

# SYNERGIES

VOLUME 22

Tomorrow's Materials Solutions...Today.

## THE MISSION FOR 2011 – NEW COATINGS DEVELOPMENT

### R&D MISSION

Develop new coatings, materials and processes that capitalize on the unique properties of materials at micro/nanometer scale to create revolutionary products with improved functionality and capabilities to benefit a large number of industries.

Candida Aversenti, CEO of General Magnaplate, added, "2011 is going to be an extremely exciting year for General Magnaplate's customers and global licensees. Not only are we working tirelessly to push the boundaries of coating technology to deliver the most innovative coatings available today, we are also adding great new talent, like Bhavin, to keep Magnaplate moving forward."



General Magnaplate is proud to announce the appointment of Bhavin Parekh, the new R&D Manager, who will take responsibility for driving the Company's development of new coating technologies. Bhavin will ensure that the world leader in coatings remains at the forefront of technical innovation. Under his guidance, General Magnaplate will be pushing forward with the development of new bulk, micro and nano engineered materials and processes for the creation of entirely new coatings.

"This really is a market-driven R&D program," reports Bhavin Parekh. "We are partnering

with customers to ensure the development of coatings that meet specific field applications which exist in the industries we serve."

"For example, one area will be the development of higher temperature, FDA-compliant coatings. General Magnaplate's coatings currently work to operating temperatures of 400-500°F. We will be working to increase the temperature resistance for optimal performance under high heat applications such as baking. In addition, the R&D department will also be examining the possibility of lowering the VOC (volatile organic content) of coatings so that they can be cured at lower temperatures, offering a "green" coating to reduce energy consumption for environmentally conscious customers."

"Oil and gas customers will be pleased to hear that coatings designed to withstand temperatures of 2200°F are being developed, with corrosion resistance, lubricity and mold release. Of course, all testing will meet ATSM standards."

#### **Bhavin Parekh – A Man with A Mission**

- Former Senior Engineer at NanoMech
- Chemical Engineering degree from Mumbai, India
- Master of Science from Rochester Institute of Technology, NY
- Master of Science from Rutgers University, NJ

# General Magnaplate Ramps up DYNALLOY® Processing Capacity with New Canadian Licensee

## Precision Surface Technologies Awarded DYNALLOY® License

General Magnaplate has awarded a license to Precision Surface Technologies (PST) of Grimsby, ON, for its DYNALLOY proprietary enhanced chrome process. DYNALLOY protects any base metal part (except Magnesium) against wear, galling, friction and corrosion. The award follows increased demand for the DYNALLOY process in Canada, while PST also has the capability to process vary large parts with a hard chrome coating.

“As the industry leader, General Magnaplate is constantly striving to improve the delivery of its coatings technology,” reports Ed Aversenti, COO of General Magnaplate. “We are pleased to announce that PST will be our new licensee in Canada, providing our customers with high quality service, large-scale capabilities and unmatched industry expertise.”

Aversenti continues, “DYNALLOY has rewritten the specifications of leading machine tool builders by establishing new standards for increased life and extended serviceability of machine guides. Parts can be processed at any stage of their service life without the need for expensive machining operations to follow, which greatly reduces turnaround time and saves money.”

General Magnaplate’s DYNALLOY creates a micro-surface that delivers extreme abrasion resistance with no edge build-up or micro cracks, to ensure optimal protection without affecting the tolerances of metal parts. DYNALLOY coatings reproduce, with precise detail, the surface morphology of the original metallic substrate. After processing, parts exhibit an attractive silver matte finish.

## LICENSEE UPDATE

General Magnaplate is pleased to announce that AHC Benelux is now the official General Magnaplate licensee for Germany, as well as the Netherlands. AHC was recently awarded a LECTROFLUOR license from General Magnaplate.

AHC Benelux B.V. has coatings facilities in Eindhoven and Venlo, and is part of the Material Technology Group of Aalberts Industries. AHC Benelux has developed its reputation by combining an expertise in heat treatment and metal finishing, which, when coupled with General Magnaplate’s proprietary processes, covers all aspects of surface enhancement technology.

Today, LECTROFLUOR, TUFRAM, HI-T-LUBE and NEDOX are all available through AHC Benelux.

