



## Sawfiler Meetings

Emily and I went to New York for the Lake Erie and Ontario Sawfilers and Sawyers meeting. There were about dozen filers or so there. Nice friendly folks and great food. People went out of their way to make us feel welcome, make sure we had direction to the airport and just generally do whatever they could to help us.

Ken Kasprzyk, president, made sure we had directions to the airport and kept giving us things including some really nice arrowheads he had made himself.

At the reception dinner we sat at a table full of nice people with a lot of great stories and laughter. Bruce Moore told us some great stories at dinner about his work with Boy Scouts. Apparently scouts are about as goofy now as they were when I was a scout.

The same people listened really well and asked a lot of good questions the next morning during my presentation.

The intermountain Sawfilers in Spokane had about sixty people including 8 vendors, filers, retired filers and wives.

### Sawfiler Meeting Cancellations

1. Southern Sawfilers Educational Association

2. California Western Sawfilers Redding Saw filers show has been postponed this year until further notice

# Carbide Processors, Inc.

Northwest Research Institute, Inc.

Newsletter April, 2009

3847 S. Union Ave. Tacoma, WA. 98409 (800) 346-8274

sales@carbideprocessors.com [www.carbideprocessors.com](http://www.carbideprocessors.com)

## Prevent 'Lily Pad' Damage

With our new, solid steel, machined inserted teeth.



Top is an inserted tooth machined out of a solid steel billet. Bottom is a traditional cast part. The solid steel, machined part is much tougher, lasts longer and is much tougher.

Besides lasting longer in straight cutting the solid steel teeth hold up much, much better when a 'lily pad' or other odd chunk of wood gets caught.



**These teeth are available in all popular sizes (see P. 3)**

### Pacific/Hoe equipment repair

Don Hoffman, who was an equipment technician with Pacific/Hoe has been laid off and is looking for work. He is doing equipment repair and maintenance on his own now. He can be reached through Cliff Gordon at (800) 707-5802, cell (503) 580 -3253 or [cliffjanisg@hotmail.com](mailto:cliffjanisg@hotmail.com)

### Also Vollmer and others

**We have a customer looking for a used Vollmer CHF210 preferably with hood**

## Iggesund Knives Resharpended

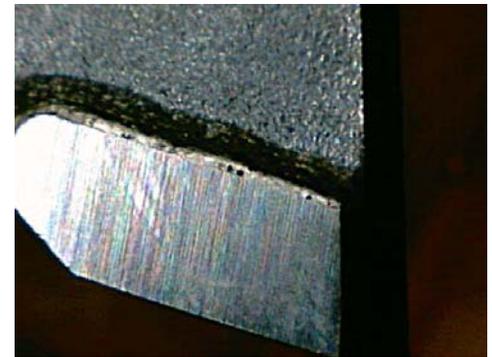
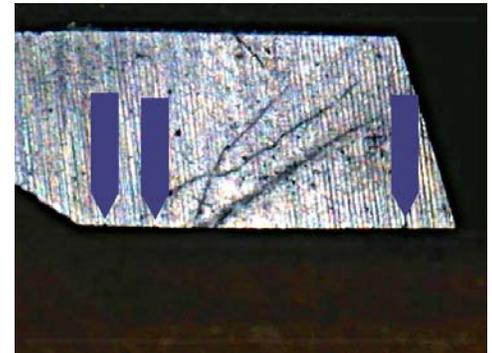
We are now working with one of our customers to offer resharpending of Iggesund and other disposable knives.

You save a great deal over the cost of new knives and get a knife as sharp or sharper than new knives.

## One Sided Tips

Here are tips off a saw that had a short run life. It dulled our long before it should have. It took a 30 x microscope to detect this minor edge chipping.

In addition this chipping was only on one side and the other side was just a beautiful edge.



**When you call a real person answers the phone. Voice mail is cheaper but I think you are worth the extra money**

## Uddeholm Steel – Truly Classy Folks

Uddeholm Steel sent two people to the New York filers' meeting. Peter Hopper was the technical rep who gave one of the clearest, most complete speeches on saw steel that I have ever heard. It was very well organized and interesting. He willingly addressed questions from the audience and answered them fully and completely.

