We are pleased to announce the premiere of our brand new website. The old site will have retired at a young age - a mere two years old - but growing demand and an expansion of services made it necessary to remodel and update the website sooner than expected. To accommodate its growth, Finishing Talk 2.0 features new web pages highlighting everything from our monthly newsletter to our 2008 media kit for advertisers, and even links to our forum-fueled internet television show, Finishing Talk Live, a production of the IPTV network Finishing.TV.

The Finishing Talk forums, the focal point of the website, have also been revamped as part of the website overhaul. Simplicity was the goal throughout the design process, and the site administrators had hoped to create a cleaner and more user-friendly interface to appeal to both existing and potential forum members. With a rapidly growing membership - nearing 3,000 and counting - this fledgling community is proving to be the new internet hub for metal finishers. Our downloadable media kit features our advertising opportunities and pricing for this year. We offer print and online ads, and even episode sponsorship for our IPTV show. And for those of you who are interested in contributing to our monthly publication, the new site makes it easy for you to submit articles and editorials to our newsletter staff.

For additional information, you can contact the site administrator Griffe Youngleson by phone at (828) 287-3353 or by e-mail at griffe@zurv.com.

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INDUSTRY EVENTS 2008

May 13-16:
ET 2008
Orlando, FL
www.et08.org

May 14-16:
Electrocoat 2008
Indianapolis, IN
www.electrocoat.org

May 20-22:
EASTEC 2008
W. Springfield, MA
call (800) 733-4763.

May 20-22:
RAPID 2008
Lake Buena Vista, FL
www.sme.org

June 3-4:
Powder Coating School
Chicago, IL
surfacefinishingacademy.com

June 3-5:
American Coatings Show
Charlotte, NC
american-coatings-show.com

June 16-18:
SUR/FIN 2008
Indianapolis, IN
www.sur-fin.net

July 8-11
PDA Applicator Spray Course
Houston, TX
www.pda-online.org

July 14-18
MST Conferences
Orono, ME
www.mstconf.org

June 21-24
CCAI Annual Meeting
Clearwater Beach, FL
www.ccaiweb.com

June 3-5:
American Coatings Show
Charlotte, NC
american-coatings-show.com

June 16-18:
SUR/FIN 2008
Indianapolis, IN
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July 14-18
MST Conferences
Orono, ME
www.mstconf.org

Have an upcoming event? Tell us about it at:
www.finishingtalk.com!
Trenton, NJ  Surface Technology, Inc. has developed an electroless nickel-PTFE plating bath featuring a plating rate of 2-3 times the industry standard. The NiSlip™ 515 system features a plating rate of about 20 microns per hour, vastly greater than traditional EN-PTFE baths that plate at only about 7 microns per hour. In addition to the revolutionary speed, the NiSlip™ 515 system saves time, energy, and labor, increases productivity and provides the opportunity for thicker EN-PTFE deposits. For further information please contact: Heidi Kellner of Surface Technology, Inc. at 609-259-0099 or by e-mail at heidi@surfacetechnology.com.

Manchester, England  Ian Sel-lars, the owner and managing director of Elcometer, and one of the founders of the modern coating inspection industry, passed away April 10, 2008. He was 70. Under his leadership, Mr. Sellars has introduced to the coatings industry a number of firsts.

Midwest  The Powder Coating Institute (PCI; Alexandria, VA) and the Chemical Coaters Association International (CCAI; Cincinnati) recently joined efforts to make sure trade shows are conducted with strategic marketing and occurrence. Each company sent 7 individuals to a 14 member working group, who will meet regularly to design a show strategy to be integrated through 2013. After analyzing show data and industry trends, the groups have decided an annual show or event is necessary to promote industry products and services. Initial talks have centered on a large Coating Show to be held in the Midwest in the fall of even years. Currently the associations are gearing up for Coating 2008, to be held in Indianapolis this September. For more information, visit www.powdercoating.org or www.ccaiweb.com.

