

# CARBIDE PROCESSORS, INC. NEWSLETTER

## Get Better Saws - Research Update

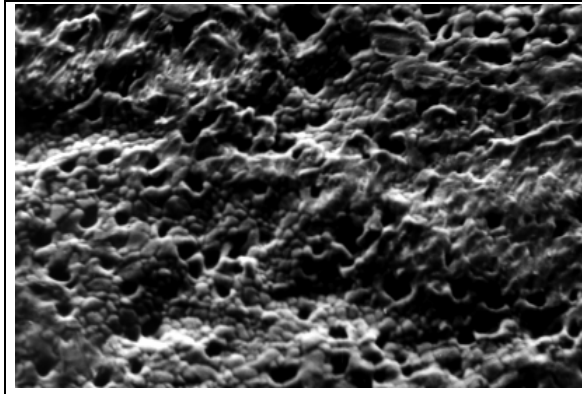
### Eliminate Tip Loss

#### Cold Anvil Brazing

The temperature of the room can influence the quality of brazing. Tips brazed first thing in the morning, tips brazed Monday mornings and tips brazed after a sudden colder temperature change can cause problems. There will be more tip loss from tips brazed on cold anvils than tips brazed later in the day on a warm anvil. The fixture or anvil works as a heat sink. It takes heat away from the braze joint. The colder the anvil is the more heat it can and will absorb. For example, ice water will take heat out of your hand a lot faster than warm water although both are less than body temperature.

This is really critical with torch brazed joints because the bottom of the joint flows differently than the top of the joint does anyway. The bottom of the joint is always colder than the top of the joint where the flame is applied.

A cold anvil can make a big difference. With a cold anvil the braze alloy will flow to make an excellent joint on the top where the torch is applied. (Continued on page 6)



### BSE Image 1000x Toney Process

#### Toney Process Analysis

The L.B. Toney Co. has a process that cleans carbide so that it brazes well. We used a scanning electron microscope to examine the Toney treatment. The picture shows a surface that looks like bubbling mud with holes in it. A backscatter electron analysis shows the heavier elements as lighter areas. The lighter areas in this photo are Tungsten and the heavier areas are Cobalt. An analysis of this as a graph confirms this data and also shows the presence of iron at about 5% to 7%. (Continued Toney,P.3)

#### Brazing Preforms for Sale

You can now buy our exact fit saw tip preforms. You can get them in lengths, widths and radii (radiuses) to fit most saw tips. We offer a wide variety of alloys and material thicknesses.

### Economic Good News

The economy seems to be doing well. We are hearing more stories of people hiring and trying to hire. We are running an advertisement on page 10 of this newsletter. It is from a good sized shop in NC. There are positions open in sales and in the shop. The owner really hopes that someone will answer the ad.

We are adding an engineer to our Research and Development activities. We are also considering adding a student as a summer intern.

We are seeing cautious hiring activity to accommodate growth throughout the industry. This is combined with complaints about how difficult it is to find good people. These two activities seem to indicate a good, healthy growing economy.

#### Inside This Issue

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## Make More by Doing Less

A good way to make money in a business is to limit yourself to doing the things that make you the most money.

Let's talk about a \$10.00 part. Your cost to make it yourself is \$8.00. If you make it yourself instead of buying it then you save \$2.00.

Let's say that you also manufacture your own product line. Here you also spend \$8.00 to make something but you sell it for \$12.00. You make \$4.00.

Example #1: You make 1,000 parts someone else could make. You also make 1,000 parts only you can make.

	Part A -- 1,000 parts	Part B -- 1,000 parts	Total -- 2,000 parts
Cost	\$ 8,000	\$ 8,000	\$16,000
Selling price	\$10,000	\$12,000	\$22,000
Gross profit	\$ 2,000	\$ 4,000	\$ 6,000

Example #2: You quit making Part A which you can buy for \$10.00 then you can devote all your resources to making Part B.

