

## ASTM International Funds Interlaboratory Studies Program

Technically valid, market-relevant ASTM test methods have held a distinguished place in the global standards community for more than a century. Precision and bias statements that accurately report the repeatability and reproducibility of tests play a crucial role in the continued success of ASTM's 5,000 test methods.

ASTM International's Board of Directors, recognizing the importance of generating valid data to the process of creating strong precision and bias statements, has made a commitment to aid technical committees in this work through the establishment of the Interlaboratory Studies (ILS) program. The board has committed four million dollars to the ILS program over the next five years.

The aim of the ILS program is to help ASTM technical committees with their round robin testing programs by removing administrative burdens from the committees. The ILS program will aid in the development of useful and relevant precision and bias statements in ASTM test methods by providing staff support and financial resources to the technical committees by offering these value-added administrative services: assisting with identification of participating laboratories; overseeing the generation of distribution of samples, collecting data and generating precision and bias statements and research reports. A pilot ILS program is currently underway.

By establishing and supporting the ILS program, the ASTM Board of Directors is acknowledging the importance of statistically valid data to ASTM test methods.

## Standard for Lean Certification Pursued by Three Organizations

The Society of Manufacturing Engineers (SME), Association for Manufacturing Excellence (AME) and The Shingo Prize for Excellence in Manufacturing, are collaborating with industry and academia in the development of a new industry standard for Lean Certification. The program is scheduled to launch in the fourth quarter of 2005.

## Test Your Plating I.Q. #407

By Dr. James H. Lindsay, AESF Fellow

### Plating bath recipes

*Chemicals, not operating conditions*

1. What is the typical makeup of an acid copper plating bath (not counting additives)?
2. What is the typical makeup of a Watts nickel plating bath (not counting additives)?
3. What is the typical makeup of a classic chromium (VI) plating bath?
4. What is the typical makeup of a cyanide copper strike prior to acid copper plating of steel?
5. What is the typical makeup of a simple sulfamate nickel plating bath?

Answers on page 38

The new certification is designed for manufacturing professionals who have chosen to pursue "lean manufacturing" in their career path, and want recognition and credentials to illustrate their knowledge and application of lean principles.

Three key aspects of the certification include: "mentoring" by and of certification candidates, "portfolio" to illustrate how lean principles were applied within an organization, as well as documenting the results achieved and lessons learned, and the "examination" that assesses knowledge of lean principles.

The definitive need to create a credentials process for lean manufacturing certification is based on a survey conducted with more than 1,100 industry respondents. Seventy-seven percent of the respondents indicated a likelihood of pursuing lean certification. Another 83 percent stated that lean certification was critical, very important, or important for a group of professional societies and organizations, in conjunction with industry and universities and lean consulting professionals, to collaborate with a goal of developing an industry standard. Additionally, 60 percent of those stated key lean manufacturing leaders at their supplier companies should earn lean certification.

The certification is currently comprised of four levels. The first level is intended to measure knowledge of lean principles. Candidates for the second level should be capable of applying lean principles and tools to drive improvements and show measurable results. At the third level, lean practitioners are expected to be senior employees or team leaders who are capable of applying lean principles and tools to drive improvements and show measurable results, plus orchestrate the transformation of a complete value stream. At the highest level of certification, the practitioner is at a point of influence and authority over assets, processes and people, with a solid understanding of all aspects of lean transformation across the entire enterprise. SME is the certifying body for the standards.

## Company News

□ Lincoln Plating, Lincoln, NE, one of the largest chromium platers in the U.S., is adding microporous plating capabilities to all seven of its nickel/chromium plating lines.

Matt Nyberg, vice president of sales and marketing for Lincoln, says microporous plating, which is mandated by automobile manufacturers, is fast becoming the standard of quality for other industries. As a leading supplier to the motorcycle industry,

Lincoln Plating ships tens of thousands of chromium plated motorcycle parts a day, and demand continues to climb.

"Adding microporous to the chrome plating process can significantly extend the corrosion protection so chrome stays brighter longer," said Nyberg. "It costs slightly more, but many of our customers, and ultimately their customers, think it is well worth it for the better quality."

Lincoln Plating will complete the upfitting of its chrome lines this summer. Microporous nickel-chrome plating is a four-step process. The four layers are applied as semi-bright nickel, bright nickel, microporous nickel and chromium. The added microporous layer of nickel gives the part a tough "skin" that spreads the corrosion potential across the surface of the chrome-plated part.

Lincoln Plating offers more than 40 high performance functional and decorative finishing processes.



□ Ethone, Inc., a business of Cookson Electronics, has announced the opening of its Shanghai Technical Centre (above) in Shanghai, P.R.C. The facility is a part of Enthone's strategic expansion plan to reinforce and accelerate its market presence throughout China. The Shanghai facility enhances the company's overall capabilities to provide immediate technical support, applications engineering, analytical services, sales and product warehousing throughout Northern China.

The centre will feature a state-of-the-art facility to enable processing of Enthone functional and decorative coatings used in automotive, plumbing and other surface finishing applications.

