

Electroless Nickel 2010
c/o Gardner Publications
6915 Valley Ave.
Cincinnati OH 45244

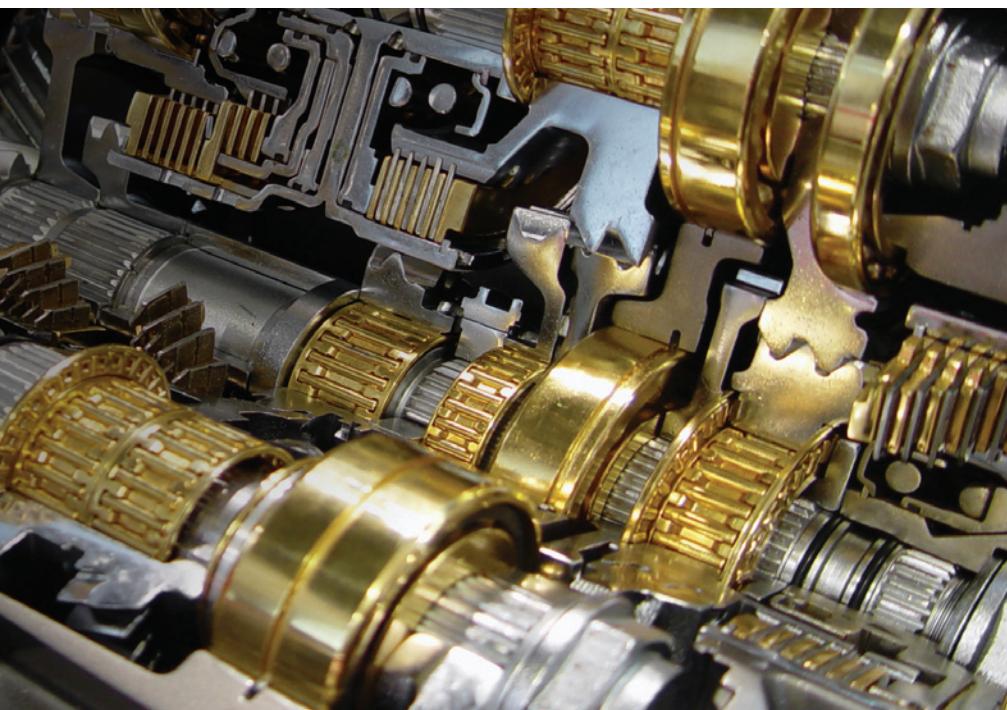


2010

TM
November 8 – 9, 2010
Francis Marion Hotel
Charleston, SC

PFONLINE.COM/EN

LEARN. INNOVATE. COLLABORATE.



ELECTROLESS NICKEL 2010



2010

TM
LEARN. INNOVATE. COLLABORATE.

November 8 – 9, 2010

Francis Marion Hotel ■ Charleston, SC

PRESENTED BY:



PFONLINE.COM/EN

Product Finishing's Electroless Nickel conference was started in 1979 to help finishers discover EN, a dynamic range of coatings offering a multitude of properties including wear resistance, corrosion protection, lubricity and complete coverage of many substrate alloy types including those with complex shape geometries and intricate ID surfaces. Since its inception, the EN conference has been dedicated to demonstrating how this technology can be utilized by veterans and newcomers alike.

The strong tradition of the EN conference will continue in 2010 when the need for an interactive event is greater than ever. It's vitally important, both to your business and the health of the industry, that you network with your peers and take advantage of face-to-face access to industry experts.

BENEFITS

Educate newcomers about Electroless Nickel very affordably: If you are interested in getting involved with EN, or want someone in your company to learn more, you will not find a more effective and economical way to immerse someone in the process.

Make your business stronger by getting your questions answered in a relaxed, open environment: At the close of the fundamental program on Monday, we'll have the presenters return to the stage for an informal panel discussion that will be combined with a happy hour for conference attendees.

Decide if EN is right for you now and in the future by listening to the State-of-the-Industry Address during lunch on Monday with information gathered from all major EN suppliers.

