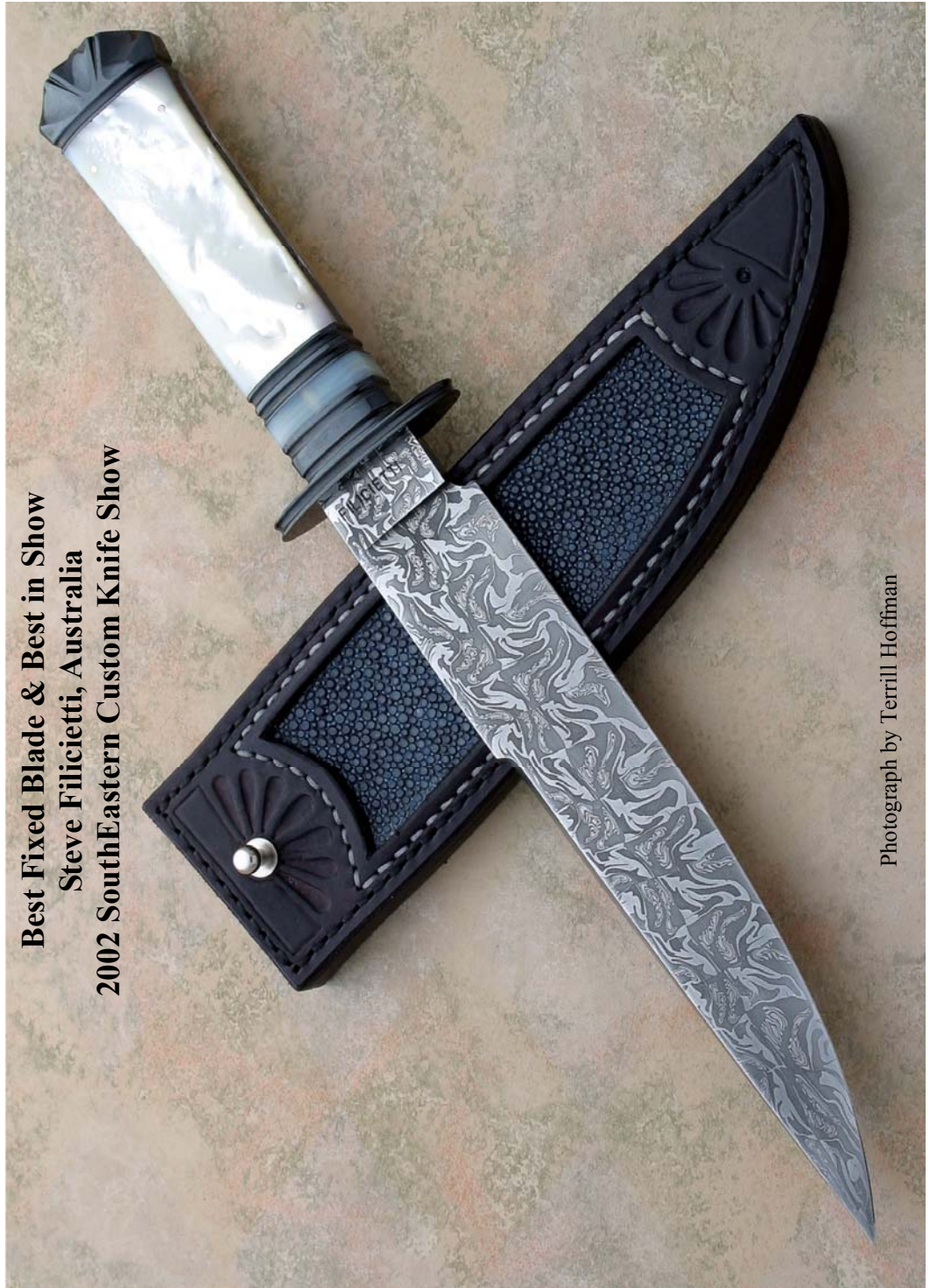


Billet & Blades



Best Fixed Blade & Best in Show
Steve Filicetti, Australia
2002 SouthEastern Custom Knife Show

Photograph by Terrill Hoffman

The Official Publication of
The North Carolina Custom
Knifemaker's Guild

October 2002

Dedicated to the Art & Craft of Custom Knifemaking

Billets & Blades

NORTH
CAROLINA
CUSTOM
KNIFEMAKER'S
GUILD

Billets and Blades is the official publication of the North Carolina Custom Knifemaker's Guild. It is compiled and published in four issues annually with two additional special publication dates possible each year. Compiled, published, and distributed by The Knifemaker's Guild.