Roy Davis, Uddeholm sales, was also there. When the question was more about use and application Peter Hopper would hand it over to Roy Davis who also answered completely and clearly. It was an excellent presentation.

I should also mention that Roy Davis was at the reception Friday night and he insisted on paying for all the drinks. He stood guard in front of the bar and had his money out before you could reach for your wallet. When things slowed down at the bar he would cruise the room looking for anyone who might be thirsty. Uddeholm has a great reputation for taking care of customers and Roy Davis sure held up his end that night.

Roy Davis  
Business Unit Manager- Saw Lines  
Uddeholm Strip steel  
912-856-0891

Peter B. Hopper  
Director of Sales  
Böhler-Uddeholm Strip Steel, LLC  
www.uddeholmstrip.com  
330-220-7800

### Excellent Bandmill Book

The Bandmill book is \$40 in Canadian or US dollars from:

Ralph Wijesinghe  
4688 Sunland Place  
Burnaby, B.C. Canada V5J 3A4  
Ph # 604 437 4610  
Cell 604 833 4610  
Fax 604 437 4680  
ridw@shaw.ca

## INDUSTRIAL SAW SERVICE EQUIPMENT FOR SALE:

Tom Lancaster, owner and operator of Northern Colorado Saw and Carbide llc. is liquidating equipment.

Akemat u4 topper  
Akemat u3 topper  
Akemat dual side  
Akemat B facer  
Stehle S-813-G auto cutter grinder  
Schneeberger Sculptor copy grinder with complete attachments for carbide and steel  
New Reform German paper knife hone  
5hp Rolair air compressor  
Pro Built Super Duty 36'' saw blade polisher-motorized tableflood cooled-uses 8'' rubberized wheel  
Acme-tall model-saw blade grinder  
2 Handsaw foley filers  
Foley Chain saw grinder  
Foley belt sander-w/side disc  
Lanier 6525 floor model printer/copy machine.

“All equipment is lien free and in excellent working order.”

Please inquire by email, and use “equipment for sale” as your Subject!  
ncscarbide@msn.com

### Nanograin Materials

We use the Super C ® for sawmills and Cermet 2 ® for manmade materials.

Both qualify as nanograin. The term nanograin does not have any precise definition. Technically it refers to a billion so it ought to mean particles measured in billionths of an inch. However something could be 900,000,000 billionths of an inch and it could be called a nanograin since it is measured in billionths but it is really 0.9 inches. Obviously that would be deliberately misleading but such things have happened in the industry before.

## \$0.10 Tip Sale- Inventory

WA 7140	C2	150
WA 7180	C2	1520
WB 7085	C4	2000
WB 7200	C4	3000
WBC 7095	C3	5000
WC 7135	C1	850
WC 7150	C2	342
WC 7150	C2	342
WD 7150	C2 LH	1738
WD 7215	C2 RH	123
WD 7280	C2	500
WDC 7105	C2	221
WDC 7110	C4	500
WDC 7185	C2	2500
WDC 7250	C2 LH no Pretin	2000
WDC 7270	C2	159
WE 7210	C2 LH	1750
WE 7265	LH No Pretin	685
WE 7290	C2 LH Hi Impact	250
WEC 7150	C4	762
WF 7150	C1	2168
WFC 7135	C1	2400
WFC 7150	C1	1700
WFC 7200	C2 No Pretin	900
WFC 7230	C4	1450
WFC 7240	C1	1000
WG 7120	C2	100
WGC 7140	C4	996
WGC 7110	C2	2500
WGC 7120	C2 Hi Impact	460
WGC 7185	C3 no Pretin	1500
WGC 7220	C4	2100
WGC 7220	C3 no Pretin	680

### Our Webmaster

This is Emily Renee' Whitman who is our webmaster, backs up emily on the phone and in sales and generally does what needs to be done.



She is a very nice lady, truly happy to help you and she is learning rapidly.



This was an article from the St. Petersburg Times Newspaper on Sunday.

The Business Section asked readers for ideas on "How Would You Fix the Economy?"

I thought this was the BEST idea....

I think this guy nailed it!

