

CONEJO VALLEY WOODWORKER'S ASSOCIATION

The Bladerunner

P.O. Box 1838, Thousand Oaks, California 91358-0838

www.cvwa.org

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Issue #141

Editor's Message

December's meeting will be the culmination of all our toy projects, showing of the toys, thanking the members who put in the work and time, and transporting the toys to Interface for distribution to the kids. Due to time constraints, there will be **no Show n' Tell**.

Upcoming Events

<u>Date</u>	<u>Event</u>	<u>Location</u>
Thursday, December 6 th	Meeting: Presentation of Toys	Redwood School
Sunday, December 9 th	Holiday Potluck & Gift Exchange	Stephen Case-Pall's
Thursday, January 6 th	Regular Meeting	Redwood School
Wednesday, January 16 th	Informal Breakfast at "Pickels"	Pickles Deli

Bus trip to Woodworking Show

About 30 members, along with three guests from **Channel Islands Woodturners** boarded our chartered bus to the Woodworking Show in Costa Mesa. **Chuck Pearson** had made the arrangements, rentals, food and drinks, and we arrived just in time for the opening of the show. While the music was better this year, the bus driver never changed the disc, so we were a bit tired of Garth Brooks by arrival time. As usual, most of us spent more than anticipated on new toys. Most of us seem to feel the woodworking shows are declining in both size and quality, and the Costa Mesa show, usually the best, had large portions of the buildings fenced off, leaving a smaller show than expected. I suggest this is due to the increase in internet sales. The return on investment for these shows is steadily declining. There's a huge expense in renting spaces, hauling tools, paying salaries for salespeople etc. which is offset by online sales. I think we'll see a continual decline until they stop altogether.

On the way home we were treated to one of **Tim Albers** better woodworking quizzes. This years prize turned out to be a handful of plane shavings, that I'm not sure was appreciated by either the recipient or the bus driver.



Chuck Pearson, Andrew Purdy, Paul Brockway and Brad Ormsby discuss Lie-Nielsen planes at the show.



Robert Holmquist asks a question at a booth.



How could you resist?



Bill Bottocchio looks skeptically at the sellers promise to make him a better woodworker.



Tom Denton pays close attention to one of the seminar presentations.



Stan Wolpert watches for sleight-of-hand tricks.



Uh oh, we've been caught!!



Paul Brockway takes a shaving home as a souvenir.

A visit to Forrest Blade Manufacturing

By an Anonymous Member of the CVWA

It was an unseasonably cold afternoon. An early rain storm blew over that morning of November 7, 2007, and in its place a cold front left the afternoon air clear and cold. Although cold, the air was fresh with excitement, as I drove west on route 3 headed for Clifton, New Jersey.

Just by chance I happened to look a bit closer at the map as I was leaving New York City. It took me just a minute to realize why Clifton, located just a few miles west of the Lincoln Tunnel seemed so familiar. Then it came to me, Clifton is where Forrest Manufacturing Company is located. Forrest Manufacturing makes that near perfect woodworking accessory, the Woodworker II saw blade. Don't get me wrong, Forrest makes all kinds of saw blades, from small 4" blades to ones larger than 20" in diameter, but it's the Woodworker II that is spoken of with awe wherever woodworkers gather.

It was about 3:30 that afternoon when I pulled up in front of 457 River Road. The building is in a small, aged industrial area alongside a busy expressway. Finding a parking spot amongst the rows and rows of double and triple parked cars told me that Forrest had grown considerably.

But before I continue to narrate my adventures at Forrest Manufacturing, it's probably a good idea to review a little about the company. Forrest was founded in 1946, and has been in this same location almost since the beginning. The company was founded by Jim Forrest Sr.'s dad as a small saw sharpening business. Jim Sr. worked for his dad and expanded the sharpening business over many years and finally began producing his own line of saw blades in the 1960's. And, as the saying goes, the rest is history.

I wasn't sure what to expect as I walked up the two steps and grabbed the cold handle of the ubiquitous glass door. It's not often these days when you can walk into a business, introduce yourself as a customer and ask for a tour. But it is worth asking for. The woman at the front desk was writing daily sharpening receipts down in a brown ledger book with no computer in sight. She greeted me and after hearing my request, asked me to wait for a few minutes, and returned with Doug Aquino. Doug was wearing a long blue lab coat and introduced himself as the Technical Sales and Service Manager. He confirmed that I had asked for a tour and seemed excited about explaining the business to me.