The North Carolina Custom Knifemaker's Guild was formed to meet the needs of a growing body of custom knifemakers in the southeastern United States. The purpose of this newsletter is to serve as a medium of exchange for the members of the NCKKG.

Billets and Blades is copyrighted in its entirety by the North Carolina Custom Knifemakers' Guild. Permission to quote small noncontiguous passages is freely given as long as appropriate citations are used. Permission to reprint, in whole or in part, must be requested from the Guild. Contact the editors.

Knife making and related endeavors are inherently dangerous crafts or occupations. The material contained in this newsletter is for information only, and is not intended to provide instruction. Therefore, the North Carolina Custom Knifemaker's Guild, its officers and editors specifically disclaim any and all responsibility for damage or injury that may occur as a result of the use of any information that is contained in this newsletter.

Advertising Policy: The NCKKG accepts no paid advertising as a matter of policy. From time to time, advertisements may appear that are deemed by the officers to be in the best interest of the Guild. Space for advertisement is offered free to Guild members who wish to promote a service or offer specific items for sale. The officers and editor reserve the right to edit advertisements for brevity. Members Only: Please submit ads to the editors at the address shown at the right.

Guild Officers and Directors

President: and Director:	Tommy McNabb P.O. Box 327 Bethania, NC. 27010 (336) 924_6053
Vice President:	Andrew McLurkin 2112 Windy Woods Dr. Raleigh, NC 27607 (919) 834-4693
Secretary:	Mrs. Charlie (Maureen) Frazier-Monroe 12 Drakesway Ct. Durham, NC 27713 (919) 544-4110
Treasurer:	Tony Kelly 348 Bell Rd. Kinston, NC. 28501 (252) 527_2130
Director:	Barry Jones 221 North Avenue Danville, VA 24540 (804) 793-5282
Editors:	Mrs. Norman (Marge) Gevais 51 Island Road Hardy, VA. 24101 (540) 721-3275
	Mrs. John (Joan) Poythress 625 Freedom Street Swainsboro, GA. 30401 (478) 237-9478

Please address correspondence about this newsletter to the President or the Editor at the above addresses. Please direct requests for information about the North Carolina Custom Knifemaker's Guild to the President, Tommy McNabb, at the above address.

From the President:

Dear Guild Members and Friends:

We just completed our 8th annual show...WOW!

I cannot begin to thank everyone personally that helped make it such a success, but I want to take this opportunity to thank you on behalf of the North Carolina Custom Knifemaker's Guild for your time, goodies for the hospitality suite, donation for our auction, helping our vendors, helping to set up for the show and all other forms of help you so generously supplied. Without generosity such as yours, this show would not be the success that it has been for the past eight years

We are planning for our ninth show and hope you will get me your comments and suggestions for next year. We cannot do it without your help and support.

I sincerely hope that the remainder of the year and the upcoming holidays are full of successes and good health. I look forward to the next Guild meeting and hope you can be there.

Thanks

Tommy McNabb
 President
 Sept 11, 2002

Winners of the Member's Knives:

Andrew McLurkin won the drawing for the knife donated by Thomas Clegg



Tony Kelly won the drawing for the knife donated by John Poythress. (Tony, it seems the excitement of the event just tired you out.)



Carol Kelly won the drawing for Ron Newton's "Ovation" knife he donated to the Guild.

Kathy Williamson, a friend of Susan Whitley, won the knife donated by Tommy Matthews. Larry Tuttle, a friend of Bill Bisher, won the knife donated by Chuck Staples. These recipients were not there for the drawing.



SouthEastern Custom Knife Show Awards

From left to right beginning with the back row: Dianna Casteel—Best Miniature; Ron Newton—Best Folder and Best Damascus Pattern; Koji Hara—Best Art Knife; Dusty Moulton—Best Fantasy and Best Scrimshaw; Aaron Guerani—Best New Maker; Front Row: James Walker—Best Hunter and Best Forged Knife; Steve Filicietti—Best Fixed Blade and Best in Show; Mark Hazen—Best Fighter; Jot Khalsa / Julie Waenski (engraving)—Best Engraved Knife.