Dear Mr. President,

Patriotic retirement:

There are about 40 million people over 50 in the work force  
- Pay them \$1 million apiece severance with the following stipulations:

- 1) They leave their jobs. Forty million job openings - Unemployment fixed.
- 2) They buy NEW American cars. Forty million cars ordered - Auto Industry fixed.
- 3) They either buy a house or pay off their mortgage – Housing Crisis fixed.

It can't get any easier than that!

### **When You Have Sons**

From John Rzasa of Jack Sigrist by way of John Schultz of Superthin Saws

You find out interesting things when you have sons, like...

- 1.) A king size waterbed holds enough water to fill a 2000 sq. ft. house 4 inches deep.
- 2.) If you spray hair spray on dust bunnies and run over them with roller blades, they can ignite.
- 3.) A 3-year old Boy's voice is louder than 200 adults in a crowded restaurant.
- 4.) If you hook a dog leash over a ceiling fan, the motor is not strong enough to rotate a 42 pound Boy wearing Batman underwear and a Superman cape. It is strong enough, however, if tied to a paint can, to spread paint on all four walls of a 20x20 ft. room.
- 5.) You should not throw baseballs up when the ceiling fan is on. When using a ceiling fan as a bat, you have to throw

the ball up a few times before you get a hit. A ceiling fan can hit a baseball a long way.

- 6.) The glass in windows (even double-pane) doesn't stop a baseball hit by a ceiling fan.
- 7.) When you hear the toilet flush and the words 'uh oh', it's already too late.
- 8.) Brake fluid mixed with Clorox makes smoke, and lots of it.
- 9.) A six-year old Boy can start a fire with a flint rock even though a 36-year old Man says they can only do it in the movies.
- 10.) Certain Lego's will pass through the digestive tract of a 4-year old Boy.
- 11.) Play dough and microwave should not be used in the same sentence.
- 12.) Super glue is forever.
- 13.) No matter how much Jell-O you put in a swimming pool you still can't walk on water.
- 14.) Pool filters do not like Jell-O.
- 15.) VCR's do not eject 'PB & J' sandwiches even though TV commercials show they do
- 16.) Garbage bags do not make good parachutes.
- 17.) Marbles in gas tanks make lots of noise when driving.
- 18.) You probably DO NOT want to know what that odor is.
- 19.) Always look in the oven before you turn it on; plastic toys do not like ovens.
- 20.) The fire department in Austin, TX has a 5-minute response time.
- 21.) The spin cycle on the washing machine does not make earthworms dizzy.
- 22.) It will, however, make cats dizzy.
- 23.) Cats throw up twice their body weight when dizzy.
- 24.) 80% of Women will pass this on to almost all of their friends, with or without kids.
- 25.) 80% of Men who read this will try mixing the Clorox and brake fluid.

### **Harley-Davidson vs Women**

From Monte Murphy

The inventor of the Harley-Davidson motorcycle, Arthur Davidson, died and went to heaven.

At the gates, St. Peter told Arthur, "Since you've been such a good man

and your motorcycles have changed the world, your reward is, you can hang out with anyone you want."

Arthur thought about it for a minute and said, "I wanna hang out with God."

So, St. Peter took Arthur to the Throne Room, and introduced him to God.

God recognized Arthur and commented, "Hey man, you're the one who invented the Harley-Davidson motorcycle!"

Arthur said, "Yeah, that's me..."

God said, "Well, I've always wanted to know what was the big deal about inventing something that's unstable, makes a lot of noise, creates pollution, and can't run without a road?"

Arthur was a bit flummoxed, but said, "Excuse me, but aren't YOU the inventor of woman?"

God said, "Ahhhh, yes."

"Well," said Arthur, "professional to professional, I'd like to point out that you have some major design flaws in YOUR invention. For instance....

1. There's too much inconsistency in the front-end suspension.
2. It chatters constantly at high speeds.
3. Most of the rear ends are too soft, and wobble too much.
4. The intake is placed way too close to the exhaust.
5. And the maintenance costs are "waaaay outta' sight."

God said, "Hmmmmm, you may have some good points, but hold on."

God went to his Celestial supercomputer, typed in a few words and waited for the results. The computer printed out a slip of paper and God began to read....

"It may very well be true that woman is flawed," God said to Arthur, "but according to these numbers, more men are riding my invention than yours."

