SME Makes Injection Molded Estimator Available

Plastics manufacturers now have access to the Injection Molded Part Cost Estimator from the Society of Manufacturing Engineers (SME). The program is a new spreadsheet tool to evaluate plastics variables not always considered in determining total parts costs. Designed by members of SME's Injection Molding Technical Group, the tool simplifies internal decision making operations and projects a comprehensive estimate of overall cost.

Major categories of process variables incorporated into the calculator include: part volume, part information, resin material, tooling equipment and maintenance, production, secondary operations and associated costs, and direct labor. The estimator can be ordered through the SME Resource Center at 800/733-4763, or service@sme.org.

FSCT Announces Nominations For 2004-05 Term

The Federation of Societies for Coatings Technology (FSCT) has announced nominations for officers for the 2004-2005 term. Dr. Rose A. Ryntz and Yasmin Sayed-Sweet have been nominated for the president-elect and secretary-treasurer positions, respectively. Dr. Frederick "Fritz" H. Walker, the current president-elect, will become president of the organization at the close of the 2004 annual meeting in October.

Dr. Ryntz of the Detroit Society is recognized as one of the world's leading experts in the area of automotive plastics coatings and has developed new techniques to study paint on plastic performance including scratch and gouge resistance She is an adjunct professor at the University of Detroit/Mercy and the University of Southern Mississippi.

Yasmin Sayed-Sweet, also of the Detroit Society, is a strategic business manager for Cook Composites & Polymers, Clarkston, MI, where she has worked since 1995.

Dr. Walker holds numerous patents in diverse areas of coatings technology. He is a prolific author and lecturer on coatings science and technology.

Test Your Plating I.Q. #398

By Dr. James H. Lindsay, AESF Fellow

Anodizing

1. The aim in anodizing is to operate at a specified current density as opposed to voltage because _____.

2. The purer the aluminum substrate, the better the anodized coating is in terms of _____.

3. Why are wrought alloys better than cast alloys for anodizing?

4. Of the cast alloys that can be used for anodizing, what alloying element is amenable to the production of a bright coating? Why?

5. Which of the following are considered to be unsuitable for protective anodizing? For bright anodizing? For anodizing and dyeing?
   (a) 99.5% Al
   (b) Al - 5% Mg
   (c) Al - 10% Mg
   (d) Al - 5% Si
   (e) Al - 17% Si, 4.5% Cu, 0.5% Mg

Answers on page 54

ASTM to Develop Standard For CMP Process

ASTM Committee G02 on Wear and Erosion has committed itself to standardizing the chemical-mechanical polishing (CMP) process by creating a task group to develop a proposed new standard. The standard will be called "Test Method for Wear and Friction Testing of Polishing Pads, Slurries and Pad Conditioners in Chemical-Mechanical Polishing. The activity is under the jurisdiction of Subcommittee G02.30 on Abrasive Wear.

CMP has been one of the fastest growing segments of the semiconductor industry for the past 10 years. Interest, however, has not been limited to semiconductors. Thousands of CMPs are currently being used in the precision glass, optics and magnetic media, as well as other high-tech industries.

"The proposed new standard will help the high-tech industry to collaborate in developing the standardized effective test procedures for CMP materials," said Norm Gitis, Center for Tribology, who also notes that all interested parties are invited to join the task group. For details, contact Diane Rehiel, ASTM International (phone: 610/832-9717; drehiel@astm.org).

Company News

❏ GE Inspection Technologies opened its China Application Center in August. Located in Shanghai, the new center will serve all of Asia.

Located within the GE China Technology Center, the China Application Center capabilities include expertise in inspection modalities, including both digital and film X-ray, ultrasonic and eddy current.

❏ Plating Technologies, Inc. (PTI), Warren, MI, a proprietary chemistry supplier, has acquired Jennings Plating Company, Dike Pump Company and Jennings Assembly Company of Detroit, MI. Jennings provides a variety of finishes

on aluminum, brass, steel, zinc die cast and non-conductors.

PTI says the acquisition will allow it to utilize its process chemistry in the processing of engineering plastics and various substrates used in prototype plating.

❏ Rohm and Haas Electronic Materials, Marlborough, MA, has entered a joint development agreement with Xaar, Plc, Cambridge, UK. The companies are working together to produce digital inkjet printing systems for the application of etch masks and other key materials and processes used in the fabrication of printed circuit boards.