## An International Perspective on Coatings Technology

General Magnaplate has always provided coatings driven by needs in the marketplace – both existing needs and those anticipated for future technologies. As well as working alongside customers, the Company also works closely with its network of international licensees to obtain a global perspective on product development.

This past fall, General Magnaplate held an International Technical Conference in Serbia with a primary focus on new coatings technology. The technical staff and management from General Magnaplate were joined by licensees from the UK, Sweden, the Netherlands and Australia. In addition to presentations from General Magnaplate on new R&D initiatives and product development, there was a wealth of valuable applications information shared by our licensees.



## AND BACK IN THE USA...

This conference was followed by a national meeting at Endicott College, MA, where the regional managers and technical staff from the North American facilities met for further research and development discussions and technical sales training.



## WELCOME BACK **TIM**

General Magnaplate welcomes back Tim Martinson! Tim has rejoined us in Technical Sales covering Wisconsin, Minnesota, Illinois, western Michigan, northern Indiana and eastern Iowa.

Tim Martinson

Tim brings a wealth of experience in the industrial sector – he has worked in manufacturing and distribution for about 15 years, including experience with supply chain and transportation. Tim was formerly Operations Manager for General Magnaplate’s facility in Wisconsin (2001-2005). He has an Associate Degree in Marketing from Gateway Technical College (WI) and a Bachelors degree in Business from Marion University (WI).



## **BRIAN KENDER** PROMOTED

Congratulations to Brian Kender who has been promoted to Technical Sales for Southern California! Brian, who has been with General Magnaplate for almost two years servicing the Mid-Atlantic states, is a graduate of Bryant University in Rhode Island.

Brian Kender



## **MATT AND MARK** ARE MOVING ON UP

Mark Beaver and Matthew Bolduc joined Magnaplate on the same day – both from the Endicott College graduating class of 2010 and have been in training since.

Mark Beaver



Mark had been working with the technical inside sales team and has been promoted to a outside territory of his own – the mid Atlantic states.

Matt has been working with our R&D and Quality Assurance teams and has relocated to General Magnaplate’s California Facility where he will be the Assistant Quality Assurance Manager.

Matthew Bolduc

# SNEAK PEAK – **LECTROFLUOR®** **605 & 609**

Our technical focus for this issue is on LECTROFLUOR (see back cover), so it’s appropriate that our first new product development news of 2011 is announcing two new versions of this high performance coating designed to withstand the harshest of environments.

The LECTROFLUOR series of high-technology, polymer-based, surface enhancement coatings provides superior resistance to metal parts and equipment subjected to corrosion, (environmental and chemical) as well as erosive and abrasive wear (especially from slurries). Coatings in this series also exhibit excellent release characteristics, and many comply with codes for food and pharmaceutical contact.

Developed primarily for the food industry, blue LECTROFLUOR 605 is USDA/FDA compliant and CFIA approved and will provide non-stick properties to almost any metal. LECTROFLUOR 609 offers similar properties but will add a pewter color to the substrate, a preference for some plant operators.

These new LECTROFLUOR coatings have been developed to withstand harsh cleaning agents and will lower expenditure by reducing downtime for part replacement.

## **CREDIT CRUNCHING!**

General Magnaplate accepts both VISA and Mastercard! Customers can pay with a credit card to ease cash flow, or to simply rack up some more air miles. We also gladly accept electronic banking transfers. Call us today for instructions on how to pay your invoice by electronic transfer, Visa or Mastercard!



## **TRADE SHOW CALENDAR**

### **West Pack**

**Feb 8-10, 2011**

Anaheim  
Convention Center  
Anaheim, CA  
**Booth: 5433**

### **Offshore Technology Conference (OTC)**

**May 2-5, 2011**

Reliant Park  
Houston, TX  
**Booth: 8617**

### **Atlantic Design & Manufacturing Show**

**June 7-19, 2011**

Javits Convention Center  
New York, NY  
**Booth: 2957**

### **Pack Expo**

**Sept 26-28, 2011**

Las Vegas  
Convention Center  
Las Vegas, NV  
**Booth: S-6725**

# LECTROFLUOR® – TECHNICAL FOCUS

Superior Corrosion, Chemical Resistance and Mold Release...Even In Extremely Hostile Environments!