# Super "C" Carbide Grade

Tougher than C1 - Better wear than C3

## What Makes Super C Tips Truly Superior

1. Superior Abrasion Resistance - Abrasion or straight wear is countered by smaller, better grain size.
- 2 & 3. Superior Adhesion and Diffusion Resistance (corrosion and chemical attack) Super C grade of carbide has an extremely fine structure so there is very little binder presented to the material being cut. This, combined with the special metallurgical formulation the Super C binder (hint - it's not just plain Cobalt) creates an extremely wear and corrosion material for use in wood, plastic or non-ferrous metals.
4. Superior Fatigue Resistance

**And People Really Like Them - Call Today To Try Them - Most Sizes Readily Available**

Super C	Hardness (HRA)	T.R.S. (psi)
	92.2 - 92.4	530,000 +

Typical C2 values		
	Hardness (HRA)	T.R.S. (psi)
C2	92.1	334,000
C2	91.8	334,000
C2	91.5	377,000
C2	90.4	435,000

Typical C Values		
	Hardness	T.R.S. (psi)
C1	89 - 92.4	350,000 - 360,000
C2	91.2 - 92.9	250,000 - 400,000
C3	91.4 - 93.6	270,000 - 350,000
C4	89.6 - 93	260,000 - 450,000

### Sawmill Grade Tips

- Transverse rupture strength well above 500,000 psi.
- Rockwell A hardness above 92
- Alloy binder for corrosion resistance
- Grain structure to inhibit both crack initiation and crack propagation
- Micro grain or mixed grain for superior wear

**Carbide Processors, Inc.  
800 346-8274**

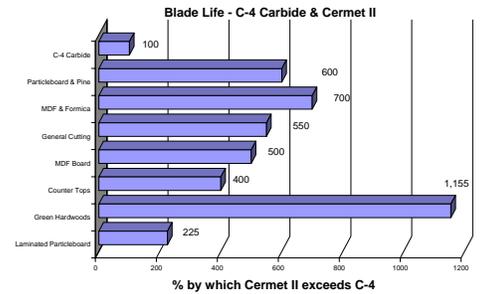


## Cermet II® 8 days instead of 5 in MDF

**Three weeks and three full loads of double side melamine laminate instead of 1 week and 1 load with carbide**

1. 5 blades with standard C-4 carbide cutting 45 lb. single and double sided vinyl-laminated particle board  
\* Cermet II - 15,088 meters / old grade - 6706 meters for **225% as much run life**
2. KM-16 industrial saw cutting 101.6 mm x 152.4 mm (4" x 6") Green hardwoods, oak, hickory, maple and walnut using 11 blades with standard C-4 carbide  
\* Cermet II / 462 hrs / old grade - 40 hrs  
**1,155% as much run life**
3. 406 mm (16") 100 teeth cutting countertops  
\* Cermet II - 4 weeks / old grade - 1 week (4 times) **400% as much run life**
4. 406 mm (16") 80 teeth cutting MDF Board  
\* Cermet II - 10 days / old grade - 2 days (5 times) **500% as much run life**
5. 305 mm (12") 100 teeth TCG Miter cutting oak, Compressed Fiber Board, Plastic  
\* Cermet II - 154 hrs / old grade - 28 hrs (5.5 times) **550% as much run life**
6. 305 mm (12") 60 teeth cutting MDF, High Pressure Laminate (Formica)  
\* Cermet II - 56 hrs / old grade - 8 hrs (7 times) **700% as much run life**
7. G 1060A on Chop Saw cutting Particle Board and Pine Dowel Rods  
\* Cermet II - 48 hrs / old grade - 8 hrs (6 times) **600% as much run life**

**Use Cermet 2 instead of carbide and make your life much easier**



## Cermet II® Successes

Several times the life in a window and door plant.

3 times the life in Corian.

8 days instead of 5 in MDF and we have an even better grade coming.

Twice the life in beetle killed Lodge Pole pine.

### Benefits You Get

- \* Grinds like regular carbide
- \* Gives a better edge than carbide
- \* Stays sharper longer than carbide
- \* Great increase in fracture toughness.
- \* More corrosion-resistant
- \* Better at high temperatures
- \* Cuts faster
- \* Cuts faster & longer yet is tougher
- \* Longer runs and less downtime.

