

SYNERGIES

VOLUME 2

What's new at General Magnaplate Corporation

Concurrent Engineering Strategies

Getting Surface Enhancement Right the First Time



By Edmund V. Aversenti, Jr.
Corporate Director
of Operations

Innovative design engineers working with “synergistic” surface enhancements are pioneering an exciting concurrent manufacturing strategy that treats coatings as part of the design process rather than simply as an adjunct.

This approach pays off handsomely by embracing a basic tenet of quality control — “get it right the first time.”

Try these surface enhancement strategies and you'll boost both quality and productivity:

- ▶ Design with finishing in mind.
- ▶ Utilize less-expensive, easier-to-machine metals toughened by surface enhancement.
- ▶ Avoid elaborate masking operations. They can increase costs by a factor of 10.
- ▶ Treat parts to reduce maintenance and increase functionality. For example, to reduce costs through elimination of chemical washdowns, use coatings that allow water-rinse cleanups.

- ▶ Treat parts to protect against chemical and corrosive attack and deterioration.
- ▶ Apply permanent mold-release and self-lubricating coatings to assure that processing and manufacturing equipment runs smoothly and keeps on running that way.
- ▶ Put smooth surfaces on castings, reducing the need for machining.
- ▶ Create dielectric surfaces precisely where they are needed, to help prevent the buildup of electrostatic discharges that can “blow” electronics and snag packaging and production.
- ▶ When designing equipment involving adhesives, use surface enhancements to avoid undesirable adhesion (see box below).

Using the principles of concurrent engineering, innovative design engineers are finding new, creative approaches to the use of “synergistic” coatings — approaches that add value to finished products and the processes that create them. Isn't it time you tried these principles, too?

Magnaplate Wisconsin Expansion Doubles Capacity, ENHANCES NEDOX® & PLASMADIZE® Operations

At the end of the summer General Magnaplate Wisconsin will christen its expanded Technology Center in Racine and put the new facilities into full-time operation. Under the guidance of Corporate Director of Operations Edmund V. Aversenti, Jr. and Magnaplate Wisconsin's Operations Manager Darren Dayke, the expansion will increase the Center's shop space to approximately 30,000 square feet and markedly enhance the Center's ability to serve customers.

- The addition of a new NEDOX line featuring 10-ft. tanks and a bridge crane will enable Magnaplate to handle larger, heavier parts and to process larger batches of smaller parts — for better customer service, whatever the scope or nature of the surface enhancement challenge.
- Existing 6-ft. tanks will be dedicated to the pre-treatment of aluminum parts prior to coating with NEDOX — enhancing the Center's capability to handle those critical coating jobs efficiently and cost-effectively.
- A new walk-in-plasma room will enable the Center to service regional customers who wish to have Magnaplate's next-generation, self-lubricating PLASMADIZE thermal spray technology applied to their parts and components in the fastest possible time. *(cont. on back)*

What to do when adhesives stick too much!

Self-lubricating PLASMADIZE TNS, a recently developed product in our new PLASMADIZE family — The Next Generation of Thermal Spray Coatings — has been designed with an extremely low coefficient of friction to eliminate maintenance downtime and production sched-

ule disruptions caused by adhesives or adhesive residues sticking too well. It creates a release (non-stick) surface so slippery that even the toughest adhesive residue or pressure sensitive tape with super-high levels of tack won't stick to formulating, packaging or converting

equipment. And unlike conventional thermal sprays, PLASMADIZE TNS seals all surface voids to eliminate porosity and produce superior corrosion resistance. It also enhances the structural integrity of the surface and can be applied in substantial thicknesses where desired.

New Faces Take Us to *New Places*

New talent is vital to any organization. Fresh faces infuse a company with refreshing ways of doing things to help serve you better.

Here are five of Magnaplate's new executives who are helping us to do just that:

Vincent Meringolo
Product Manager
PLASMADIZE®

Vince is new to Magnaplate but not to surface enhancement coatings. With years of experience in thermal spray technology, he is the ideal person to manage the further development of PLASMADIZE — The Next Generation in Thermal Spray Coatings.

What attracted him to us? "Magnaplate's diversity in surface enhancement technology, from wet chemistry to thermal spray. Most shops have just one process to offer. We have a wealth of choices." He sees a bright future for Magnaplate: "The demand to increase productivity is putting major strains on equipment. The result will be increased wear and additional sticking problems — particularly in the food industry. This is precisely where we can help."

Vince has a BS in metallurgical engineering from Brooklyn Polytechnic Institute and a marketing MBA from Hofstra University.

Robert Armstrong, P.Eng.
Engineering Manager
General Magnaplate Canada

Bob Armstrong, our most recent new face, brings Magnaplate a great deal of engineering experience. A graduate of the University of Toronto with a BAS in metallurgy and material science, Bob is a member of ASM and the Professional Engineers of Ontario. Prior to joining us, he served as Manager of Precision Manufacturing and Supervisor of Turbine Overhaul at Vac Aero International, Inc. This expertise will stand him in good stead as he takes on the responsibility of organizing the move of our Canadian plant to its new location. "My goal," says Bob, "is to make a completely seamless transition that won't affect our product quality or record of on-time service."

What attracted Bob to Magnaplate is the company's wide spectrum of cus-

tomers across industry. "I feel a little like a kid in a candy shop," he says. "There will be so many coating challenges for us to tackle at our new facility."

John Larsen
Sales Manager
General Magnaplate Texas

College-trained in business management, basic chemistry, and metallurgy, John's expertise includes "utilization of chemistry and surface enhancement through metal and non metal coatings to reduce or eliminate specific component failures, or enhance performance criteria." He's a member of the Society of Metallurgical Engineers (SME), Association of Finishing Processes (AFP), Texas Association of Metal Finishers (TAMF), and Texas Watch Program (Volunteer Environmental Monitor).

Frank Niznik
Technical Sales
General Magnaplate Corp.

The excitement Frank X. Niznik feels at working with us can be easily sensed in even a brief conversation. "I was attracted to a career with Magnaplate because of their professional philosophy and reputation," he says. "We have the unique capability to utilize experienced engineers to develop and implement a performance coating to fit a particular customer's application need. Performance coatings will be required to balance out the ever-growing demand for superior efficiency and productivity, and we're in the forefront of those efforts."

A graduate of the New Jersey Institute of Technology with a BS in industrial engineering, Frank is not only tackling the challenges of selling and servicing Magnaplate's high-tech coatings, but is working on his MBA.

Bob Peterson
Technical Sales
General Magnaplate Wisconsin

Bob Peterson literally grew up in the surface enhancement coating industry, working during school breaks and vacations in Ra-Tech Inc., his family's company, which was bought by Magnaplate in 1989. Bob's first responsibilities at Magnaplate involved light metals applications. He believes Magnaplate has much to offer customers: "We have long been considered the problem solver in the industry. Customers bring problems to us every day and we, in turn, give them solutions." As Bob sees it, there are always important problems to solve. "With advancing technology, customers are facing the need to run equipment at higher temperatures, and to assure metal parts can resist harsher environments than ever before encountered."

Magnaplate Wisconsin

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- A walk-in blast room will optimize the Center's ability to pretreat parts and to provide customers with the best possible mechanical finishing.

General Magnaplate Wisconsin can now coat larger batches of small parts, and reduce turnaround time despite increased workloads.

LATE BREAKING NEWS...

As we go to press, we are purchasing a new building in Ajax, Ontario. It will be the site of an expanded Canadian Materials Center, designed to give you better service.

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



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