Ron Newton took Best Folder with this Gun/Folder. This little cutie really shoots!



Mark Hazen took Best Fighter with this sleek fixed blade.

In putting on a show, it takes lots of work and help to bring the convention center from this.....



to this. Thank you to everyone who works so hard to make this weekend successful!

Mr. Bill Moran and Dr. James Batson always make the Bowie Symposium interesting.



The Chopra's always take plenty of time to go over supplies with the customers

The show is always a good place to get to catch up with friends.



Philip & Barry make sure the "new guys" are made to feel welcome. Steve Filicietti won the Best Fixed Blade category and Best in Show.



Pop puts great thought into each question posed by each person.

Bob Cumming visits with Mr. Bill Moran.



Dana Acker enjoys good company at the Banquet. Thanks Philip & Barry for bringing another fine craftsman into the Guild

Even as good as the food is, you just can't beat the fellowship at the Banquet.



Thoughtful deliberations are always a part of the show.

Exactly how I would have cleaned up also.



Tommy & Koji making plans for the class Koji taught at Tommy's shop the following week.



It was a real pleasure for me to meet Mr. Moran at the show. I also had the pleasure of bringing home the Show Poster with his signature. Eat your heart out Caveman! (and thanks Doris)



After the show, Koji Hara stayed around and held a class on making a folder. To quote my husband, "the tips I learned in just the first day made the class more valuable than the cost". John Poythress, Charlie Monroe, Wayne Whitely, Koji Hara, Tommy McNabb, Travis Daniels in attendance.

NCKKG Meeting
Saturday, November 2, 2002
Demonstration Schedule
Herb Baker's Shop
Eden, NC

8:30am	Board Meeting
9:00am	Guild Meeting
10:00am	Flint Knapping – Mark Amon
11:30am	Mini-Mill – Tommy McNabb
12:30pm	Lunch
1:30pm	Iron In The Hat
2:00pm	Wooden Scabbard – Phillip Jones
3:30p	Precision Measurement- Daniel Hilgenberg
5:00pm	Departure

Directions:

From Martinsville VA:

Go south on 220 to Ridgeway VA. #14 dead ends into 220. A few hundred feet south of the Sgstate Line the road splits. The right fork is NC 87. We are 3—5 miles down the road (give or take a mile or two). Brick House white front steps; Paved drive; brick gate posts with lights and brick mailbox #14104 on it. This is only a few yards past a new Gleaming White Church also on your right. Shop is in the back yard. Will have to park on the grass.

From the WEST or Winston-Salem:

Take #158 from #40 to #68 to #220 bypass. Go north till you turn off on #135. This goes to Eden and near the drive-in theater it runs into West Washington St. 2-3 stop lights will be a left turn to S. Hamilton. This run into Bridge Street which runs into Oakland Ave— Which is NC 87) Outside the city limits 5 houses or so past the old fair grounds the house will be on your left. (see above description).

From the South or Greensboro:

You may go north on #220 until you come to #135 (see above).

You may go north on #29 to the Intersection with #14 and #158 take #14 to left to Eden. At the intersection of Van Buren Rd (#14) and Kings Highway (across from the Hospital) turn left follow across the valley and you have to turn this is Bridge St. and it runs into Oakland Ave. which becomes #87 as you leave town.

From Danville VA:

There is an Eden turnoff signs on both #29S and #58W

Motels:

Jameson Inn	Hampton Inn
336-627-0472 \$62.00	336-627-1111 \$82.00
Days Inn	Inn Keeper
336-623-1500 \$51—\$55	336-627-5131 \$60.00

Doc & Mrs. Baker tell me that Eden has 3 Chinese Restaurants, 2 Mexican, 2 Steak Houses, and all of the usual assortment of fast food places.

Thanks Terrill Hoffiman, Daniel Hilgenberg, and Tommy Mcnabb for banquet, winners, & show pictures.

Profile In Steel

(Normally the Profile in Steel is a biography of one of our Guild members. However, John and I were so impressed with this knifemaker that we decided that you might find his biography interesting. The profile information was taken from his website www.knifehousehara.com and from my conversation with him.)