## Report from Marvin Windows

On the saw that we tried. How many times we resharpen a blade before we order new or have retipped we are not sure. Most blades get damaged by hitting something so we have the carbides retipped a lot. How often do regular blades have to be resharpened? We normally have our carbide tipped blades sharpened every week.

The new Cement II blade normally last twice as long before it gets damaged. The best so far is four weeks and one and a half million cuts before we changed it out which is four times longer.

Hope this helps and keep up the good work on those tips.

Nathan Hull, Grinderman  
Marvin Wood Products

## **We Don't Have Too Many Friends.....Just Good Friends**

Let's see if you send this back...

A farmer had some puppies he needed to sell.

He painted a sign advertising the 4 pups and set about nailing it to a post on the edge of his yard. As he was driving the last nail into the post, he felt a tug on his overalls.. He looked down into the eyes of a little boy.

"Mister," he said, "I want to buy one of your puppies."

"Well," said the farmer, as he rubbed the sweat off the back of his neck,

"These puppies come from fine parents and cost a good deal of money."

The boy dropped his head for a moment. Then reaching deep into his pocket, he pulled out a handful of change and held it up to the farmer.

"I've got thirty-nine cents. Is that enough to take a look?"

"Sure," said the farmer. And with that he let out a whistle. "Here, Dolly!" he called.

Out from the doghouse and down the ramp ran Dolly followed by four little balls of fur.

The little boy pressed his face against the chain link fence. His eyes danced with delight. As the dogs made their way to the fence, the little boy noticed something else stirring inside the doghouse.

Slowly another little ball appeared, this one noticeably smaller. Down the ramp it slid. Then in a somewhat awkward manner, the little pup began hobbling toward the others, doing its best to catch up...

"I want that one," the little boy said, pointing to the runt. The farmer knelt down at the boy's side and said, "Son, you don't want that puppy. He will

never be able to run and play with you like these other dogs would."

With that the little boy stepped back from the fence, reached down, and began rolling up one leg of his trousers. In doing so he revealed a steel brace running down both sides of his leg attaching itself to a specially made shoe.

Looking back up at the farmer, he said, "You see sir, I don't run too well myself, and he will need someone who understands."

With tears in his eyes, the farmer reached down and picked up the little pup.

Holding it carefully he handed it to the little boy.

"How much?" asked the little boy. "No charge," answered the farmer, "There's no charge for love."

The world is full of people who need someone who understands.

It's National Friendship Week.  
Show your friends how much you care.

Send this to everyone you consider a FRIEND as well as those who WERE!!!

If it comes back to you, then you'll know you have a circle of friends.

### **Armstrong Plant Tour**

Mike West of Cascade Hardwoods writes Visited with your buddy Norm Brown yesterday. We took my two bandsaw benchmen down to the Simonds plant in Springfield. It's good to take the boys on a road trip and I think it was great for them too see two of our saws being benched by the guys at the shop. They got to chat with them about what they prefer and now they're not just some nameless people to cuss about when a blade arrives, they actually have someone they met and talked to. Good move.

Norm also told me that you had taken over the duties of pretinning their clamp screws and stuff.

Thank you very much; I've lost quite a few myself. I'm just sorry I hadn't recommended it to Armstrong before. I will try to remember to be more proactive in these matters.

### **Call Norm Brown**

Norm Brown  
Market Manager  
Office 503 228-8381 x 0175  
Fax: (360)-673-6485  
Cell: (360) 589-9030  
Mai1:18001328-3808 x0707  
nbrown@simondsintcom  
Phone: home(360)-673-6484

Norm is something important at Simonds / Armstrong. I am never sure just what. However I do know that Norm is extremely good at helping people and extremely good at taking care of customers.

If you have a problem I suggest you call Norm on his cell. Avoid the office phone as he is generally in the field.

Now, you are supposed to go though a chain of reps and use the voice mail system and leave messages. That never works for us so we just call Norm.

Norm doesn't run the company and he can't do everything no matter how much he wants to. Sometimes he hasn't been able to do what we want but he always gets us an answer and he really cares.

**Note:** Calling Norm directly is a secret trick and it is going outside the ritual of what customers are supposed to do so don't abuse it and don't tell anyone I told you about it.