The office area, in the front end of the building is clearly dated with a mix match of office furniture, book cases and somewhat dated sales literature. Following Doug about twenty feet straight back from the front door, we entered the manufacturing floor. There was no doubt that I had certain preconceived notions about what I was going to see – I was expecting some high tech CNC machines. But I had no idea just how far I was going to walk back in time. Don't get me wrong – this in no way applies a negative thing. To the contrary, I was in awe of the place. The dimly lit manufacturing floor was filled with grinding stations, massive manual milling machines and

lathes, hand brazing workstations – even the swimsuit models pinned up on every wall. And the place was filthy, not just a bit dusty from the day’s work, but downright filthy with many years worth of grinding dust and metal working coolant.

Doug started the tour in essentially the middle of the warehouse, where saw plates were stacked on a wooden table. Forrest buys the saw plates from Peerless Saw Company. The plates arrive at Forrest’s facility cut to shape and sized to make a specific saw blade. The fresh plates are loaded, one at a time, on a rotary table. Held down by only gravity the plates spin, while an operator runs a surface grinder over the top of the plate taking off only a few thousandths of an inch at a time. When the first side is ground flat, which the operator determines based on the sound of the grinding, the plate is flipped and the second side is ground.

From there the plates are loaded on one of the many grinding machines where the shoulder that supports the carbide tooth is ground perfectly straight and flat. Peerless laser cuts this area which is technically known as the “seat pocket”. But the guys at Forrest are sticklers for quality and know that they will get the best bond between the plate and carbide tooth by grinding a perfectly flat and straight seat pocket. After this operation it gets a quick cleaning and it’s on to the brazing station.

While the brazing process is done by both hand and machine, Forrest currently employs four full-time brazing employees. The employees primarily work on small batches of blades, usually about 10 or less. While I was there one employee was working on a small batch of ten plastic cutting blades, while another employee was making a batch of only four 16” table saw blades. Woodworker II blades and some of their miter blades are brazed on one of the company’s two automated brazing machines. These machines are located back in the shipping area of the facility – clearly a modern addition. These machines, can of course, work 24 hours a day without breaks and since the carbide tooth is brazed with electrical

current to generate the heat, there is less chance of warping the saw plate.

Working in a cramped corner of the manufacturing floor, closest to the make-shift break room, the manual brazing employees appear to be at the head of the pecking order. They each had their own small cubicle-type enclosures surrounding their workbenches. They had vintage metal stools and each had their own radio on a shelf. The workbenches, metal frames with wood tops, had been used for decades and their appearance demonstrated this fact. This was certainly one of my favorite stops on the tour. I could have watched these guys for hours as they methodically placed a saw plate on the rotary work surface, reached into the metal coffee can and scooped out a handful of carbide tips placing them one at a time around the blade. When finished, they donned their goggles and picked up their lit torch. With one hand they held the torch on each tooth and with the other hand, fed the solder with their thumb and index finger, while slowly rotating the blade with their pinky finger. The manual brazing operation is certainly more flexible and surprisingly – it’s also faster. One of Forrest’s experienced brazing employees can produce twice as many blades in a given hour than one machine!

All manually brazed blades are heated in a furnace for several hours to help solidify the bond between the saw plate and the carbide teeth. After brazing the blades get a quick cleaning on a custom built machine, which at first glance scared the heck out of me. As we walked past the furnace and stifling heat radiating from the recently opened door, I almost couldn’t watch as I saw a young kid, he appeared to be in his early 20’s grab a spinning saw blade between his palm and fingers and stop it. My immediate reaction was to yell something, but then I realized what was happening. You see, this custom built machine – essentially a vertical steel plate, motor and a saw arbor protruding from the middle – was spinning the blades in reverse. What I was witnessing was the operator placing a blade on the arbor and hand sanding the excess bits of solder and flux stuck to the sides of the blade. Literally

tearing a small piece of sandpaper from a sheet and sanding the sides of the blade with his fingers backing up the sandpaper. It certainly gets your attention to see someone literally take a piece of sandpaper to the side of a table saw blade and then when the power is shut off, grabbing the blade to instantly stop it from spinning.

Once the blades are cleaned, it was off to one of three guys who essentially sat in dimly lit, phone booth sized offices, with only a half shielded florescent light on the wall. In front of them was a manual arbor press and to the side, a fixed saw arbor and dial indicator. While I was mesmerized by the manual brazing operation, I was awestruck by the hand flattening operation. These three employees used short straight-edges, some only 2" long, to measure and then hand flatten each blade! I watched as one of the guys was working on a stack of Woodworker II saw blades and another was working on a small stack of extra large blades. What an amazing thing it was to see as one at a time they would hold the saw plate on their finger tips while using their other hand to place a straight-edge horizontally across the plate. They would look for light under the straight-edge and then quickly set the blade on the press. Based on their years of experience they would apply varying amounts of pressure to areas of the plate. They would continue this process until no more light was detected. At this point they placed the blades on the arbor and measured each blade just below the tooth. Each blade was straight to within a thousandth of an inch. As with many tasks, I'm sure with experience the process is not that difficult, but to the untrained eye it appeared to be a daunting step.