	Part A -- no parts	Part B -- 2,000 parts	Total -- 2,000 parts
Cost	-0-	\$16,000	\$16,000
Selling price	-0-	\$24,000	\$24,000
Gross profit	-0-	\$ 8,000	\$ 8,000

The same assets and the same work make you more money. You don't try to make Part A. You buy it. You concentrate on Part B where you make more money.

I learned this from three different customers. These people are very successful.

Customer #1: The first customer is big. He manufactures custom saws, stock saws and is a full sawmill and saw shop supplier. He manufactures and resells. He absolutely refuses to do anything that doesn't meet his very high margin standards. The only exception is in the area of quality. He will spend the money on his own lasers or his own heat treating to get the absolute top quality he demands.

Customer #2: This customer manufactures custom saws and distributes sawmill equipment and supplies. He doesn't buy anything he can have someone else make. He doesn't see any need to buy lasers or install heat treating when there are several excellent suppliers for these. He is investing the money into building additional US and Canadian operations.

Customer #3: This customer started out sharpening saws for sawmills and everybody else. Now they manufacture, distribute and sharpen saws and tooling for very high end applications. The managing partner estimates that he can easily lose enough profit to equal 2% or 3% of his total sales if he gets sidetracked from his core business.

These are three different approaches but they all come down to the same thing. The way to success in business is to concentrate in one area and do it extremely well.

### Customer Service

Carbide Processors, Inc., Creed: First is the **CUSTOMER**; Always the **CUSTOMER**; Nothing is more important than the **CUSTOMER**; At the very minimum we will give the **CUSTOMER** exactly what they want, when they want it;

We should constantly strive to perform so the **CUSTOMER** is thrilled.

### Toney

Continued from Page 1

The holes appear to be about 3 microns across which is about the size of the Tungsten Carbide grains. It appears that this surface is slightly rougher than that of untreated Tungsten Carbide. In addition the holes mean that the silver solder can flow into the holes and bond physically with the surface.

## Reduce Carbide Breakage

Proper pretinning can actually make a saw tip a lot harder to break. This is a new concept in saw brazing. Traditionally silver solder was only used to hold the tip in place. Now it appears that the right solder, properly applied, can make a saw tip a lot harder to break.

We had always thought that the solder acted like a cushion between the carbide and the steel. George Bellwoar at Engelhard is speculating that there may be a combination of factors that act together to give much better results than you would expect. George used the example that a sheet of plywood has a strength much greater than you would expect if you just added up the strengths of the individual layers.

## Solder Comparison

A50N vs. A56T

These two solders appear to be about identical in their ability to resist impact breakage. In order to test these materials we first built an impact weight drop tester. We had two identical blades built by Cascade Southern Saw Co. We then dropped an exact weight from a measured height onto the side of the tips. The A50N showed tip breakage and loss at an average of 1.08 and the A56T failed at an average of 1.11 foot pounds of delivered impact energy. This is less than a 3% difference.

## -Overheard on the Radio-

He used to call me "Little Lady" so I would call him "Big Senator."

## Six Sigma Update

World Class Quality in Saws

Research Priorities

The problem with tip loss and breakage seem to fall in several areas. First, the surface of the carbide is not a good surface for brazing so the tips come off too easily. Second, the brazing process has too many variables. Third, the braze joint is strong enough to hold the tip on but it doesn't provide enough impact protection.

We are approaching these three areas in three ways: First, we are doing an analysis of various surface treatments to determine just how and what makes a good treatment. We are developing a new treatment that will combine the best features of all existing treatments.(Cont. on page 4)

## Six Sigma

Continued from page 3

Second, we are working with customers and suppliers to determine the variables in the brazing process to specify what should be done and how it should be done. This will lead to better materials for training. It will also help ensure repeatable excellence.

Third, we are taking a look at what silver solder really does and what it can do. It is much more than just a way of gluing carbide tips to steel. It can play an extremely important part in seeing that the tips survive by also providing cushioning and stress relief.