Koji Hara became a full time knifemaker in 1988. For the first three years he made knives in the style of Bob Loveless.

In 1991 when he held his first “one-man knife show” in Seki City, Japan, Koji started making knives of his own concept and design.

Three years later, he became a AKG Probationary Member. Koji started attending knife shows in the U.S. and realized that no custom knifemaker could expect to succeed by being a “copycat”. It was then that he decided to create knives that reflect his own style. In 1997, he became a AKG Voting Member.

Most knifemakers in Japan have been selling their knives primarily through cutlery stores and knife shops. However, Koji sells very few of his knives through such retail outlet and instead has his own sales channels.

Annually, Koji participates in 2 knife shows in Japan, 5 to 9 knife shows in the U.S. and other countries. He also holds a couple of “one-man knife shows”. It is through his attendance at such shows where he personally comes face to face with many of his customers and users.

His “one-man knife shows” are held in the smaller cities in Japan and are very much appreciated by people who are not able to attend the large knives shows held in the big cities. Koji believes that his one-man shows are an ideal opportunity for more and more people to become aware of and enjoy custom knives. He conducts knifemaking classes and holds an annual “knife campout” that is widely attended. Since Koji conducts such activities and attends many shows, he often works 15 hours a day in his workshop making knives.

His knife steel of choice is “Cowry—Y”. This is a

powdered stainless steel made by Daido Steel which holds an excellent cutting edge and polishes to a high mirror finish. Although one of the drawbacks of powdered steel is its weakness towards lateral impact, this can be corrected through proper heat treating. Koji also makes knives using ATS-34, D-2, 440-C, and other steels based on the customer’s preference. His preferred method is stock removal and he uses stag, mastodon ivory, abalone, mother or pearl, and other materials for handles.

Koji has two children. His daughter is a registered nurse who specializes in diabetic nursing. His son is a computer guru and website designer. (Now that’s a fellow I’d love to get tips from). Koji’s son is engaged and Koji is very excited about the upcoming wedding. When you find Koji in his shop you will also find his wife there helping him with his mirror finish polish.

Koji hopes to focus his knifemaking activities towards the U.S. market in creating knives of his own concept and design to delight his customers.

Koji won Best Art Knife at this year’s SouthEast-ern Custom Knife Show.

Hot Bluing

By

Wayne Bernauer

(Wayne demonstrated Hot Bluing at the April 2002 meeting. This is the 2nd and final part of the information he gave us. Du-Lite Process from the Du-Lite Corporation. Thanks Wayne!)

These instructions are for use with the Du-Lite Steelkote Black Oxide Salts and Du-Lite Oxiblak Black Oxide Salts. These are for blackening of wrought iron, plain carbon, and low alloy steels. The finish meets or exceeds government specification MIL-C-13924B, Class 1.

Section 3 - Mixing and Maintaining the Blackening Bath

Part 1 - Determining Required Quantity: When mixing new solutions it is necessary to determine the amount of blackening salts which will be needed to make the new solution. This is done by using one of the following formulas:

For square or rectangular tanks - $(L \times W \times D) / 231 = G$ (Where L = Tank length in inches, W = Tank width in inches, D = Tank depth in inches, and G = Tank capacity in gallons)

For cylindrical tanks - $H \times ((R \times R) \times 3.14) / 231 = G$ (Where H = Tank height in inches, R = Tank radius in inches, and G = Tank capacity in gallons).

Dimensions are the inside dimensions of the tank to be used. Four to six inches should be left open in the top of the tank to allow for expansion and boiling action of the solution. Height and depth measurements should be adjusted accordingly before the above calculations are performed. Once the tank capacity has been calculated, it is multiplied by 6.5 to determine the number of pounds of salts required to make up the Du-Lite blackening bath.

Part 2 - Mixing New Solutions: If a new tank is being used, no special preparation is required. If an old bath is being replaced, it will be necessary to clean the tank as well as possible by repeatedly flushing the tank with water to remove any possible iron oxide contamination built up in the tank. Once the tank is clean and empty, you are ready to start.

IMPORTANT — When making blackening solutions, never start with hot water, and never add large quantities of salts to the solution all at once: The salts generate heat as they are mixed into solution, and if the solution becomes too hot a boil-over can occur! Du—Lite salts must be added slowly and mixed well when solutions are made to insure that the salts are completely dissolved into the solution.