We continued our tour and followed a newly flattened stack of saw blades to the grinding and sharpening area. Forrest begins the process by grinding the steel saw plate directly behind the carbide tooth. This is done to remove any remaining solder and help eliminate any potential of flux or solder material from contacting the diamond wheel that is used to grind the carbide teeth. All four side of each tooth are ground. The sides are ground to achieve a very slight side taper – only about 1 degree. The tops of the teeth are

ground to equal heights and finally the face of the blade is sharpened. Sharpening, like brazing, occurs on both automated machines or by manually operated grinding machines. And, for the same reasons as described above.

Completed blades are sent to the shipping area where they are acid etched with the Forrest name and blade type – again all by hand. This job gets assigned to the most recent employee of the company. A young kid named Carlos applied a plastic cutout on the blade and then sprayed the blade with a type of acid to etch the blade. After the acid is neutralized and the now completed blades cleaned once again, they are dipped in a 55 gallon barrel of WD-40 and just the teeth are dipped in a hot melt plastic coating to protect the cutting edges for shipment. The final step is for the blades to be packaged in a very secure shipping container. Forrest takes pride in their shipping containers. One of their reasons for selling blades in such a solid package is that they want their customers to keep the packaging to return blades to them for sharpening.

And, in addition to all of the above, it's no surprise that Forrest runs a full service sharpening business. Customers send them everything from saw blades to planer knives to carbide tipped router bits. On the day that I visited, they were busy sharpening saw blades. Like many other things at Forrest, each blade received at their door for sharpening or repair is manually logged in a record book. On November 7, 2007, they had entries for about fifteen packages, each containing between one to ten blades. The log noted the customer, blade types and condition.

The blades are identified by their serial number if they are Forrest blades, or if another brand, they are engraved with the customers' name. But before the blades just get tossed on the automated grinding machine, similar to everything else at Forrest they get put through a dizzying number of steps – from a ten minute plunge in an ultrasonic bath, to further inspections and verification of tooth geometry. Finally, the blades are sent to one of Forrest's' sharpening operations.

It was getting close to closing time, but the heavy workload and dedicated employees continued their individual work without hesitation. One employee was busy repairing a custom made 18" aluminum cutting blade. Forrest had originally made the blade for a horizontal beam saw for a metal supplier. Unfortunately, misuse by an inexperienced employee caused nearly 3" of the blade's circumference to be completely torn away from the saw plate. I was astonished to watch as an experienced Forrest employee worked to weld a new plate section to the damaged area and then grind the new section flat with the rest of the blade. From there the blade would be sent back to be straightened, then grinding, and finally sharpening. I would never have thought that a blade with such severe damage could be repaired.

By this time, I had been at the Forrest facility for nearly an hour and half. Much to my surprise and my pleasure, Doug was in no hurry for me to leave and continued to answer my sometimes pathetic questions. But I felt if I didn't leave, I might miss my flight home and it would be difficult to explain how I missed my flight because I was so engrossed in the tour of a circular saw factory...

But before I left, I stopped by their sales desk and placed an order for a new Woodworker II, okay, maybe I ordered a couple blades. Okay, so I ordered about a dozen! It's not often that I have the opportunity to visit an iconic woodworking brand like Forrest. Before I left I had the opportunity to meet two of Jim Sr.'s kids. Jim Jr. works on the manufacturing floor and makes many custom blades. Jay operates the front office and oversees all sales. Finally, at about 5:15, I left the building with a hat, coffee mug, pencil and notepad, and a few nice Forrest blades. Never forgetting my friends in the Conejo Valley Woodworkers Association, I brought with me a Thin-Kerf Woodworker II Blade and one of their brand new Box Joint blades for making precise 1/4" and 3/8" box joints. These will be used as awards for upcoming challenges.

January Challenge

Don't forget the challenge for January is to make a tool from wood. This can be any kind of tool, serious or not. Give free reign to your imagination. The prize is another of that hot new item, the "Tilt Box" by Beal Tools. It's a digital inclinometer for your any saw. You zero it on your table, then attach it magnetically to your saw blade. As you tilt your blade the Tilt Box reads out the angle accurately to one hundredth of a degree! It can be used for the table saw, band saw, even the scroll saw. It's being repeated by popular request

Raffle Prizes

If there's a raffle prize you would like to see in our raffle, please let **John Knittle** or **Stephen Case-Pall** know about it. We'll try to get it. The raffle is one of the things that the club provides, usually at a loss, with your dues.