## Six Sigma Partnerships

Six Sigma is a term from statistics. It means a defect rate of 3.4 parts per million. It is being used to define world class performance in manufactured products. We are in a program to analyze and improve the joining of carbide to saws so that there is a tip loss rate of 1 in 294,118 tips.

In the last two months we have worked with the following: Cascade Southern Saw Co., Carbide Alloys, Menominee Saw, International Saw and Knife, University of Puget Sound, Wright Patterson Air Force Base National Labs, Engelhard Anaheim, CA and Engelhard Warwick, RI, Tyler Tool Co., J. Dwight Co., Eagle International, Kennametal, and Argonne National Labs.

## Research Updates

1. Tip Loss Prevention

- Brazing Techniques

2. Carbide Surface Analysis
3. Reducing Tip Breakage
4. Solder Comparison
5. Six Sigma Partnerships

## Machine Shop Capabilities

A good machine shop can be a wonderful thing. It can also be darned hard to find. After years of looking we have a very close relationship with an excellent small machine shop.

The machine shop is run by the owner. He has three men working for him. He does only one at a time fixtures and tools for aerospace and plastics manufacturers as well as production work. The owner is an excellent machinist and businessman. This is an unusual combination and it makes him easy to work with. He is willing to do short production runs of parts because it helps balance his work load and it gives him a base to cover his overhead. With a couple weeks lead time he can fill in production work around the much more profitable precision tooling.

This is a small full capacity machine shop. The shop has manual and CNC mills and lathes. It also has EDM capabilities and two grinding machines. A comfortable run of parts is 500 pieces. The shop is currently handling a good range of sizes. The smallest common size is a very small milled and turned part that will fit in a 3/8" sphere. The shop can very comfortably handle parts 18" x 12" x 24". There is also the capability to handle much larger parts if required.

This is an excellent machine shop. We are very comfortable working with them. We are willing to look at more work for this shop if we can do it slowly and cautiously. We would be interested in one at a time tooling or relatively large production runs.

If you have machine shop work that you'd like to have done we'd be happy to talk to you. We won't charge for the quote, we'll give you good work and honest prices. We'll stand behind everything we do.

## Trips to Engelhard

I made two trips to Engelhard plants. The first trip was to Anaheim, California. This is a metals refining center as well as a warehouse and supply center. I met the two ladies, Rose and Patty that have been doing such a great job of keeping us supplied with braze alloy.

The purpose of this trip was to address supply issues. Engelhard is very serious about being a dependable supplier. They keep very impressive levels of expensive inventory on the shelf against customer demand.

Engelhard is also very serious about meeting or exceeding governmental requirements.

## Engelhard

Continued form page 4

There have been several instances of metal refiners getting shut down by the government for environmental reasons. Engelhard is doing an

excellent (and expensive) job of complying with these regulations.

The Engelhard plant in Warwick, Rhode Island was supposed to be a trip to get some technical questions answered. I came away with some answers but I also had a lot more questions when I left than when I started. I was privileged to meet with some very intelligent people who provided a lot of new insights into braze alloy, what it is and how it works.

I was extremely impressed with the quality and attitude of the people I met.

The work areas were clean, the tools were in excellent shape properly racked and the people were dedicated to both quality and customer service.

Engelhard is making significant manufacturing equipment improvements. An example is a rolling press that is being refitted with a laser sensor. The reflected laser light will guide a positive feedback CNC system to keep flatness and thickness within .0001" on rolled material.

## Traveling with Burl

I got a call from Burl Swiger of Cascade Southern Saw the other night. We'd been doing some research on solders and I wanted to get his last minute thoughts before I went back east to talk to the supplier. We talked a while then I asked him how things were going on the road.

Burl said that he couldn't go up the mountains because it was snowing so hard that half the passes were closed and the other half you couldn't get through. He couldn't go down the mountains because what wasn't flooded had already washed away. There was some excitement though. He could see the swimming pool from his motel room window. It was raining so hard that it looked to be within an inch of overflowing. He thought he'd stay up and watch the swimming pool fill with rain water until it overflowed.