To mix the new solution, start by filling the process tank about one third with water. Slowly add a small amount of the blackening salts to the tank, and mix the salts into solution. In all but the smallest tanks, salts are generally added in ten to fifteen pound increments, then mixed well into solution before more salts are added. After about half the required quantity of salts are added to the tank by the above procedure, a sufficient amount of water is slowly added and mixed into the solution to bring the solution level in the tank up to about half the operating level. At this point the heat for the processing tank is turned on and the solution is allowed to come to a gentle rolling boil and the temperature of the solution is noted. The operating temperature of a new bath should be about 280^oF. to 285^oF.

If the boiling point of the solution is below this temperature, more salts must be added to the bath. Small quantities of salts are added and mixed into the solution. Each addition of salts should raise the boiling point of the solution slightly.

This process of slowly adding and mixing salts into the solution continues until the proper boiling point is obtained. If the boiling point of the solution is above the proper operating temperature, water must be added to the bath. Additions of water should be made only after the bath has come to a rolling boil to insure that the added water will mix well into solution. If added water is not mixed well into solution, pockets of water can form and result in tank eruptions as the water is turned to steam. Additions of small amounts of water are made slowly, and each addition is mixed well into solution, until the proper boiling point is reached. Once the proper boiling point of the solution has been reached with the tank at about half it's normal operating level, alternate additions of water and salts are made slowly and carefully, with each addition being carefully mixed into solution, until the desired operating level of solution is reached. This procedure is not difficult and is exercised to ensure that the new solution is mixed at the proper concentration.

To understand how the amount of salts in solution affects the boiling point of the solution, you must understand that adding salts to the solution makes the solution stronger and denser. Denser liquids have a higher boiling point. Adding water to the solution lowers the solutions density and, therefore, lowers the solutions boiling point. Then the boiling point is correct, the solution concentration is correct. The key to properly making up the new blackening solution is to make all additions of salts and water slowly and carefully, to mix all additions well into solution, and to carefully monitor the boiling point of the solution.

Part 3 - Maintaining the Blackening Bath: No attempt should be made to control the operating temperature of the bath by simple adjustment of the bath's heat source. The bath must be held at a constant gentle rolling boil during operation. Once the solution reaches it's boiling point, it's temperature will not increase until enough water has evaporated to raise the solutions density, so there is normally no need to regulate the heat applied to the bath. The only situation in which regulation of the heat source is advisable is if this boiling action is too vigorous. This may occur in production facilities where large capacity heat sour-

ces are used to minimize initial heat up time.

Maintaining the Du-Lite blackening solution is a simple matter of keeping the concentration of salts at the proper level. This is accomplished by careful monitoring of the solutions boiling point in exactly the same manner as employed when mixing new solutions. Remember - high salt content causes a high boiling point, and low salt content causes a low boiling point. In processing, additions of salts and water are made to regulate the boiling point of the solution, and therefore regulate the concentration of the solution.

Additions of Water: Many of our customers choose to use automatic temperature sensitive water feed controls to regulate the addition of water to the blackening solution. Additions of water are made more frequently than additions of salts in actual processing due to the loss of water through evaporation in the heated bath. Automatic water feed controllers are set up to open a valve and allow small amounts of water to be added to the bath when the operating temperature reaches a point about 5⁰F above the normal operating temperature. When sufficient water has been added to lower the operating temperature of the solution to normal levels, the controller closes the solenoid valve. This makes control of the bath extremely simple, and in large production facilities this type of control is the most efficient and logical method of controlling the bath. When an automatic controller is used, water supply lines should be set up above the surface of the bath, and constructed to allow the water to run down the side of the tank before it contacts the actual solution. This is to insure that the added water will mix into the solution more effectively. A spatter guard should be installed in the section of the tank where water is added to protect the operator from spattering when cold water comes into contact with the hot solution. If additions of water are made manually, great care must be taken to avoid operator injury from spattering, and water must be added very slowly and cautiously. Water supply lines near processing tanks should be iron pipe, rather than copper, because copper exposed to the caustic copper may break down and allow copper residues to enter the bath, causing copper contamination.

Addition of Salts: Normally, additions of salts are required only after a fairly large amount of work has been processed. When salts are added to the bath, you are replacing whatever salts have been lost due to "drag out" during processing.