Jackson, MI  Elm Plating has had to lay off its third shift - 13 workers - as a result of the ongoing UAW strike at five American Axle plants in Michigan and New York that began on February 26 over a labor agreement. Elm Plating finishes and heat treats bolts and fasteners that are found in many vehicles. The company operates two plants and employs 118 workers. The American Axle strike has caused GM to shut down all or some of 29 vehicle assembly plants because of parts shortages. The strike is having a far-reaching impact on numerous auto industry suppliers. American Axle said that the latest proposal aimed at ending the two-month-old strike was "not market competitive" and that it might close striking production plants if the UAW workers do not accept pay and benefit cuts.

Pewaukee, WI  James (Jim) H. Steffes, 61, of Prime Coatings, and a member of the Chemical Coaters Association, passed away unexpectedly on Thursday, April 17, 2008, as a result of an automobile accident. He is remembered as an outstanding coatings technician who served on the Board of Directors for the Wisconsin Chapter of the CCAI for many years, and helped put on that organization’s summer golf outing. For more information, e-mail WISCCAI@wi.rr.com.

Oxford Instruments Coating Measurement (OICM) has led the industry as a trusted source of dependable coating thickness measurement technology.

We provide bench top units and handheld gauges designed to accurately measure paint, powder, plating, chrome, anodizing, copper, electroless nickel, galvanizing, and other coatings for a range of applications.

visit www.oicm.com for more information.
This month, Finishing Talk interviewed co-hosts Paul Fisher and Paul Skelton of the popular online metal finishing TV show, Finishing Talk Live. The show, which first aired in mid-2007, has become a hit in the metal finishing industry. Known for its humorous mix of metal finishing news, useful information, camaraderie, entertainment, and of course, beer, Finishing Talk Live is quickly making a spot for itself in the ‘Favorites’ list on metal finisher’s computers nationwide. Check out their show at www.finishingtalklive.com

FTalk: In a nutshell, can you explain to our readers just exactly what Finishing Talk Live is?

Fisher: Finishing Talk Live is an extension of the website FinishingTalk.com. Skelton and I are really bored these days so this is what we do with all of our free time.

Skelton: I ‘echo’ Fisher’s comments. I am not so sure about the “bored” part or the “free time” either, but we sure find this hobby enjoyable and entertaining, and we hope members and viewer agree.

FTalk: How long has the show been ‘running’?

Fisher: As of today we now have 6 Episodes online - not counting the first one we tried to do which ended up being called the “teaser episode”. That one has a scene of me break dancing to Eddie Money’s “Electric Avenue” in it!

Skelton: ‘Running’ is an overstatement. As for producing each episode we work at about the pace that they brew Guinness in Ireland. When it comes to preparing for it, we run at the pace in which we can drink a Guinness after work. Did that make sense? We started almost one year ago...many, many Guinesses ago.

FTalk: Who came up with the idea for the show, and how long did it take for the idea to materialize into an actual production?

Skelton: I never saw the napkin, but I was told that alien’s were involved. Just kidding. I only take credit for bringing entertainment and content; the nerds (I mean our IPTV producers) get the credit for the techno-production part. We couldn’t do it without them. And to answer your question, I believe this was Paul Fisher’s idea, with a twist of Griffe.

FTalk: Out of all the places you’ve filmed episodes, which did/do you prefer to film at the most?

Fisher: Even though I didn’t like Cleveland the city much - and the people at the hotel were just outright mean - I thought the venue for Episode 4 was the most fitting. For those of you who weren’t there, it was held in the lounge area of the Renaissance hotel during Sur-Fin ‘07. We had a crowd of at least 100 at that show, and once it got going we had fun. It is the only episode that we had to do some editing to, but it was actually because some rowdies in the bar kept sending over shots...and the producer felt that one shot per episode was plenty. I kept asking ‘what does the producer know about shots anyways’ – he had just turned 21 at that time.