John Knittle has selected only the finest of gifts for this holiday season raffle:

Member prize - Combination square - very delicate, but manly enough to own.

General raffle items - 4 piece butt chisel set - nicely done in the European style.

Sorby Sandmaster - for the wood turner who works on a small scale.

Hunter number 4 tool cutter - a wood turning tool that will make you to throw out all the rest of your tools.

Irwin 48 inch parallel clamps (2 each) - heavy duty, but with a most gentle touch.

50 inch all-in-one twin clamp with measuring tape - for the big boys who love to play with plywood.

By the way, thank **Gene Moutes** for volunteering to take over the raffle. Without him we wouldn't have a raffle this month.

Holiday Potluck & Gift Exchange

Sunday, after December's meeting is the Holiday Potluck, from 11 to 3, at **Stephen Case-Pall's** in Santa Rosa Valley. I want to emphasize that this

is for **all** CVWA members and their partners. Maps will be available at the December meeting. We'll continue the popular Gift Exchange: Make something for a gift, and wrap it with your name on the inside, and no name on the outside. Each person bringing a gift will receive one from the group. It's been loads of fun in the past, and gets better each time. Bring something for the potluck of your choice; entrée, salad, desert etc. It always works out evenly for a great feast. There will be a drawing for members for a \$100.00 gift certificate. Wine, beer, soft drinks and water will be provided by the club, Since we no longer have our CVWA chairs, they're in short supply. If you can bring a couple of your own, you'll be assured of having a place to sit and eat.

Special Interest Groups

There was a good response to the SIG proposal made by **Rob Hobman** at November's meeting. Rob will bring the sign-up board to future meetings and update us on the organization of the groups. Please don't feel you need expertise to be a group leader. It's only to facilitate the meetings of the SIG's. Volunteer and make it a go!

Woodworker of the Month

This month's Bladerunner features our past president, **Arlen Handberg**. Surprisingly, Arlen wasn't a woodworker when he joined the club about 7 years ago. He found us on the internet, and liked the club. Most of us know him from his presentations, particularly on routers, and his term as president. He's a highly skilled woodworker today, and is truly a "poster-boy" for the maxim that you get most out of a club by participating actively in it's workings.

He says that most of his skills have developed through club participation; meetings, toy workshops, other workshops and making presentations.

Originally from South Dakota, he's lived in our area since 1960, not counting an Army stint in Viet Nam as a radio teletype operator.

A few years ago, he started **Grandpa's Toys & Crafts** selling his toys at craft fairs. Toys are his

favorite media to work in wood, and he's become a master at building jigs to facilitate their construction. It seems that selling was a natural progression. It keeps him rather busy during the craft season from September to mid December. He also converted a very large chicken coop on his property into a large, air conditioned, well lit shop that is the envy of most who see it. He's also in the process of remodeling his kitchen, which includes raising the ceiling. While he credits the club for developing his skills, we, and our club have gained a great deal from his participation too.

Thanks Arlen!!



Vendor List

The following vendors support us by offering discounts to those with a valid membership card.

Conejo Hardwoods, 31275 La Baya, Westlake Village. 805 497-0025

Far West Plywood. 18450 Parthenia St. Northridge. 818 885-1511

Lane Estanton (H&M Hardwood) 19 Aviator Ave. Camarillo. 805 987-3877

Integrity Wood Products. 7836 Alabama Ave. Canoga Park 818 704-7490

Mayan Lumber 2930 Los Olivos, Oxnard 805 981-4555

Roadside Lumber & Hardware 29112 Roadside Drive, Agoura Hills 805 497-1486
Code: 1230

Rockler Torrance. 20725 Hawthorne Bl. Torrance. 310-542-1466

Siggia Hardware. 16260 Raymer St. Van Nuys 818-787-1650

Sign up on www.siggia.com and mention CVWA for contractor pricing

Sun Brothers Enterprises. 4350 Eileen St. Simi Valley 805 526-5794

Conejo Electric Motor. 31200 La Baya #305 Westlake Village 805 495-0556 See Bill Butler

Woodcraft Beach Bl. @ 22 Fwy. 10% excludes sale items and power tools.

Rockler Pasadena

(All prefixes are 805)



Unnamed CVWA member on his way to Harbor Freight for the big Black Friday sale.

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Our founder, Friedrich the 3rd.