## IN SHORT...

- Superior corrosion resistance
- Permanent dry lubricity for very low COF
- Broad resistance to chemicals and acids
- FDA, USDA, and AgriCanada code compliance
- Prevent abrasive wear and galling
- Offer heat stability
- Self-lubricating for extended wear
- Provide radiation and U/V resistance
- Provide superior mold release
- Complete protection at temperatures from -360°F to +550°F (-182°C to +288°C)
- For parts made of all types of metals



The LECTROFLUOR series of high-technology, polymer-based, surface enhancement coatings provides superior resistance to metal parts and equipment subjected to corrosion, chemicals and abrasive wear (especially from slurries). Coatings in this series also exhibit excellent release characteristics, and many comply with codes for food and pharmaceutical contact.

The LECTROFLUOR series of coatings also improves the wear characteristics and performance of all types of metal. It especially provides superior resistance to severe corrosion and chemical attack in hostile environments.

Some of the coatings exhibit excellent mold release properties. And many of them meet FDA, USDA, and AgriCanada codes — making them ideal for use in food, pharmaceutical and external medical applications.

LECTROFLUOR coatings are based on proprietary blends of engineering polymers with a very low Coefficient Of Friction. The metal parts are first cleaned and prepared in specially designed equipment. The selected polymers are then applied by either standard spray methods or by electrostatic spraying, depending on the polymers and the part's end use.

The selection of which polymers to use is based on many factors, including: end-use application of the part, its base metal, the kind of hostile environments to which it might be exposed, and the coating buildup permitted.

**LECTROFLUOR 605 is ideal for waffle making equipment**

## LECTROFLUOR 601

**Description:** For maximum corrosion resistance on ferrous and non-ferrous metals over a broad temperature range.

**Properties:** Excellent corrosion, chemical and abrasion resistance. High oxidative stability. Excellent mechanical toughness and cut-through resistance. Good electrical properties.

**Applications:** Excellent for use with chemical processing equipment, scrubbers, air moving equipment, pumps, lined pipe valves and meter housings, as well as mixing vats.

## LECTROFLUOR 602

**Description:** Exhibits superior resistance to U/V and radiation as well as to chemicals. Meets FDA codes.

**Properties:** Superior chemical resistance. Also resists fungus, impact and U/V radiation. Low permeability to most gases and liquids. Excellent dielectric properties.

**Applications:** Thick film recommended for all radiation-resistant applications. Good insulating material for electrical and electronic products, including probes, chassis, mounts, and housings. Ideal for use in medical products.

## LECTROFLUOR 604

**Description:** Meets USDA/FDA codes. Offers chemical and corrosion resistance at temperatures to 500°F (260°C). Also exhibits superior mold release.

**Properties:** Very low coefficient of friction. Excellent impact and abrasion resistance. Superior glue and mold release (especially in rubber molding) permits easy cleanup.

**Applications:** Recommended for use in food and drug processing and packaging applications (especially pasta making equipment), as well as in dryers, housings, stirrers, and chemical reaction linings. Dry lubricated surfaces solve sanitation problems.

## LECTROFLUOR 611

**Description:** Vegetable based coating that meets FDA/USDA and AgriCanada codes. Superior corrosion and fungus resistance.

**Properties:** Superior corrosion and impact resistance. Permits fast, easy cleanup of equipment parts. Resists staining. Selected colors available.

**Applications:** Ideal for sanitation and maintenance in food and drug processing and packaging (especially candy making). Also used in the marine industry, on dishwasher tubs and baskets, on refrigerator shelving, industrial gas tanks, and home appliances.

## LECTROFLUOR 615

**Description:** Meets USDA/FDA codes. Exhibits superior resistance to chemicals and wear at temperatures from -400°F to +550°F (-240°C to +288°C)

**Properties:** Superior mold release unaffected by U/V weathering. Superior cryogenic stability. Excellent heat and chemical resistance. Very low Coefficient of Friction.

**Applications:** Specially developed for food contact applications such as sealing dies, die rolls, stirrers, dryers, hoods, tanks and conveyor system components and rolls in the baking industry.

For more information, or to request literature on any of our "synergistic" surface enhancement coatings, contact:



**General Magnaplate**

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