Skelton: ‘Cleveland rocks’ is right! But it’s only because we made a good showing of it and received a lot of support from the attendees at Sur/Fin last year. Cleveland was a lot of fun for us.

FTalk: What is your favorite Episode so far?

PF: Really, I don’t like any of them...have you ever recorded your voice and felt terribly self-conscious of how weird it sounds? Well, it is sort of like that for me, only worse. Not only do I have the weird voice thing to think about – but add in the video, the crowd, and the fact that these shows will always be on my permanent record, and I’m usually a wreck leading up to a filming. My favorite part about the show is when we all agree that it’s a wrap!

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am wrong and they produce a very, very good product, and we move on to the next one in a few weeks.

FTalk: If you could choose an ideal location to film an episode, where would it be?

Fisher: The roof top bar at the Charleston Pavilion Hotel. We've been asking them for years to let us film a show in conjunction with the end of our pub crawl / scavenger hunt during the SMF conference.

Skelton: I would have to say on the beach, maybe Hawaii or in the Caribbean somewhere. And then there is my desire to shoot it on a set similar to “The Man Show”, beer, trampolines and everything. That reminds me, Jay Pietro invited us to shoot a show in New England in his wine cellar, and throw in the trampolines. And don’t think we won’t take him up on it!!

FTalk: You have a segment called the ‘Finishing Talk Walk’ where a short tour is taken of a plant or a particular machine is filmed and discussed; how does someone get their facility or machinery on the show?

Fisher: All you have to do is call or write us. We are always on the look out for something cool in our industry to share with our viewers. We’ve had many offers, but usually proximity plays a big part in whether or not we can get there to shoot or not. If you have something in the Indianapolis area that we should come take a walk at – that’s the one I’m working on now.

Skelton: All you have to do is let us know you want to collaborate with us and we will let you know if we can facilitate coming to your company or place to film “a walk”.

FT: Where will your next episode (Episode 7) be shot?

Fisher: We have just finalized plans for our invitation to have Episode 7 filmed in conjunction with the Indianapolis AESF Branch party for Sur-Fin 2008. I think Jillian’s is the venue and it should be a blast. Once we have everything in concrete we’ll make some postings on the bulletin boards and send everyone announcements.

Skelton: My understanding is Indy, I just make sure I am where I need to be I let the Fisher take care of the shoot, I scout out the pub crawl wherever we are. It’s all about team work, it’s a tough job, but someone has to do it.

FTalk: How can viewers get involved and interact with the show?

Fisher: A big part the show comes from the viewers themselves in the form of postings on the bulletin boards. There is no surer way to get involved than communicating, and collaborating with fellow members.

Skelton: Register on FinishingTalk.com! Make a post, reply or add to a post, just get involved with the online forum and we will make you FAMOUS!! Or at least use your topic for content, our members are already famous!! Remember, it’s a team effort.

Check out this and past interviews on our updated website in the ‘Publication’ section at www.finishingtalk.com
We’ve chosen an extra long forum post this month, in celebration of our new site. Forum members **D.T., DustinGebhardt, Skelton, metfinoh**, and **DaveO** discuss solutions to stopping titanium heaters from plating up with copper during the electroplating process. Feel free to add your thoughts to their ongoing discussion by visiting the forums at www.FinishingTalk.com/community/topic618-Heaters-plating.html (or searching for it in the Electroplating forum under the thread ‘Heaters Plating Up’). For more ‘From the Forum’ discussions, check out our monthly internet television show, Finishing Talk Live, where hosts Paul Fisher and Paul Skelton bring the boards to life!

**D.T.**

We have titanium heaters in our copper electroplating tanks, and they are plating up with copper. We have tried to ground the heaters to the rectifier cabinets, but they are still plating up. Going to try a 4’ ground rod this week and see what happens. Any other suggestions? :confused:

**DustinGebhardt**

Run a small gauge wire (12-16) from an anode to the heater. This will “anodize” the heater and prevent buildup from forming. Plus, it will slowly redissolve the copper back into the solution. Be sure to keep the wire out of the solution, or it may dissolve.

