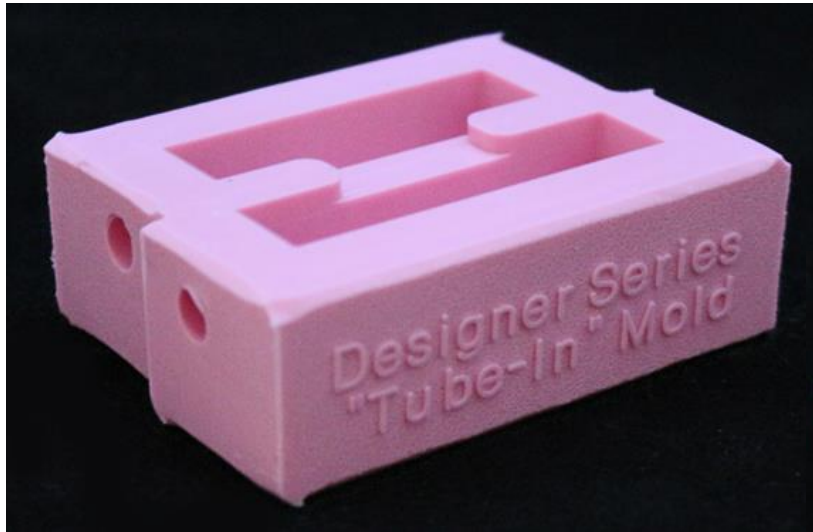
Red Dots – Pseudo Origami paper



Casting – Molds

PTownSubbie Casting Molds

- Clear Casting Vs. Color Blanks



Molds Courtesy Of:
Fred Wissen
<http://www.ptownsubbie.com/>

Vertical Casting System

Underhill Casting Solutions



Vertical Casting System



Vertical Casting System



Adding Some Pressure



Other Castings

- Playing Cards
- Medallions
- Abalone Shell
- Nature
- Carbon Fiber
 - Real
 - Image
- Watch faces

Pairing With
Component Sets



Question and Comments

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- 10 Minutes To Better Pen Making
- IAP: mg_dreyer