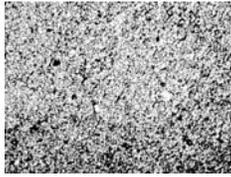


## Purified Flux

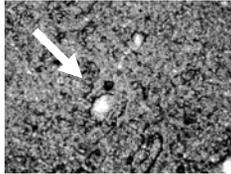
30% To 100% Better  
Braze Joints  
(50x magnification)



Purified flux  
Smooth &  
consistent



Standard flux  
large grains of  
foreign material



**You can see and feel the difference immediately.**

Purified flux is black flux that has had extra processing steps. These processing steps take the black article out and leave the flux a rich, creamy brown color. If you take a little of each flux and rub it between your fingers you can feel that Purified Flux is not only smoother but the particles are smaller and there are no extra large particles.

Flux is made to prevent oxygen from getting to the parts as they are heated. Steel and especially tungsten carbide oxidize at room temperature. The hotter they get the more they oxidize. Above 1,000 F tungsten carbide oxidizes extremely rapidly and forms an unbrazable surface. Purified flux is good for more time at higher temperatures, up to 1,700 F.

The original idea with flux was that it was to be applied on top of the braze area. However the critical part of saw and tool brazing is what goes on inside the braze joint. Ordinary flux is inexpensively made and has up to 10% odd size particles and non-active minerals in it. These odd size particles and non-active minerals get lodged in the braze area and can seriously effect the strength of the braze joint.

**Purified flux is cleaner, smoother, creamier and much more effective.**

5 # jars

Case (6 jars @ 5#) \$ 464.31

Single jar \$ 87.39

## Braze Alloys (Silver Solders)

The right braze alloy can make a huge difference in performance

Braze Alloy Impact & Bond Strength Tests	
<b>High Impact</b>	<b>100%</b>
S50N - 50% Silver with Cadmium	100%
A50N - 50% Silver - Cadmium free	75%
A56T - 56% Silver with Tin	0%
S50N - 50% Silver with Cadmium	100%
A50N - 50% Silver - Cadmium free	64%
A50N with copper spheres added	67%

### Stop tip Loss - Prevent Carbide Breakage

Saw tips are brazed onto a steel saw using braze alloy. When a tungsten carbide saw tip breaks it is usually bad carbide, the wrong grade of carbide, the wrong braze alloy or a combination of these.

The brazing process forms a three part composite. The success of the composite depends on the tungsten carbide, the steel, the braze alloy and the way it is all put together. The braze alloy has to do three things. 1. It has to keep the tip on the saw. 2. It has to cushion the tip because the tip suffers a lot of impact stress when the saw cuts. 3. It has to compensate for the difference in expansion between steel and tungsten carbide as they are heated and cooled during brazing.

## Buy Our Books

Buy online or call 800 346-8274

1. Carbide Saw Specification Manual  
<http://www.cafepress.com/sawspecs.80466877>

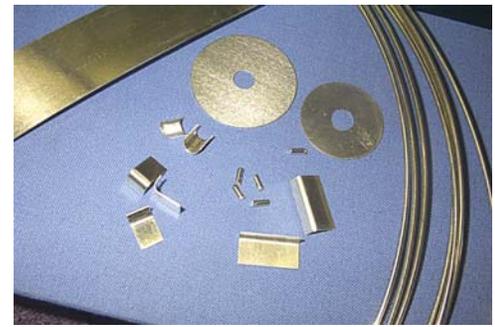
2. Carbide Saw Manual - Lowell freeborn  
<http://www.cafepress.com/freebornmanual.80464996>

3. Managing Coolants from Machining and Grinding Operations  
<http://www.cafepress.com/managecoolants.80458178>

4. Building Superior Brazed Tools  
<http://www.cafepress.com/superiortools.93943435>

5. Chisels on a Wheel by Jim Effner  
<http://www.cafepress.com/chisels.90813670>

6. Braze Failure Analysis  
<http://www.cafepress.com/brazefailure.79434854>



We sell braze alloys (also called silver solders, high temperature silver solders, or braze filler metals.)

We supply the finest information in the world on the selection and use of braze alloys for carbide brazing.