**D.T.**

Run a wire to the heater? You mean a wire from the heater ground to the anode? Close to the heater itself? We have 4VDC 500 amp rectifiers. Will this throw off the current to the work in the tank? Won't it burn up the small wire with all the current going through it to ground instead of the plating bath/work?

Thanks for the tip! I received the same tip from Process Technology. I will try it.

**DustinGebhardt**

The small wire should be fine. In fact, it should limit the current going out through the heater to the tank. As more current goes through the heater, it should start to anodize and form an oxide layer that will further inhibit current flow. You should also have enough anode area that the current coming off of the heater shouldn't be a problem. At least, it has never been a problem for me.

Do not ground the wire. Simply run a small wire directly from the heater to the nearest anode connection. Remove the grounding wire from the heater, as this is not needed and may cause problems.

**D.T.**

Process Tech says to ground the heater to earth, also. I would think removing the ground wire would cause a potential electrocution hazard, so I can't do that. They are 480VAC 5000 watt heaters, 2 in each tank, side by side. Single and three phase. What would a ground fault do, mess up the plating current? Hopefully pop the fuses. We do not have ground fault protection on the heaters. Our tanks are plastic and not grounded.

**DustinGebhardt**

Okay, now I’m getting a better picture. In my mind, I thought you were using Ti steam coils. Now I see that you are using electric heaters. By all means, ground the electrical part of the heaters. I’m no electrician, but I believe that a single phase wiring job should include a hot lead, neutral lead, and ground. Three phase should include 3 hot leads, 1 neutral and 1 ground, but I could be wrong; 3 phase power sometimes makes me scratch my head.

When you run your small wire from an anode to the heater, be sure that the wire is somehow touching the outside metal cylinder. Having the wire only run to the internal elements may not get you to where you want to be.

As far as the Ti dissolving into the tank, I’ve never really seen that happen. I’m assuming that you are using the correct material for the bath.
I'm assuming that you have an acid copper bath, right?

**Skelton**

This is an old one, but a good one.....

It appears that you are on track to get your heaters grounded. I highly suggest Dustin's recommendation to implement anodic current to the heater tube itself, but you need to ensure that it is in fact connected and drawing anodic (+) current to stop plating. If you cannot weld a connector to titanium tube, you could try a conductive adhesive and hope that the chemistry does not remove adhesive. Or, you could use a stainless hose clamp to make connection to your anodic connector and then securely connect to the anode bar.

The correct material for acid copper is Quartz and PTFE (Teflon). This may be your quickest solution, however, most expensive route to resolving the problem. If you are copper plating in an alkaline-cyanide or non-cyanide plating bath, stainless steel is recommended. Could you please indulge us on your copper process, this may help us some. Also, if you have the ability to check "ripple", you

*Continued on next page...*
may have some stray current that may be causing some of this to happen. Ripple voltage is the magnitude of fluctuation in DC output voltage at a specific output current. This assumes the AC input voltage and frequency are kept constant. Most common levels do not exceed 5% of AC input voltage and can be the culprit in some cases.

Let us know how you make out with this, it seems you have been struggling with this for sometime now. Good luck.

DustinGebhardt
Quote: Skelton wrote: “Also, if you have the ability to check "ripple", you may have some stray current that may be causing some of this to happen.”

Not to nit-pick, but ripple and stray current are 2 very different monsters. I agree that ripple should be below 5%, or 10% worst case. Stray current is any other current than the one introduced by the rectifier(s). Sometimes you can get current coming through your steam lines, water pipes, etc. Stray current is very often a nightmare of a nightmare to find. Ripple should be much easier to check with a good quality RMS digital multimeter.