The story just seemed to say it all about the bad part of being on the road.

Of course, Burl being Burl, he had sniffed out a new prospect he could get to and he was having a good time watching the swimming pool fill up. He also had a great restaurant picked out where the steaks were big, the drinks were honest and it would pass an expense account.



## Book Review

### The Goal

by Eliyahu M. Goldratt

This is an excellent book. I have read it five times and I bought copies for my staff.

The book is a novel. It is interesting and easy to read. It also gives absolutely excellent advice on how to run a business.

This is a kind of a sleeper book. It didn't receive a lot of publicity but more and more people are reading it and using it. It really does work. It is helping me solve training problems and managing staff. I have been using these principles for at least two years and the differences have been amazing.

It is an extremely valuable book no matter what your job is or what size organization you run. You can probably find it in a good local bookstore. The publisher is North River Press at (413) 528-0034.



## New Advertising Campaign

The center section of this newsletter has samples of our new ads. We will be running these in US and Canadian magazines over the next year. Please note that we are not selling saws or carbide. The whole purpose of these ads is to get people to buy our service through our current distributors.

### Software Shindig

Sometimes software can just be frustrating. Since we acquired the scanner, we have had to integrate the two existing software programs. All seemed to be working well except when we went to print this newsletter....

It is as if the software programs have an unspoken law that when you upgrade one component of your system, you ultimately have to upgrade the other parts to mesh with your new stuff. Otherwise, you end up with half of a printout.

We found this out when we went to print off a HP LaserJet II. It has a base memory of 512KB. We needed 2MB in printer base memory in order to print the scanned images you see in this newsletter. Thursday night only half pages would print on the HP II. On Friday it was recommended that we upgrade to an HP 4+. We did. The newsletter you are reading today is a result of new software and a new printer.

The printer cost \$1386.95 + tax. The cost of the printer will pay for itself in terms of enhanced productivity and reliability. We're very happy with it.

### Tip Loss

Continued from Page 1.

However, the underside will be so much colder that the joint will be a "cold joint" meaning that the alloy did not flow fully and the joint is weak.

A recommended practice is to make sure the anvil or fixture is at the proper temperature for brazing before starting to braze. Heating the anvil with a torch for a minute or so before brazing can significantly raise the temperature of the anvil. One way of determining the proper temperature is to heat the anvil until you can rest your hand on it for about two seconds but no longer.

**Caution: Do not let the anvil get too hot.**



### Recommended Magazines

We read a lot of magazines here at Carbide Processors, Inc. We'd like to share our titles with you.

Metal Finishing magazine

212-633-3950

American Machinist magazine

216-696-7000

Cutting Tool Engineering magazine

708-498-9100

Industry Week magazine

216-696-7000

NASA Tech Briefs

212-490-3999

Design News

303-470-4000

Forbes magazine

800-888-9896

BusinessWeek magazine

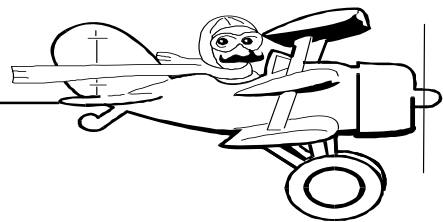
800-635-1200

PC Novice computer magazine

800-424-7900

We highly recommend these magazines as they are very informative and insightful.

## *The Classifieds*



To Place Your Free Classified Ad Call Us (800) 346-8274 or Fax Us (800) 707-5802

### Stellite

Sales and Service of all your Carbide and Stellite circle saws (6" to 108") and band saws. We specialize in Stellite tipped and side ground band saws. If it cuts we can sharpen or repair it. Sales of new circle saws, band saws, log deck saws, filing room supplies. Free pick up and delivery in Oregon. Call **Brecto's Saw Shop (503)687-1923, ask for Mark.**

### Scrap Bought

We specialize in the recycling of **TUNGSTEN CARBIDE SCRAP** and pay the highest prices for your hard scrap, sludge and powders. Call **CARBIDE RECYCLING CO. (800) 526-3505 or FAX (810) 474-6152** for current prices and shipping inf.