Learn from what is happening in the EPA that will affect the industry and your business from Dr. Donna Lee Jones, Tuesday's Keynote Speaker.

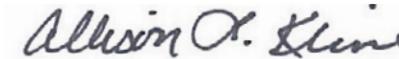
Talk directly with the presenters and learn from other platers who are dealing with the same issues as you during a roundtable lunch and a networking reception on Tuesday evening.

Hear exclusive information that you will only get by attending EN 2010.

Explore Charleston with your family! Come to town early and see everything this historic American city has to offer.

So, please join us for the 2010 EN Conference. The EN Steering Committee has worked hard to put together an educational program that offers great value to attendees – it was built for you and encompasses all that EN currently has to offer.

Thanks, and we hope to see you there!



Allison Kline Miller
Products Finishing Magazine
Director of Events



Brad Durkin
Conventya, Inc.
EN 2010 Technical Director

November 8 – 9, 2010

Who Should Attend?

Manufacturing Engineers
Suppliers of Chemicals and Equipment
Operators of Captive Finishing Departments
Design Engineers
Line Operators
Consultants
Job Shop Owners
Sales Representatives
Contract Finishers



What you can expect to find at EN 2010:

- All the key players in the Electroless Nickel industry
- Networking opportunities including a special expert panel discussion and happy hour, 2 keynote addresses, 2 luncheons and a networking reception.
- A certificate of completion for attendees (continuing education)
- 23 conference sessions – from basic EN to the latest advances in technology and efficiencies
- A conference proceedings CD and notebook
- Exclusive information that you will only get by attending EN 2010
- Special rates and discounts for EN attendees at the beautiful Francis Marion Hotel in downtown Charleston, SC

A Special Thanks to the EN 2010 Sponsors!












SCHEDULE AT-A-GLANCE

Monday, November 8th

- 8:00 am: Registration Opens
9:30 am: Continental Breakfast
10:00 – 11:50 am: MORNING SESSIONS
EN Fundamentals
Noon – 1:30 pm: Lunch Presentation
State of the Industry
Bill Fields, President, Palm International
1:45 – 4:00 pm: AFTERNOON SESSIONS
EN Fundamentals
4:00 – 5:00 pm: Panel of Experts with Cocktails and Questions



Tuesday, November 9th

- 8:00 am: Registration Opens
8:30 am: Continental Breakfast
9:00 – 11:45 am: Business and Environmental Issues
11:00 am: Keynote Address:
The EPA's New Rule Concerning Electroless Nickel
Donna Lee Jones, Ph.D.
Senior Technical Advisor, Metals Sector; U. S. Environmental Protection Agency
Noon – 1:30 pm: Lunch: Roundtables with Industry Experts
1:30 – 5:00 pm: AFTERNOON SESSIONS Trends and Technologies
5:00 pm: Conference Adjourns

Conference sessions and times are subject to change.

Featured Special Events

Lunch Presentation: State of the Industry

Bill Fields, Palm International

Panel of Experts with Cocktails and Questions

Keynote Address: The EPA's New Rule Concerning Electroless Nickel

Donna Lee Jones, Ph.D.
U. S. Environmental Protection Agency

Lunch: Roundtables with Industry Experts

Networking Reception

DETAILS

Monday, November 8th: EN Fundamentals

- 8:00 am: Registration Opens
9:30 am: Continental Breakfast
10:00 – 11:50 am: MORNING SESSIONS

EN Properties and Uses

Matt Sisti, Coventry

The properties of Electroless Nickel deposits are well defined; corrosion performance especially is linked to mechanisms that impact deposit porosity. The performance of an Electroless Nickel system chemistry is also mostly predictable in many end-use applications. To further improve the capabilities of these technologies in the next several years, better correlation of R&D laboratory studies and the relationship to improved deposit and tank performance is critical. This presentation will review new methodologies to monitor and control the diffusion of key EN chemistry constituents that have resulted overall in the improvement of performance for these systems and their deposits.