Processing large amounts of small, irregularly shaped parts in baskets or barrels will require more frequent salt additions, because this type of work tends to trap more of the blackening solution in small holes and "pockets", and results in more "drag out". Salts may be added any time the working level of the solution has dropped enough to indicate that additional salts are needed in the solution, but certain conditions should be observed before adding salts. First, the bath should be at a good rolling boil to enable you to monitor the boiling point while adding salts.

Second, salts should only be added to the bath when there is no work in the bath to avoid the possibility of salts settling on the work before they are completely dissolved. Third, all additions of salts should be made in small quantities, making each addition slowly and carefully, and making sure that the fresh salts are mixed well into solution before adding more. Generally, it is most practical to make any necessary addition of salts at the end of a processing day, because the tank will be empty of work and at the proper operating temperature.

You can calculate the approximate quantity of salts needed to replenish the bath by using the same formula you used to determine the required quantity for a new bath. First, determine the level of solution in the tank by measuring the distance from the top of the tank to the surface of the solution. Then decide how much you want to raise the solution level in the tank. Remember that you want to leave four to six inches open in the top of the tank for expansion. Next, calculate the quantity of salts needed by using the appropriate formula for your tank, as shown in the following example: You have a processing tank which measures 24"W x 24"L x 24"D, and you want to add 6" of new solution. Using the formula for a square tank, you calculate the required quantity of salts. $24''(L) \times 24''(W) \times 6''$ (Change in level) $3456 : 3456 / 231$ 14.96 (Number of gallons of new solution required) $: 14.96 \times 6.5$ (Pounds of salts per gallon of new solution) 97.24. Approximately 97 1/4 pounds of salts will be needed.

The calculated quantity of salts is slowly added and mixed into solution in small amounts. If you are

using an automatic water feed controller, the controller will automatically add appropriate amounts of water as small quantities of salts are added to the bath. If you are making water additions manually, small amounts of water and salts should be added alternately, just as if you were making up a new bath, until the desired level of solution is reached and the proper boiling point is achieved.

Part 4 - Cold Start-up Of the Bath: When the processing tank is to be started after it has been allowed to cool for a length of time, certain procedures should be followed. First, the bath should be mixed well before heat is applied to the tank to mix crystallized salts back into solution. Second, probes for temperature sensing apparatus should be checked to insure that crystallized salts have not built up around the probe. Incorrect temperature readings may occur if these two precautions are not observed. Careful placement of temperature probes when they are installed will minimize this problem. Probes should be installed in a manner that will allow easy removal from the tank to allow for cleaning and occasional calibration if necessary. If a probe becomes encrusted with salts, the probe should be removed from the tank and the caked on salts should be carefully removed. Probes for temperature sensing apparatus should always be installed in a section of the tank where the solution will circulate freely around the probe. A guard may be used to protect the probe from possible damage by work being moved in or - out of the tank.

Once the salts have been thoroughly mixed back into solution, the heat source for the processing tank is turned on and the bath is allowed to heat up to its boiling point. Ordinarily, this will be about the same temperature as was indicated when the bath was last shut off. If for some reason the bath does not boil at the proper temperature, additions of water or salts are made to regulate the boiling point. Additions to the bath are made in the same manner as when maintaining the bath during normal processing. No additions should ever be made to the bath until it is at its boiling point!

Part 5 - Other Maintenance Procedures: After some use, the bath itself may take on a reddish coloration. This is not uncommon and should not be taken as a sign that the bath has “gone bad”. Work will normally continue to blacken perfectly in a bath which has taken on this coloration. Also, after considerable use, you will notice a reddish—brown residue that comes to the top of the solution during processing. This is normal and is a result of iron build-up in the solution. Unless this build up is severe, it poses no threat to the quality of the finish delivered by the Du-Lite process. Some customers prefer to occasionally skim this residue from the bath surface to avoid dragging work through the residue.

A slight build up of iron sludge in the bottom of the tank is also normal when the bath has been in operation for a length of time. This sludge can be removed at the end of a processing day after the heat for the processing tank has been shut off. When the boiling action of the bath has ceased, but while the solution is still hot and the salts are still well mixed into solution, sludge is removed by raking the tank bottom slowly with a hoe or similar implement. In large installations, Du-Lite can provide a solution clarifier for the processing tank. Clarifiers attach over the side in one end of the tank, and have a percolating effect to continually remove sludge build up from the bottom of the bath.