**CASH!!** Tungsten Carbide-saw tips with or without brazing, sharpening sledge, and inserts. We pick up Pacific Northwest only. Barry at **Acme Trading, Portland, OR (800)547-6732 or (503)227-5501.**

### Tools, Supply & Service **Desert Carbide,**

manufacturer of solid carbide tools, drills, reamers, burrs, mills, inserts, threaders & groovers for machining industry. We will ship nationwide! contact Steve Cagle at 1-800-Inserts.

### **North American**

#### **Products Corporation:**

We offer a complete line of carbide tipped cutting tools to both the woodworking and metalworking industry. North American also has 13 service centers strategically located throughout the United States to completely recondition our customer's cutting tools. This service also includes free pick-up and delivery within a geographic location. For additional information or a free catalog call or write to **NORTH AMERICAN PRODUCTS 1180 Wernsing Rd., Jasper, IN 47546 (800) 634-TOOL.**

#### **Cascade/Southern Saw**

Co. will stock carbide tips and diamond wheels in our Hot Springs, AR location. Our customers will benefit with faster deliveries and less freight cost. Call (503) 241-1982.

For all of your Crobalt and Tungsten needs call John Osborne at **Carbide Specialties.** (818)915-3911.

**AA Carbide Inc.** Largest selection of saw blades, router bits, shaper cutters in the Intermountain West. Complete service - custom manufacturing and sharpening - sales of woodworking equipment. Call George Laws (801)486-4881.

### **United Saw & Supply**

**Company** can supply new saw blades cut to 84" diameter for cutting non ferrous metals. Send us your requests, we will quote price and delivery for you to resell. (901) 784-6886

### **Lemon & Snoop Company**

**Inc.** Custom and standard carbide tools to meet all of your woodworking needs. complete repair and service facility available. Please contact us at (616) 532-3696 for all your tooling requirements.

**Special Products!** BI-metal and Special Alloy Band Saw Blades. Unbeatable prices, with guaranteed factory welds. Check our prices and quality. The best combination. **United Saw & Supply Co.** (901)784-6886. Re-sale inquiries welcome.

**Continental Division** is offering T1 HSS molder knives to compliment their excellent quality M2 molder, joiner and planer knives. The T1 knives differ from the M2 in that special heat resistant elements give the knives superior resistance to thermal erosion of the cutting edge, resulting in longer runs between sharpening and increased "grindability." **For Distributor information call (602)269-1078.**

## Saw Shop Service

Hammering, sharpening and welding of band saws, slasher saws, carbide saws, board saws, chipper and planer knives. For all your cutting tool needs call **Endull Saws**. (207)990-5660.

## **METALSAW from PLUS**

**TEN!** Precision carbide tipped cold sawing of stainless, nickel alloy & tool steel plates! Call Luigi Bonacini at (707)745-4625.

## **RAPCO INDUSTRIES,**

**INC.** Carbide Tipped Saw Chains! The Worlds Best. Outlasts other chain 10 times!....Call (503)255-6355.

**Herco Inc.**, Manufacturer of the world's finest Carbide and Diamond cutting tools for the woodworking industry. Saw blades and router bits in stock ready for shipment. Custom Carbide tooling shipped in two weeks, Diamond in 3 - 4 weeks. Call or fax for a quote. Phone (614) 498-5181 or Fax (614) 498-5454.

## **BYRD TOOL CORP.**

Manufactures quality tooling for the woodworking industry. Molder and shaper heads, brazed tip cutter heads, and insert heads, along with inserts and knives. Call (800)441-2973 for more information and a free catalog. Made in the USA!