Equipment for EN

Charles Johnson, Palm International

This presentation will go over recommended plating equipment to optimize bath performance and process control of Electroless Nickel. It will cover: tanks, heaters, controllers, ventilation, pumps, chemical feeders and plumbing. It will list all of the choices available and best practices.

Pretreatment of Ferrous Alloys

Stan Zabrocky, Enthone Inc.

Leading OEMs worldwide depend on the quality of Electroless Nickel plated parts to enhance wear and corrosion performance, improve appearance and enable product performance. Proper surface conditioning is as important to successful Electroless Nickel plating as the selection of the nickel process itself. The majority of plating failures are the result of improper cleaning and activation cycles. This presentation will discuss the planned cycle of controlled treatment steps, each calling for matched cleaners and activators designed for the substrate and final finish.

Pretreatment of Aluminum

Rich Bellemare, OMG

This paper will outline the basic operations in the pretreatment of aluminum for Electroless Nickel. We will discuss pretreatment processes and considerations, the nature of aluminum, typical alloys and the five basic steps necessary to ensure a successful EN finish.

Noon – 1:30 pm

Lunch Presentation: State of the Industry

Bill Fields, Palm International

For our luncheon presentation, Bill Fields will walk us through the current state of the electroless nickel industry. After collecting data from all the major EN vendors, we will deliver and explain a snapshot of where we are today.

1:45 – 4:00 pm: AFTERNOON SESSIONS

Process Control

Paul Feagins, Lekem

Electroless Nickel is used today for a very large number of applications on a wide range of substrates. This has necessitated the development of specialized baths that can help achieve maximum corrosion resistance. This paper will discuss the various aspects associated with the typical EN application and present ideas to maximize useful bath life.

Specifications/Quality Control

Kuldip Johal, Atotech

In a world of basics, receiving what you pay for is an important element of any successful business transaction. Having the ability to provide assurances that, on any given day, an EN deposit will meet the end requirements or needs of the application is crucial. Quality certification systems are shown to serve as quality cornerstones; however, specifications provide a more grass roots approach for the examination of Electroless Nickel deposits. This presentation will show you how to equate quality with performance.

Post Treatments of Electroless Nickel Deposits

Michel Aleksinas, Metal Chem Inc.

For a variety of reasons, post treatments are frequently administered to Electroless Nickel deposits. These may include increased corrosion resistance, anti-staining characteristics, hardening of the deposit, better release properties, and even coloring of the deposit. Each of these post treatments will be discussed in detail and will highlight the benefits of these applications.

Waste Treatment of Electroless Nickel

David Calnan, CCI-A Chemical Corporation

The method with which you handle the waste from your EN process is of critical importance and can save you time and money if done properly. There are several considerations for treating EN on site, including:

1. The type of chelating agents employed in the process.
2. The amount of spent EN generated and the cost for treatment off-site.
3. The amount of EN rinses as a percentage of total flow in the wastewater treatment system.
4. Equipment and storage capabilities.
5. Value of nickel in solid waste generated.

During this presentation, there will be several types of treatment methods analyzed, such as calcium chloride and heat, the removal of ammonium through caustic pH adjustment, and air, calcium and DTC and acid pH adjustment and oxidation rendering the chelating agents inert.

Tier 4 Applications: EN as a Replacement for Organic Coatings

Phil Brockman, Techmetals

This experienced plater will explain how his company has used EN to replace some traditional organic coatings. This is exclusive information to the EN conference and a session you won't want to miss!

4:00 – 5:00 pm

Panel of Experts with Cocktails and Questions

In this unique spin on a typical panel discussion and Q&A, we'll offer cocktails to conference attendees while they can ask any questions related to the topics discussed by our industry experts in the fundamentals program. This is your opportunity to share ideas and collaborate in a fun, relaxed environment.