Not to go too far off-topic, but my sister company, Fluke, makes some great multimeters. :-)

D.T.
Alright, you guys haven’t given up on me yet - great. Here are the heaters that are in the tank:

P, F, S, and T Series, Metal Heaters
(Link: http://www.process-technology.com/processtechnol/mots.htm)

Bath is sulfuric acid, copper sulfate.
Rectifiers are 4VDC 500 amp maximum. We usually use less than 180 amps DC. I have checked ripple before with our oscilloscope, and usually do not see over 100mV DC.

I swung this idea by my boss, who is the cheapest person there is, and he said we may try it. I say we replace them all with PTFE encapsulated heaters instead; but business is really slow right now, so I doubt we will spend the money. We are concerned we may have an actual fault current, and how it may mess up our plating process causing scrap.

DustinGebhardt
Ripple is measured by the percentage of VAC to VDC. If you measure 2VDC and measure 0.2VAC, you would have 10% ripple (0.2/2 = 0.1 or 10%). I’m assuming you meant “less than 100mV AC" and not "100mV DC", right? In that case, 100mV divided by the DC voltage you measured at the same time would give you your ripple. BTW, ripple should always be measured with material in the bath. Measuring ripple in an idle tank can give bogus readings.

What kind of faulty current are you talking about that would cause scrap?

Metfinoh
Back to the heaters plating up...here is what we do in our tanks. We actually use a separate auxiliary rectifier, such as a laboratory or hull cell rectifier. You would not want to use a large capacity rectifier, because all you need to impose is a very small "trickle" of direct current.

An anodic charge should be imposed on the outside shell of the titanium (or stainless) heater, above the solution level. We run a small wire from the cathodic side of the auxiliary rectifier to a small piece of carbon, and place this carbon cathode within about 6" of the heater. Then we adjust the output of the auxiliary rectifier to about 1/2 volt DC. This small secondary electrical input should have no side effects. It is important that the wire connections to the heater and carbon cathode be above the solution level. At the voltage I recommend, you will only see about 1 ampere. The amperage is limited by the size of the cathode.

The shell of the heater is connected to the factory ground and in no case should this ground be disconnected. This ground is to direct a possible shortage to ground (0 potential difference).

D.T.
External rectifier sounds like a good idea. I had to calibrate one rectifier today, and I only saw 25 mV AC ripple with a shunt across the load (sorry about earlier typo). Damn control cards, rectifiers, and...
gate cards are via 1980, and are from Controlled Power. Difficult to get "perfect", as far as amp output and feedback to the PLC. But I've got to use what I have. Fault current is if a heater shorts to ground (Titanium sheath). This would put 277VAC current into the anode, and short out who knows what.

DaveO

Guys,

RIPPLE is NOT superimposed AC, as your replies indicate. Ripple is defined as "...the extent to which the DC (from a rectifier) deviates from the ideal..." (ref. ELECTROPLATING by Frederick A. Lowenheim pp. 160). By nature of the alternating current being rectified (converted to DC), and by the nature of the filtration of the rectified current, the "Ripple" can be as much as 50%, or very close to 0. Dr. Lowenheim goes on to relate that ripple is normally of little importance in electroplating operations. In chrome plating, ripple is a problem. It is not a problem in copper plating. Superimposed AC could cause problems in bright acid copper plating.

It should also be noted that ripple is not going to cause heaters to plate out, and neither will superimposed AC! Stray DC current probably would. Take a millimeter, and measure the current potential between the heater and the ground. That won't tell you WHERE the current is coming from, but it will tell you how big the leak is. When you know how big the leak is, then you'll know if it is a situation where all you have to do is a little housekeeping, or if you have your heater leaning on the cathode bus.

Finally, why is a little plating on your heater such a problem? If you don't have a problem using the wrong type of heater in your acid copper, so what if it plates out a little? If the plating gets too thick on the heater sheath, chip it off and put it back in the anode baskets where it belongs, and with the money you save, tell your cheapskate boss to buy a Teflon coated heater!