The announcement said that five plating lines will be installed for pre-treatment, plating and post-treatment chemical processing. The centre will be staffed with technical support and applications engineers. The facility is equipped with advanced instrumentation analysis, including AAS, UF/VIS, CVS and a CASS test chamber that will be used to analyze a wide range of materials.

□ Reliable Plating Works, Inc. (RPW), Milwaukee, WI, has received "Wisconsin's Small Family Business of the Year" and

## Answers to I.Q. Quiz #407

- |  |                                |                       |
|--|--------------------------------|-----------------------|
| 1. Copper sulfate, $\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$ | 195-240 g/L (26.0-32.0 oz/gal) |                       |
| Sulfuric acid, $\text{H}_2\text{SO}_4$                       | 50.0-61.0 g/L (6.7-8.1 oz/gal) |                       |
| Chloride, $\text{Cl}^-$                                      | 20-80 ppm                      |                       |
| 2. Nickel sulfate, $\text{NiSO}_4 \cdot 6\text{H}_2\text{O}$ | 225-375 g/L (30.0-50.0 oz/gal) |                       |
| Nickel chloride, $\text{NiCl}_2 \cdot 6\text{H}_2\text{O}$   | 30.0-60.0 g/L (4.0-8.0 oz/gal) |                       |
| Boric acid, $\text{H}_3\text{BO}_3$                          | 30.0-40.0 g/L (4.0-5.3 oz/gal) |                       |
| 3.   | Diluted bath                   | Concentrated Bath     |
| Chromic acid, $\text{CrO}_3$                                 | 250 g/L (33.3 oz/gal)          | 400 g/L (53.4 oz/gal) |
| Sulfuric acid, $\text{H}_2\text{SO}_4$                       | 2.5 g/L (0.33 oz/gal)          | 4.0 g/L (0.53 oz/gal) |
| 4. Copper cyanide, $\text{CuCN}$                             | 52.5 g/L (7.0 oz/gal)          |                       |
| Potassium cyanide, $\text{KCN}$                              | 103.0 g/L (13.8 oz/gal)        |                       |
| Free potassium cyanide                                       | 26.0 g/L (3.5 oz/gal)          |                       |
| 5. Nickel sulfamate $\text{Ni}(\text{NH}_2\text{SO}_3)_2$    | 450 g/L (60.0 oz/gal)          |                       |
| Boric acid, $\text{H}_3\text{BO}_3$                          | 30.0 g/L (4.0 oz/gal)          |                       |

Source: F.A. Lowenheim, *Modern Electroplating*, McGraw-Hill, 1978.

the "Region V Small Family Business of the Year" awards from the Small Business Administration.

RPW is a family-owned, third generation company that offers decorative and functional nickel/chromium finishes on steel products. The company utilizes large, fully automated plating lines that produce large volumes of products at very competitive prices, and reduced lead times.

RPW is also the base company that has nurtured the establishment of Elite Finishing, LLC and Brilliance LLC. Jaime J. Maliszewski is president and CEO of Reliable Plating Works, Inc., general manager of Elite Finishing, LLC, and a founding member of Brilliance, LLC.

In announcing the awards, the Small Business Administration noted that Jaime, along with his brothers Jack and Jeff, have worked as a team to bring RPW, Elite and Brilliance to the level of excellence that has earned the awards. The brothers learned their business sense and ethics from their father, John Maliszewski, and grandfather and founder of Reliable, Julian Maliszewski.

Elite Finishing, LLC, was started in 2001 as a partnership between Jaime, his brothers Jack and Jeff, and friends Dave Scherzer and Ken Kazubowski of the Sigma Group. The shop was created to fill a niche in the nickel/chromium finishing industry on aluminum and brass products. With financial assistance from Milwaukee Economic Development Corp., the Small Business Administration, and a Lincoln State Bank, Elite completely renovated a

building it purchased and installed state-of-the-art plating equipment.

Currently, RPW and Elite are realizing record years. They now employ more than 150 people, double the workforce of three years ago.

Armed with a business sense gleaned from his father and grandfather, Jaime talked two friends in the industry—John Lindstedt of Artistic Plating and Al Henry of Chrometech of Wisconsin—into developing a holding company called Brilliance LLC, to minimize costs, increase profits and gain competitive advantage in many areas as a group. Brilliance now handles health, dental, business, worker's compensation insurance, marketing, lease programs, human resources, safety issues and employee training for five surface finishing companies. Brilliance is currently looking for new member companies to join the cost-cutting group of small businesses. Brilliance is saving its member companies tens of thousands of dollars each year in insurance and related costs. As a group, the five member companies have more than 250 employees.

□ Dixie Industrial Finishing, Inc., Tucker, GA, was recently named "Manufacturer of the Year" at the Georgia Governor's luncheon, held outside of Atlanta.

Dixie Industrial was nominated by DeKalb Technical College, the DeKalb Chamber of Commerce, and the DeKalb County Development Authority, for its commitment to community, employees, vendors, partners and the environment.