Tuesday, November 9th

8:00 am: Registration Opens

8:30 am: Continental Breakfast

9:00 – 11:45 am: BUSINESS & ENVIRONMENTAL ISSUES

Fire in My Plant! What to Do When Disaster Strikes

Reliable Plating with OMG and Products Finishing

In this informal interview session, listen in as Kurt Weamer of OMG and Don Kline of *Products Finishing* talk to Reliable Plating, a facility located outside of Chicago, IL, that had to learn a hard lesson in business continuity when a fire tore apart their business. Would you know how to handle picking up the pieces if disaster struck your facility? Learn from the first-hand experience of a company that had to figure out how to keep its business thriving during disaster.

Electroless Nickel Makes “Cents” for Many Plating Applications, Present and Future

Jordan Beavers and Marc Aleksinas, Metal Chem Inc.

In the midst of continual environmental restrictions and the current depressed state of the economy, Electroless Nickel remains a coating that has distinct chemical properties that may prove to be advantageous for future applications. By replacing environmentally hazardous materials such as chrome and more expensive materials like stainless steel, EN coatings increasingly have made more economic sense for today's applications. Coating of new base materials such as magnesium, titanium, zinc die casts and other substrates will provide additional new avenues where EN will be used likely in the future. Here, close examinations of costs and benefits of EN coatings will be made for various applications.

Minimizing the Use of Hazardous Chemicals in Processing Aluminum Alloys

George E. Shahin, Atotech USA

Currently, the most common pretreatment processes for aluminum alloys utilize nitric acid and cyanide-based chemistries to produce a zincate surface compatible with electroplating. There has always been some concern over the risk associated with improper use of nitric acid or cyanide in these processes. This has lead to the recent development of pretreatment cycles based on less hazardous chemicals. This paper discusses these new processes and compares them with the more accepted cycles. The discussion will include a comparison of operating parameters of the cycles, resultant zincate morphology, and a direct comparison of resultant properties after EN deposition. In addition, the corrosion resistance of various Electroless Nickel deposits using the new pretreat-ment chemistries will be compared to using conventional pretreatment cycles.

Survival Strategies for an EN Plater in a Post Crisis Era

Roger Plath, Twin City Plating

The recent economic downturn was a reminder to all of us that the business world is a harsh and unforgiving environment. This paper will describe our company's unique approach to overcoming the most significant downturn in US history and how we developed a blue print for a successful future. Some of the measures we will cover in the paper are Responsive Mobile Application (RMA) of our EN coatings, equipment "leasing" for cutting edge applications and our experience with a novel approach called Collaborative Supply.

Keynote Address: The EPA's New Rule Concerning Electroless Nickel

Donna Lee Jones, Ph.D., U. S. Environmental Protection Agency

EPA issued national emission standards for control of hazardous air pollutants (NESHAP for the plating and polishing area source category on July 1, 2008 (40 CFR, part 63, subpart WWWWW).

This rule went into effect July 1, 2010, for existing sources. These final emission standards reflect EPA's determination regarding the generally achievable control technology (GACT) and/or management practices for this area source category. The plating and polishing rule established emission standards in the form of management practices for new and existing plating and polishing tanks, thermal spraying equipment, and mechanical polishing equipment that use or emit compounds of one or more of the following metal toxic air pollutants: cadmium, chromium, lead, manganese and nickel. Dr. Jones's Keynote address will discuss the management practices that need to be implemented to be in compliance with the new rule. Verification of what is and what is not subject to the rule will be discussed and a Q&A period will follow so attendees can fully understand how this new rule will affect their businesses.

Noon – 1:30 pm: Lunch – Roundtables with Industry Experts

1:30 – 5:00 pm: TRENDS AND TECHNOLOGIES

Electroless Nickel Composite Coatings Using PTFE and Diamond:

Practice, Properties, and Applications

William B. Staples CEF, Atotech

Many different materials can be incorporated into Electroless Nickel deposits to produce special properties to enhance lubricity, wear resistance, or abrasiveness, and composite EN coatings have found use in many engineering applications. Specialized tanks and handling equipment are required for application of Composite Diamond Coatings (CDC). The diamond particles must be kept suspended in solution by agitation with recirculation in order to codeposit, and bath stability must be maintained because of a danger of plate out. Part fixturing is also critical for a uniform deposit. CDC deposits generally incorporate 10-20% by weight diamond and have high abrasiveness and wear resistance. EN/PTFE composites contain 20-30% by volume PTFE and have good lubricity. A high speed Electroless Nickel/ PTFE process has recently been introduced with plating rate approximately twice the speed of traditional EN/PTFE baths. The bath is lead and cadmium as well as PFOS free. This paper will cover the specialized techniques used for plating Composite Diamond Coatings as well as High Speed EN/PTFE; critical bath parameters and deposit properties will also be described.

Coatings for Product Tracking and Authentication

Michael Feldstein, Surface Technology, Inc.

Increasingly, companies are looking to protect their brands, IP and market share. The new coating technology discussed in this presentation can aid coaters and their customers in this important regard. When small quantities of certain novel "markers" are incorporated into a coating, their presence can be detected quickly in a non-invasive manner with a small electronic device. Such markers therefore allow companies to verify the authenticity and source of a product as well as many other inventory tracking and control factors. Manufacturers can reliably demonstrate that parts are truly original equipment and not counterfeit. Coaters can use the technology to identify which coated parts were, and hence were not, processed in their shops. Dozens of unique markers have been developed that expand the number and variety of this new technology, equivalent to a chemical bar code within a coating. Although many other forms of plating and coating can be enhanced by this technology, this paper will focus on electroless nickel coatings with this identification feature.

Multipurpose Electroless Nickel Bath Components

Don Walsh, Uyemura International

There are fundamentally five types of Electroless Nickel phosphorus products commonly used in the metal finishing and electronics industry. Specifically, these product types are categorized as low phosphorus, mid phosphorus bright and semi-bright, high phosphorus and low temperature strike. Each of the five product types normally requires three components to operate a bath.

Applicators that operate multiple processes are faced with inventorying up to 15 different chemical concentrates to make-up and maintain the five bath varieties described. Using Electroless Nickel components that are flexible, this presentation describes an alternative approach to running different Electroless Nickels using two concentrates, two small volume additives and nickel sulfate.

Green Technology for Plating Magnesium

Brad Durkin, Coventya

Finishers have always been challenged to process magnesium. The DOW process for the preparation of magnesium substrates prior to plating has been commercialized since the 1960's and successfully utilized over these years to provide functional and decorative finishes to this class of engineering light metal. Unfortunately, the use of chromic acids, phosphoric acids, lithium fluorides and cyanides limit the use of a DOW process platform with the environmental focus of today. Process variations on this technology platform have proved limited success over the years and with a greater emphasis on environmental "green" requirements, processes that are chrome, phosphoric, lithium and cyanide free are gaining acceptance but also have improved performance.

Electroless Nickel is Not Only for Metallic Applications

Linda M. Wing, Enthone Inc.

The extensive use of electroless nickel for its wear resistant and corrosive protective properties is well documented in numerous articles and journals. But a less well known electroless nickel application is its use on plastics. Electroless nickel can be found on familiar applications such as chrome plated plastic faucets and shower plates, cosmetic containers, clocks, kitchen appliances, and most prominently on vehicles. The electroless nickel used for plastics differs from the types used on metals. Its function and the development of a more environmentally process are examined.

The Little Things That Make a Difference

Rich Bellemare, OMG

Electroless Nickel plating is a process requiring a certain level of analysis and control to run successfully. Even when a process is in control in the eyes of the operator, situations arise that appear unexplainable. This paper will discuss the dynamics of Electroless Nickel plating from the standpoint of the components within a bath to give the user an understanding of the chemical interactions that occur during operation. These interactions can then be related to some of the unexplainable issues encountered in everyday production.

5:00 pm: NETWORKING RECEPTION

Mingle with your peers and talk to the experts that you heard speak during your 2 day immersion in the world of Electroless Nickel. This is a great opportunity to ask additional questions, meet other platers and expand your business network.

A Special Thanks to the EN 2010 Steering Committee!