Sharpening, repair & sales of wide band saws from 4" to 8" wide 17' to 31' long. Carbide saws up to 36" diameter. Custom manufacturing of carbide saws and groover saws. many other cutting tools serviced. Over 60 years of

experience between two master filers. For more information call **McGinnis Saw Service, Inc.** (602)883-3723 6720 W Bilby Dr. Tucson, AZ 85746.

Manufacturing and Balancing of CNC router bits. A CNC bit is only as good as its balance. Improve tool life and cut. Reduce spindle damage. **Great Lakes Carbide Tool Mfg. Inc.** (800)873-4528. 3/94.

## Diamond Wheels

**Diamond and CBI grinding wheels** for saw sharpening, knife and profile grinders. Private labeling available. (503)683-0801 Fax (503)342-2715.

## Ultra Precision Grinding

**YKC Technologies** (702) 689-2111. Precision carbide cutting and grinding to + or - .00005" if needed.

## Saw Tips

ICE Super Specials: Indexable Carbide inserts resharpened: Only \$1.90 each! Carbide saw tips, and much more! Call now for the best prices and service **International Carbide & Engineering, Inc.** (800)424-3311.

Carbide Saw Tips. **Multi Metals**, specializing in the Woodworking Industry since 1955, has a new toll free Fax number: (800) 527-TIPS. Customer Service: (502) 587-5660.

## Saw Tips - Special

Inventory clearance! Carbide saw tips, first quality, braze treated. WA 7130 C2 grade .03 cents each!! - save 60%!

WF 7140 C2 grade .14 cents each!! WF7150 C2 grade .148 cents each!! Call Lisa at **Eagle International.** (800)633-8068.

## Shipping Services

If you truly believe that the transportation services you are currently receiving cannot be improved and the rates you have cannot be lower, it isn't necessary to call. If on the other hand, you are interested in service improvement and cost savings for your company, please call **Forte' Transportation Logistics Corp.** at (206)874-9922 and ask for Kim or Bruce

Need Trucking at highly competitive rates? Flatbeds and vans available. Serving North America. Licensed & insured. Call us at **Fox Dispatch** (800)421-9393.

## Miscellaneous

Expert pad transfer printing and super prices. we'll print your blades! Any quantity, 1 to 1,000 plus, give us a call. We'll give you a price you can't refuse. **Northwest Assembly & Machining.** (206) 471-0508.

Custom milling, cutting, drilling, assembly and staining. No job too big or small. Call **Five Star Industries** at (618) 542-5421 for quotes, ask for Mark.

## **CONFUSED????**

Try the "**Woodworkers Calculator**". This slide rule chart calculator can answer your questions regarding feed



speed, chiploads, rim speeds, horsepower, knife marks per inch and cutter mark depth. Send \$10.95 check or money order to: S-3, Inc., PO Box 257, Fox River Grove, IL 60021. Fax (708)304-4823. 5/94.

### Sawmill Supply

Sawmill supplies! **Burton Saw & supply** (503)683-3337. We stock most filing and planer room supplies. We have a large inventory of Armstrong parts, grinding wheels, files, knives and equipment for carbide, stellite and steel.

### Lumber, Specialty Wood

Craftwood Northern White Cedar, Butternut, Cherry, Tamarack and other species. 1/8 - 1/4 - 3/8 - 1/2 - 3/4 inch thickness. Planed 2 sides, ripped 2 edges. Send for free catalog and free sample of cedar. 100% guarantee. Cedar is an excellent pine substitute. Phone (207)425-2911. **Hartford Woodworks**, Box 41-E, Blaine, ME 04734

**Van Der Stad Sawmill Co.** 25 Paradise Road Oak Ridge, NJ 07438 (201)697-3101. Custom moldings, rough cut lumber, survey stakes, pallets, kiln dried hardwood...EST 1940 your eastern source for quality and service. 3/94.