Section 4 - Common Processing Variations

Part 1 - Dual Temperature Processing: The Du-Lite process produces perfectly acceptable results on normal carbon steel work when used as a single temperature system, but certain conditions in steel parts may produce inconsistent results. This is a common occurrence in steel alloys containing high levels of chromium or nickel. Tempered and heat-treated steel parts and assemblies can present problems. In some cases, welded and ground parts can present problems. Problems may include uneven coloration, bare spots, and poor overall coloration. In most instances processing this work at two different temperatures can produce good, deep, dark, consistent colors. Dual temperature

processing uses two separate 2 black oxide baths. The first blackening bath is mixed to obtain a boiling point of between 280⁰F and 285⁰F and the second blackening bath is mixed to obtain a boiling point of between 300⁰F and 305⁰F. Bath control is accomplished in the same manner as with a single temperature process, but the new temperatures are used as correct boiling points. This process has been proven to provide superior results, even on plain carbon steel, and can reduce processing time of all work by over 50%. Quite often it is found that a five to ten minute immersion in each bath of a two temperature process will produce results superior to those obtained by a twenty to forty minute immersion in a single temperature bath with problem parts. Small installations can achieve the same results by starting work at the lower temperature, and allowing work to remain in the blackening tank until enough water has evaporated to raise the solution temperature to the second stage temperature.

Part 2 - Multi Purpose Processing Lines: In some processing applications it is desirable to process different types of metals. Processing tanks for these different metals can often be integrated into the basic Du-Lite processing installation. This can allow the use of common rinse and cleaning tanks for the different processes, and can therefore result in considerable cost savings. Du-Lite Corporation supplies a full line of specialized products to provide black oxide finishes on several different types of metals, as listed below:

Du-Lite 3-0 Process: For blackening stainless steels, cast iron, monel, etc.

Du-Lite "XX" Compound: For blackening silver and silver solder.

Du-Lite Cu-Prep and Cu-Salts: For blackening copper, brass, and alloys

Part 3 - Special Purpose Operations: Some types of parts have a tendency to absorb or occlude processing salts during the blackening process. These occluded salts may not appear immediately on finished work, but will creep out of the finished piece in the future. When this problem, known as "blooming", occurs, salts will appear in the form of a whitish rind or haze on the finished piece. Cast and malleable iron, powdered metal castings,

laminated parts, and parts with many blind holes are particularly susceptible to this problem. Du-Lite Corporation supplies two products to overcome this problem. Du-Lite's Necco #2 is a dry granular material which, when mixed with water, forms a dilute acid solution. This solution is heated to about 180⁰F and work is immersed in the solution to neutralize residual salts to keep "blooming" from occurring. Du-Lite also offers its "SD" Compound, which is a specially formulated oil product, used at full strength and heated to between 220⁰F and 230⁰F by means of a steam or electric immersion heater. When parts are immersed, "SD" Compound seeks out and removes trapped salts and moisture. "SD" Compound offers the added advantage of being completely compatible with Du-Lite's Pro Ct Oil, and enhances corrosion protection when used in the Du-Lite process.

Du—Lite personnel are always available by phone to assist you with any problems you may run into. The tips listed below will solve most common problems.

Red or Green Coloration on Work: Excessive temperature in the blackening bath can cause redness. Checking and calibrating your temperature indicating equipment will normally correct this problem. In some cases, steel may be high in silicon content, and this may cause redness in the finished work. Unless the silicon content in the steel is exceptionally high, processing this work in a two-temperature system, as with hardened and high alloy steel, will normally eliminate this problem. Other odd coloration problems due to the nature of the materials being processed can also often be solved by this two temperature processing system. Redness may also be a result of severe copper or iron oxide contamination in the bath. Addition of a small quantity of Du-Lite's Black Bath Purifier will normally correct this. When using this purifier be careful when making additions, because too much purifier can cause green tinted work.

Uneven, Stained, or Spotty Coloration: Again, two-temperature processing can often solve these problems. Other things to consider include improper or inadequate cleaning before blackening,

and the possibility of drying between the blackening bath and the cold-water rinse. Never let chemicals dry on the work, or staining and streaking can result. Do not pause to inspect work between the blackening operation and the cold-water rinse, as salts may dry on the work. Work should be kept moist at all times, and should be transferred as quickly as possible from one tank to the next to avoid staining.