Mike Aleksinas, Metal Chem

Dan Brockman, Techmetals Inc.

Bill Fields, Palm International Inc.

Brad Durkin, Coventya

Don Kline, Products Finishing Magazine

Scott Walker, Products Finishing Magazine

Kevin Martin, Atotech USA Inc.

Don Walsh, Uyemura International

Kurt Weamer, OMG Electronic Chemicals

Stan Zabrocky, Enthone Inc.

General Information

Cancellations

Registrations are non-refundable. Please advise Conference Management of all personnel substitutions.

Where to pick up your badge

Conference badges are not mailed. They can be picked up at the Electroless Nickel 2010 registration desk at the Francis Marion, located outside of the Colonial Ballroom.

Hotel accommodations

Francis Marion Hotel
387 King Street
Charleston, South Carolina 29403
Phone: 843-722-0600
Online: francismarionhotel.com
Online Reservation Code: EN2010



How to Register

 **Online:** you can register today!
Visit pfonline.com/en and click on the registration button.

 **By Fax:** Complete the registration form and fax it to 513-527-8801

 **By Mail:** Simply complete the registration form and mail with your payment to:

Electroless Nickel 2010
c/o Gardner Publications Inc.
6915 Valley Avenue
Cincinnati, OH 45244

We have negotiated special rates at the prestigious Francis Marion Hotel for EN conference attendees of \$149 per night. Be sure to mention that you are calling for the EN Conference group room rate when you make reservations to get the discounted price. These rates are available exclusively for EN attendees, and apply through the weekend if you'd like to come in early and explore all that Charleston has to offer! There are a limited number of discounted rooms available, so act now to plan your trip.

You can call the Reservations department at 843-722-0600, or make your reservations online at: www.pfonline.com/en/hotel. Use the reservation code: EN2010 to get the discounted rate online.

Explore Charleston!

Take advantage of your trip to Charleston and extend your stay. During the EN conference Charleston weather is at its prime, and the city offers numerous activities for children and adults. Visit www.pfonline.com/en/hotel for more information.

 **By phone:** Call 1-800-950-8020 or 513-527-8800 8:00 am – 4:30 pm e.s.t.

 **On site:** You may register on site while seats are available.

Please be prepared to make payment at that time. We encourage you to register in advance to save time and money.

REGISTER

REGISTRATION FORM: Fax completed form to 513-527-8801

Section A: Registration Information

Note: Photocopy if registering more than one individual.

Name _____

Title _____

Company _____

Address _____

City _____ State _____ Zip _____

E-mail _____

Phone Number _____ Fax Number _____

Please indicate any special needs:

Section B: Conference Fees (Please check one of the following.)

	By October 1	After October 1
<input type="checkbox"/> Full Conference	\$450.00	\$550.00
Includes: Monday and Tuesday Conference sessions, Networking reception, 2 breakfasts and 2 lunches.		
<input type="checkbox"/> Group Rate (per person*)	\$405.00	\$495.50
<input type="checkbox"/> Basic Sessions Only		
Includes: Monday Conference sessions, 1 breakfast, 1 lunch, and networking reception.		

Indicate the number of people attending from your company _____

*Group rates apply to companies sending 3 or more people to full the conference.

Please send registration forms in together.

Section C: Payment Options (Please check one of the following.)

<input type="checkbox"/> Check: Please make payable to: "Gardner Publications, Inc. - EN 2010"
<input type="checkbox"/> Company Purchase Order - please submit P.O. with order. List P.O. Number _____
<input type="checkbox"/> Credit Card: <input type="checkbox"/> Visa <input type="checkbox"/> MasterCard <input type="checkbox"/> American Express

Account Number _____ Exp. Date _____

Signature _____

Return this form with payment to:

ELECTROLESS NICKEL 2010
c/o Gardner Publications, 6915 Valley Avenue, Cincinnati, OH 45244, Fax: 513-527-8801

Questions? Call:

1-800-950-8020 or 513-527-8800 or on-line at www.pfonline.com/EN