### The Finest, Most Consistent Braze Alloys for Tungsten Carbide

- 26 Different braze Alloys
- All AWS approved
- All inspected to parts per million
- All alloys exceed AWS specifications
- Cadmium free
- With Cadmium
- Hi Impact – developed for Weyerhaeuser
- Ultra Hi Strength – High Temp.
- Low Silver – Very High Strength
- Low Temp. with high strength
- Wire – all diameters
- Ribbon - all sizes
- Sandwich alloy ribbon
- Brazing preforms

### Why Quality Makes a Difference

(American Welding Society AWS 5.8) Braze alloy can be within AWS specifications but it can vary in brazing temperature by as much as twenty degrees. This means that you can have cold joints and tip one end or zinc loss and more broken tungsten carbide tips at the other end.

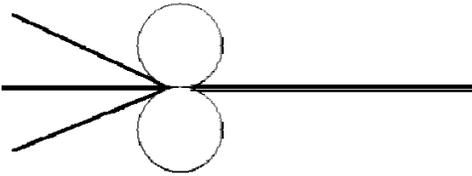
Our braze alloy is accurate and measured within parts per million. It is typically four times better than it has to be or more according to government certified analysis. It brazes the same way every time.

## Trimetal Failure

Trimetal (also plymetal or sandwich) is a three layer material with braze alloy on each side of a copper strip usually in a 1:2:1 ratio. It is designed to relieve stresses caused in brazing created by the difference in growth of steel and tungsten carbide.

Roughly steel will grow 2 to 3 times as much as carbide. When the heat is removed the braze alloy sets in place while the parts continue to shrink. This creates stress in the carbide and can cause breakage. (See the article on heat stress / thermal stress.)

At brazing temperatures the copper anneals to a "dead soft" condition and helps to compensate for the strain.



Trimetal is made by rolling three strips of material together. The strips are held together due to the pressure of the rolling. It is expected that the heat of brazing will cause the three strips to bond and create a strong joint.

Trimetal strength depends in large part on the kind of braze alloy used. A weak braze alloy will still allow for tip loss even when used in a trimetal configuration.



This is a picture of a good trimetal braze. You can see the thin line of reddish copper at the top



Here you can see a failed joint causing tip loss. There is one layer of braze alloy is attached to the steel. There is just a bit of the copper left. Essentially the layers pulled apart. This could be from underheating or contamination on the strips as they were rolled together.



In this case you can see the copper as a solid red bar down the middle. The tip came off and ripped the layer of braze alloy apart.



Here you see that the braze alloy was heated enough to soften it but not enough to achieve full flow. The amount of alloy between the tip and the copper is about right. There is appears to be more alloy between the copper and the steel because this alloy was squeezed out leaving a thin joint.

While steel and tungsten carbide both respond to induction heating the steel respond more readily and heats faster. In this case there was too much pressure from the machine and the pressure was applied before the part was fully heated.

In addition there is no evidence of wetting onto either the steel or the carbide. This is also indicative of underheating but always raises the additional question of whether the steel and the carbide were prepared properly.

## Jerrimy Snook Snook's Saw Service Salem, OR

IndustrialToolSharpening@yahoogroup  
s.com

Tom,

Proper tip heating on our automatic machine requires a careful setup. I have a CEIA induction unit that in cooperation with the machine controls temperature, heating time, cooling time, and annealing. Each of these is dependent upon coil size and placement as well as Pyrometer placement. The CEIA pyrometers have a laser aiming light which should be aimed at the solder joint. It is fairly common for the laser to quit working without affecting the function of the machine. The pyrometer will still measure temperature wherever it is aimed. The trouble is aiming at the joint. The pyrometer is expensive, as much as \$1500 from the U.S. machine distributor.

I think it is possible, yet not preferable, to get an acceptable solder joint if you know what you are looking for and have access to visual and mechanical inspection equipment.

Another pyrometer related issue, involves excess flux buildup on the induction coil. Sometimes the excess flux will block the line of sight of the pyrometer thereby rendering the pyrometer ineffective.

On the machine that I use, the solder is cut and shaped on the saw tip after the tip has been fluxed. While the solder is cut, the excess flux is pressed out of the joint. So yes this is a very tight joint.

Jerrimy

Note:

This came from a discussion on the Yahoo Sharpener's group started by Tim Cook of Cook's Industrial Tool in New Braunfels, Texas.

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