DustinGebhardt

I was wrong to deviate off topic. Ripple is a topic for another discussion, I suppose. My initial reply was to add a small wire from the anode bussing to the heater outer tube. The idea here was to make the heater anodic so that you would force the cop-

Continued on next page…
per buildup to stop, and even slowly dissolve back into solution.

The reason for the buildup in the first place could stem from several reasons. In my experience, bipolarity and stray current are the 2 most common. We haven’t really discussed bipolarity here, but it is when a strong magnetic or electric field creates induces another magnetic or electric field nearby. Think of a bar magnet and several nearby iron nails. Each nail in turn becomes slightly magnetic as it enters the field of the main magnet. One end of the nail becomes slightly “North” and the other end is slightly “South”. You could daisy-chain the nails together if the magnet is strong enough to affect them all.

Electricity is very similar to magnetism. If you have a piece of conductive material (your heater) floating around near a strong electric field, and it does not already have an electrical current passing through it (aka it is not generating its own electrical field), it is possible for the conductive material to assume a slight current flow. This is why live entry and live exit are so commonly used. As a part is being removed from a plating bath and it looses contact with the cathode system, it briefly has no strong polarity to it and can be subject to bipolarity. If the bipolarity is strong enough, it can cause part of the piece to become passive, and subsequent operations can fail. Duplex nickel (or 3x or 4x, too) is particularly sensitive to this in my experience. By simply adding a small wire from the anode system to the heater, you introduce a small positive charge to the heater, which will prevent the bipolarity from forming.

DaveO

Bipolarity is also a potential factor. Is only one end being plated? That is the simplest way to check for bipolarity. I still think he needs to check the potential above ground first. How much current is there? If this is such a problem, how come we’re the only ones talking about it? ~FT~

Join in on the conversation and other finishing discussions at www.finishingtalk.com. Maybe your advice, views, or opinions will end up in a future installment of ‘From the Forum’.

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What is Anodizing?
Developed more than 60 years ago, anodizing is a simple electrochemical process that forms a protective coating of aluminum oxide on the aluminum surface. The finish is very durable; however the lifetime of the finish is proportional to the thickness and density of the anodic coating as well as the quality of the seal.

Aluminum oxide is a hard, durable, weather resistant coating that protects the base metal. The coating may be clear or colored using various methods. The coating itself grows from the base aluminum metal by way of the electrochemical process, so the coating is integral to the metal and cannot peel or flake. The coating's structure consists of many small pores that can be used to color the aluminum. Once color is added, these pores are sealed to provide durability. This durability has been recognized by the aerospace industry, which selected anodizing as the finish of choice for the Space Station.

Advantages of Anodizing
- Anodizing can be less expensive to produce and maintain.
- Anodic coatings are highly abrasion-resistant and durable. It is particularly durable in high-traffic areas where the coating is subject to physical abuse and abrasive cleaners.
- Anodic coatings do not peel, chip, flake, or chalk.
- Anodic coatings are translucent, resulting in a deep, rich metallic appearance.
- Anodic coatings are scarcely affected by sunlight.
- Anodic coatings are excellent finishes for areas subject to filiform corrosion, especially structures in coastal locations.
- The anodizing process uses chemicals without VOCs, and aluminum itself is recyclable.
- Anodized aluminum can be colored in a full spectrum of shades.
- Several coloring techniques offer weather fastness suitable

Continued on next page...
for architectural applications.

**Anodizing: the Renewable Finish.**

A thicker and denser anodic coating carries the advantages of durability and longer life. After many years, an anodized surface may accumulate dirt and stains that look similar to chalking paint. This film can be removed with a mild detergent applied with an abrasive cleaning technique. A small amount of the anodic coating can actually be removed, leaving behind a renewed anodized finish, preserving the original appearance.