### New Equipment

Stop filing mica by using the "No File" Mica Finishing Router Bit PAT#4,669,923. Consistent, super smooth edges with no sharp corners. Dealer/Distributor inquiries welcome. **Bob's Saw Sharpening**. (305)463-2689

### Help Wanted

Fax (305)463-8731. If It Cuts, We Sell It, If It Doesn't, We'll Sharpen It!

### Considering Lasers?

Lumber Line can supply all your laser needs, including top-quality new and rebuilt lasers and all-brand repair at the industry's best prices. **Lumber Line Laser Repair** in Yaocolt, WA give us a call at (206)686-3077.

### Hardwood Wanted

Wanted: hardwood pallet cants. 4"x6", payment upon delivery! John Wojciechowski, **Mole Lake Wood Industries, Inc.** Crandon, WI (715)478-5380.

### Dealer's Wanted

Manufacturer of NO GRAB™ Carbide tipped saws for cutting aluminum extrusions, tubing, rods, and sheet (.040 or less -.375 or more) using the same blade. The unique NO GRAB™ design ensures durability, burr free cuts for longer tool life. **Bob's Saw Sharpening** (305)463-2689.

### Equipment for Sale

We are hi-lighting the following pieces of equipment this month!

- Forano Eastern** is selling the following:
- ⇒ Forano 56" 6K Chipper, HF/TD
  - ⇒ Fulghum 48" 6K Chipper HF/BD
  - ⇒ Woods Planer/Matcher Model 415 M knife motorized heads W/profiles complete W/breakdown infeed (Lots of spares & cutter heads)
  - ⇒ 10"x36" Ukiah top arbor thin kerf gang

- ⇒ Schutte Model 1390 Hammermill
- ⇒ 27" Nicholson A-4 debarker with hydraulic drive & lots of spare parts. These are only a few of the many items that Ferano Eastern has. Please contact them at 800-541-9032. Ask for Mike or John.

### Clark Sawmill Equipment

offers many items, here is a sampling of the equipment for sale:

- ⇒ 36" Jeffrey vibrating conveyor with drive
  - ⇒ Mellott 20' live rollcase with kickers
  - ⇒ Morbark 48" 3K chippac
  - ⇒ CAT 318 diesel power unit
  - ⇒ Frick 8" double arbor gang with 2 150 HP motors
- address: POB 187 Newfane, VT 05345 802-365-7606

We will spotlight various sellers of industry equipment. If you know of anyone who would like a free classified, have them contact Carbide Processors at 800-346-8274



Manufacturer of Carbide Woodworking Tools has several newly created positions. Excellent long term opportunities for experienced individuals who enjoy a challenge and work well in a team environment. Openings for manual machinist, CNC machinist, CNC programmer with CAD/CAM skills. Must be able to produce all types of cutting tools ( router bits, moulder heads, etc..) from drawings or samples. Facility has new machinery with excellent tooling and very clean working conditions. Also seeking individual with mfg./design/engineering background to develop insert style cutting tools for the woodworking industry. Mail or fax resume with work & salary history to PO Box 3367, Hickory, NC 28603 Fax (704)327-4845.

Manufacturing facility producing all types of cutting tool components (ready to braze) for carbide woodworking tools has immediate need for **SALES AND MARKETING INDIVIDUAL**. Must have working knowledge of this product and the potential customer base. Primarily an inside position, but some travel may be required. Computer skills are essential and candidates should have experience with direct mail, industry trade publications, trade shows and catalog/price list preparation. Excellent long term opportunity with private company. Salary commensurate with experience and generous bonus plan based on performance. Mail or fax resume with work and salary history to PO Box 3367, Hickory, NC 28603. Fax (704) 327-4845. All replies will be held in strictest confidence.

**Lisa Harris of Eagle International Finds Larry E. Tiffin**

Last newsletter, we sent out a call for an all points bulletin search for Larry E. Tiffin. Lisa Harris of Eagle International found him right in the parking lot! Lisa was so highly impressed with Larry that she purchased a franchise from him and adapted it to her neck of the woods! Lisa told us that "Larry E. Tiffin is working with me this week doping horses, we tamed all the tigers."