❏ Uyemura-USA (UIC), Ontario, CA and Southington, CT, has hired OS-Tech of Dallas, TX, to expand its product offerings to companies in Texas, Oklahoma and Mexico.

❏ Interplex Industries, Flushing, NY, has doubled the size of its manufacturing facility in Bangalore, India. The facility, known as Interplex Electronics India, Pte, Ltd, provides precision metal stamping and electroplating services with full engineering support for customers throughout the region. The facility has been operating since 1999.

❏ Horner Advanced Products Group (Horner APG) has expanded its operation to serve the subcontinent of India. The venture is a merging of India's Genius Automation Pvt. Ltd. in Bangalore into Horner APG's international business group. It will be called Horner Genius Automation (India) Pvt, Ltd.

❏ The Science and Engineering Laboratories at Hill Air Force Base (AFB), Ogden, UT, have been selected to receive the U.S. Environmental Protection Agency (EPA) Administrative Award for Environmental Excellence. The award is presented to individuals and groups that have made exceptional contributions to the protection of human health and the environment.

Hill AFB is receiving the award for its efforts in eliminating chromated conversion coatings in its aircraft painting operations. Because of the groups efforts to find alternative processes for chromates, workers at Hill are not longer exposed to hexavalent chromium. The Air Force is also using the alternative proprietary technology at other locations where aircraft are painted.

Answers to I.Q. Quiz #398

1. This is the only way that the rate of coating formation can be controlled or known. Different aluminum alloys require different voltages to achieve the same current density.

2. Clarity and brightness

3. Wrought alloys are more homogeneous, have reduced porosity and have smaller impurity particle sizes. Of particular importance is the use of silicon in cast alloys, which makes them less suitable for anodizing.

4. Magnesium, up to 3%. Magnesium oxide has a refractive index (1.74) close to that of aluminum oxide (1.69).

5. Unsuitable for:
   Protective anodizing: (e) Al - 17% Si, 4.5% Cu, 0.5% Mg
   Bright anodizing: (c) Al - 10% Mg, (d) Al - 5% Si and (e) Al - 17% Si, 4.5% Cu, 0.5% Mg.
   Anodizing and dyeing: (e) Al - 17% Si, 4.5% Cu, 0.5% Mg. However (c) requires careful control, and (d) is only suitable for dark colors.

❏ Kolene Corporation, Detroit, MI, has announced that Houston Plating & Coatings, Houston, TX, has been licensed as an authorized processor for Kolene's proprietary metallurgical treatments. Houston Plating & Coatings will be Kolene's exclusive authorized processor in Texas and Louisiana.

❏ Quantum Plating, Inc., Erie, PA, recently achieved certification for ISO 9001:2000 quality management standard.

❏ Inpro/Seal Company, Rock Island, IL, and Flowserve, Dallas, TX, have reached an agreement to market Inpro/Seal's proprietary bearing isolators. Under terms of the agreement, Flowserve Solutions Division will become a select distributor of the proprietary bearing isolator, which is a non-contact, non-wearing, permanent bearing protection device.

In Memoriam

Arthur Allen "Al" Ferguson died on May 25, 2004, following a long bout with cancer.

Ferguson was a two-term president of the AESF Bridgeport Branch. He joined the Society in 1945 and spent 59 years contributing to the organization through teaching and involvement. He was a board manager of the Bridgeport Branch for the past 12 years.

During his career, Ferguson was a sales manager for MacDermid, Inc. for 25 years, serving as national sales manager for part of that time. He also served as vice president of Hubbard Hall, Inc., and as a private consultant for metal finishing and cleaning processes.

Ferguson was a decorated World War II veteran of the U.S. Navy.

Maurice R. Caldwell. 97, passed away on July 21, 2004. He was a passed president of the AESF Grand Rapids Branch, and served as president of the National AES in 1945.

For most of his career in surface finishing, Caldwell worked for Dolhler-Jarvis in Grand Rapids, MI. He developed a patent for nickel plating and taught electroplating and finishing throughout the nation. He was a National Honorary Member of the Society.

At the time of his death, Caldwell was residing in Naples, FL.