When a paint film fails, the usual options are to recoat the surface with another paint or replace the metal. Scrubbing can damage a painted finish. When an anodized coating appears to have failed, cleaning often results in a renewed appearance. Anodized surfaces, like other building components, must be protected from chemical attack after installation.

**Anodizing and the Environment**

There are environmental advantages to selecting anodizing as an architectural finish. The process does not require the use of solvents that contain volatile organic compounds (VOCs) and no heavy metals are involved. Chemical wastes from anodizing are used by many municipal wastewater treatment facilities to balance pH levels of treated water. The aluminum hydroxide from the effluent of anodizing plants improves the separation of solids in wastewater treatment plants. If local wastewater treatment plants cannot handle the solids generated in the anodizing process, equipment is available that enables anodizers to remove aluminum hydroxide solids from the effluent.

**Color**

In most situations, anodized coatings exhibit excellent color consistency, but this does not mean that anodizing yields perfectly consistent color. Customers must be careful in selecting the colors to be used and should have the metal processed at the same time and in the same place whenever possible to reduce the likelihood of color variation.

Care must be taken when applying touch-up paints to anodized finishes because a perfect match is impossible between the factory-applied finish and a finish
applied in the field. For this reason, touch-up paints are a problem for both painted and anodized coatings.

Customers often present questions about color variation within the context of color range. A "range" implies a two-dimensional axis, for example, a range from light to dark. Research has shown that lightness is only one of at least three dimensions of appearance. Most people are familiar with the controls on a television set that affect brightness, color, and hue. When these same three components of appearance are combined with gloss and texture, we have at least four variables that can influence appearance besides light and dark.

The word range is discouraged when describing color. It is better to focus on scientific color measurement systems that include color, lightness, and gloss. With scientific color measurement techniques, a production run can be compared objectively to an approved standard. If a component is significantly different from an approved standard, the finisher should not ship it. It is also the customer's responsibility to avoid using metal that is not acceptable. When large anodized panels or extrusions are used in close proximity to each other, it may be possible to see color variations. In application, it is common to sort parts to obtain the desired effect.

The industry has visual comparisons as the criteria for color matching and for the most part color reproducibility has not been a problem. Color evaluation using color instruments is helpful but not the solution to producing a consistent color match. To avoid problems, the customer should agree on color standards with the anodizer.

**Durability**

Coating thickness is a significant indicator of durability for anodized coatings. Coating thickness for architectural use can be specified as either Class 1 (0.7 mil) or Class 2 (0.4 mil) per *Aluminum Association DAF 45*. However, oftentimes there is no specification. When there is no specification, the least expensive option is usually used, and in a few years the finish is pitted, stained, and eroded. Another important determinant of coating life is its density. The denser the coating, the longer it will last.

Low-cost anodized sheets are often sold with a coating thickness of 0.15 mil. A finish of this thickness also might be called a 200, A21, A22 or A24. While this coating thickness is suitable for many applications, the integrity of this finish will not last more than a few years in exterior architectural applications and the expected lifetime is much less in coastal environments. Coating thickness makes an even more important difference in the durability of organically dyed finishes. Dyes fade more quickly with thinner coatings since they contain less color substance.

There are many options for finishing aluminum, and this is one reason aluminum is such a popular material. It is not always easy to decide which finish to apply. Communicate your needs with your finisher or your finisher's supplier. Consider not only appearance, but also the environment, maintenance requirements, and life cycle costs.

**The Aluminum Anodizers Council**

In 1988, a group of anodizers and suppliers, concerned that the market was unaware of the features and benefits of anodizing, formed the Aluminum Anodizers Council. The Council works to promote the advantages of anodizing, serves as a technical resource center for members and customers, provides technical information through workshops, articles and seminars, and develops and upgrades industry standards.