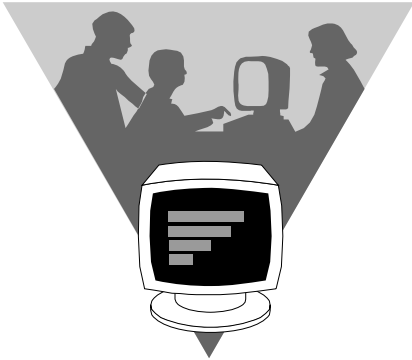
<b>Used Cars - Land - Whiskey - Manure - Nails Dancing Lessons - Racing Forms - Advice</b>	
<b>Lisa Harris</b>	
<b>Wars Fought Governments Run Uprisings Quelled Revolutions Started</b>	<b>Brawls Stopped Horses Doped Organizations Run Computers Verified</b>

<b>Used Cars - Land - Whiskey - manure - Nails Fly Swatters - Racing Forms - Bongos</b>	
<b>LARRY E. TIFFIN</b>	
<b>Wars Fought Revolutions Started Assassinations Plotted Governments Run Uprisings Quelled</b>	<b>Iron Melted Tigers Tamed Bars Emptied Computers Verified Orgies Organized</b>

(This friendly little card is for entertainment. We think that these cards are fun! We have new software and we'll run a few off for you if you wish. Please allow a week for Kristi to get them out to you.)

**Computer Wisdom--**

Young people seem to be better at making computers work. Old people seem to be better at getting things done when the computer doesn't work.



## Carbide Suppliers

Carbide Alloys  
800-334-1165

Carbide Sales Corp.  
401-231-6960  
Carmet CO  
800-845-6969

Cascade/Southern Saw Co.  
503-241-1982

Eagle International  
800-633-8068

ICE  
800-424-3311

IKS Service, Inc.  
205-684-4124

Kennametal Ltd.  
604-474-1225

Metal Carbides  
216-788-6541

Multi-Metals  
502-589-3781

Peerless  
614-836-5790

Sandvik Hard Metals  
800-343-0636

Sharp Tool CO  
800-221-5452

Systi Matic CO  
206-823-8200

Sintex Corp.  
503-357-9510

Teledyne Firth Sterling  
615-641-4355

## Other Materials

**Crobalt**  
Carbide Specialties  
818-915-3911

**Stellite**  
Deloro  
800-267-2886

**Tantung**  
**Carbide Specialties**  
**818-915-3911**

## Recyclers

Waldorf Metals  
800-526-3505

Macro  
604-941-9611

Reggie Newman  
310-358-0255

Stalloy Metals  
800-321-6314

Barry Gordon  
800-547-6732

## Referrals

Omega CO  
800-872-9436

Welding Laboratory  
206-262-9844

## Associations

International Saw & Knife  
317-659-1297

## Used Equipment Resources

The Surplus Record  
800-622-5449  
Attn: Buyer's Service Department  
20 N Wasker Drive, Ste. 2500  
Chicago, IL 60606-9757

The Used Equipment Directory  
PO Box 823  
Hasbrouck Heights, NJ  
07604-0823  
800-526-6052  
201-393-9558

Talladega machinery Sales  
301 North Johnson Ave  
PO Box 736  
Talladega, FL

## Newsletter Publications

The Intermountain Log  
703 Lakeside Ave  
Cour d'Alene, IA 83814  
208-667-4641

Journal of United Sharpeners  
Association  
POB 751144  
Petaluma, CA 94975  
707-763-6552  
Fax 707-763-7777

Wood Machining News  
POB 476  
Berkeley, CA 94701  
501-943-5240

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## **Carbide Processors, Inc. Newsletter**

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by Tom Walz

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### **Carbide Processors**

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