Tool Marks, Pits, etc. on Finished Work: The Du—Lite Process will not hide poor surface preparation. When properly prepared, work will be finished with a deep, consistent, black coloration, but the physical characteristics of the surface will not be changed. Bead blasted or sand blasted work will remain dull looking, resulting in a black matte finish. Highly polished and buffed work will blacken and remain polished.

Things to Remember: 1) Temperature is of the utmost importance! Never attempt to process work if the bath is not at proper operating temperature. Test and calibrate temperature-indicating equipment as needed to insure accuracy. Operating temperature depends on the concentration of salts in solution. Never attempt to control temperature by regulating the heat applied to the tank. Never attempt to control solution level by simply adding water. Never make additions to the bath until the bath reaches its boiling point. 2) Surface preparation is important! Poor attention to buffing, polishing, or cleaning will result in poor finish quality. 3) Avoid bath contamination. Do not attempt to skip steps in the process. All rinses are important to keep the processing bath clean. Cleaning and degreasing must be performed before attempting to blacken work. Avoid using tools, racks, or baskets, which have been brazed to avoid copper contamination.

Section 6 - Environmental Information

Most solutions in the Du—Lite process are highly alkaline and corrosive in nature. If solutions are to be disposed of, you should consult local, state, and federal environmental protection regulations. In many areas, solutions can be neutralized by slowly adding dilute acid and testing the pH with pH test

strips that are available from most laboratory supply companies. When the pH of the solution has been lowered to between 7.0 and 8.5, the solution is considered a neutral salt solution and many areas will allow discharge to municipal water treatment facilities. Oil products should never be dumped into sewers or waterways, but should be brought to an oil collection center for disposal.

IMPORTANT! Parts made of aluminum, tin, cadmium, zinc, or galvanized steels should never be introduced into the blackening bath! The solution is corrosive and will destroy these materials! Product safety information can be found in Material Safety Data Sheets for each individual Du-Lite product. Because many of these products contain high levels of corrosives, all personnel who may come into contact with these products through use or handling should read and familiarize themselves with these sheets.

The July meeting always seems to be overshadowed by the show when it gets around to newsletter time. But I did want to mention that when you go to Norm & Marge's you never know quite what to expect....from the ice cream boat on the lake to the rooster on the car.



Rob Wotzak did a great demo on ornamental forging.



Also at the July meeting Philip Jones did a demo on Japanese Silk Handle Wrap. He has sent me detailed instructions on how to do this. You will find this information in the next issue of Billets and Blades. Thanks Philip!!!

Thanks Norm & Marge for your hospitality each year!

Calendar of Events

October 2002

Class: Oct 4-5 Automatic Folder, Ron Newton, Instructor, Montgomery Community College.

Class: Oct 11-13 Pattern Welding & Mosaic Damascus, Darrel Ralph, Instructor, Montgomery Community College.

November 2002

Knife Show: Nov. 1-2 New York Show

NCKKG Meeting: Nov. 2 Herb Barker's Shop, Eden, NC

January 2003

NCKKG Meeting: Jan. 25 Montgomery Community College, Troy, NC

April 2003

NCKKG Meeting: Apr. 12-13 Montgomery Community College, Troy, NC

July 2003

NCKKG Meeting: July 19-20 Norm Gervais' Shop, Hardy, VA

(Directions and meeting details will be sent in the Newsletter preceding each meeting)

(Register for classes at Montgomery Community College; located in Troy, NC. Lodging is available in Troy or in neighboring Albemarle, NC)

MEMBERSHIP APPLICATION FORM

Date:		
Name:		
Address:		
City:	State:	Zip
Phone:		
Email:		
Website:		
Choose One:	New Member:	Renewal:
Choose One Membership Category:	Collector:	Student

Membership / Renewal fees are: \$50.00 per year

Collector membership fees are \$25.00 per year

Student memberships are \$10.00 per year

Please send this form with a check or money order to:

NC Custom Knifemaker's Guild

Attn: Tony Kelly

348 Bell Road

Kinston, NC 28504

<http://www.ncknifeguild.org>