**Conclusion**

Anodizing is the superior finish. Its appearance, abrasion resistance and cost effectiveness are unlikely to be matched by any organic coating. We invite you to specify anodizing, as it truly is a versatile finish for many applications, from storefront to handrail; from automotive to decorative applications. If you are considering the use of an anodized finish for an architectural application – or for another use – you are encouraged to contact an AAC member firm. Click on the Member Directory below to find an anodizer near you.

~FT~
This two-day course covers everything you need to know about Powder Coating. Expertly taught, this interactive class will give you the knowledge you need to succeed in today's market.

Coming soon to a location near you:

February 19-20 ...... Miami, FL       June 3-4 ................. Chicago, IL
April 9-10 .......... Denver, CO       August 5-6 .............. Mystic, CT

September 15-16 .Charleston, SC
November 5-6 ....San Diego, CA

Sign up today — Space is limited!
We've all heard the buzz surrounding popular internet media venues such as YouTube, been among the hoards of people tapping into the virtual phenomenon of social networking sites, and marked Google as our homepage to conduct our internet searches with ease. We also know what happens when high concentrations of people flock to one location - advertisements spring up. They may be subtle at first, appearing sparingly as small banner ads flashing silently along the edges of your screen. Then pop-up boxes emerging out of nowhere, followed by the mandatory preliminary ad spot before you watch an online video clip. They appear as you wait to be redirected from one webpage to the next - brief intermissions, like those of the old drive-in theatres, beckoning you to grab a box of popcorn and some Sno-Caps from the nearby snack counter.

Currently, the dominant force in online advertising remains Search Engine Marketing. Estimated to account for 40% of online ad budgets, SEM is defined by New Media Worldwide as both “advertising and optimization efforts to achieve high visibility of a website for relevant keywords (also referred to as search engine positioning or search engine promotion)”. The fastest growing online ad format, however, appears to be advertising spots during video content. This sector is expected to grow by 70% in 2008 alone, according to eMarketer, New York. According to a study by B2B Magazine, web site development was cited by 74% of marketers as their main focus for 2008. Other areas of high concern to marketers include e-mail marketing, search engine marketing, video, webcasting, banner ads, sponsorships, and social media (which includes customer feedback for research and advertising).

But the new media outlets don’t stop with the internet. According to a new report from PQ Media, companies will spend more than $160.8 billion in 2012, which is an 82% increase from what it will be this year. This huge expenditure will be filtered into emerging markets such as store-based TV screens, sponsored events, TV and movie product placements, cell phones, video games and digital video recorders, as well as web advertising. Many of these methods are still quite novel and are still undergoing testing for their effectiveness. McDonalds, for instance, is using Cellfire - a mobile service based in California that provides discount coupons on goods and services for cell phone users - for use in regional test in Utah, Wyoming, and Nevada, where they are promoting their new iced coffee beverage. Customers text ‘mcd’ or 22888, receive the Cellfire application, and sign up to receive a redemption code that they can present to the cashier.

With all of these emerging marketing opportunities, it might seem difficult to decide where to start implementing them (if any) to work for your own business. Within the metal finishing industry there are already many outlets for online advertising. Finishing Talk, for instance, provides an excellent example for several of the aforementioned web advertising sectors; our website offers banner advertising, e-mail marketing opportunities, and an even larger outlet - the forums! The forums have already been used by many companies to promote new products, post press releases, job opportunities, obtain feedback, and more.

Another new media format is online video. Here, too, the finishing industry is up to speed with new technology; Finishing.TV - the first and only metal finishing IPTV network - offers opportunities for marketing through video. Not only can advertisers purchase commercials or short ad spots to be included in future shows (such as Finishing Talk Live), they can create their own IPTV shows and purchase space for them on the network. In this way, an entire network just for metal finishers is being formed; and we all know that the more content provided, the more viewers will be attracted. Where there are viewers, you can be sure that there will be advertisements!

You can find this article and a list of resources at our Forums on FinishingTalk.com. Come check out the site, and see what the Industry is talking about!
Please deliver this informative newsletter to the following valued Finishing Talk reader: