

SYNERGIES

VOLUME 3

What's new at General Magnaplate Corporation

Sales of Black & Decker's New Steam Irons Press On



...thanks to MAGNAGLIDE® — Magnaplate's Newest Surface Coating Enhancement

In a push to grow market share in the "heavy ironer" market, Black & Decker decided to "reinvent" its premium steam irons. Drawing on interviews with over 2,000 consumers, Black & Decker determined that a totally new soleplate was one of three major elements required. Heavy ironers want long-lasting soleplates that glide quickly and smoothly across clothing without dragging or sticking, especially on starched fabrics.

Most soleplates are anodized aluminum, titanium alloy, stainless steel, porcelain, satin aluminum, polished aluminum, or Silverstone® PTFE. While all have some positive virtues, no one material is ideal. For example, stainless has superior corrosion resistance and glides well on cotton at high temperatures, but its non-stick starch resistance is only fair. Silverstone PTFE coatings have excellent corrosion resistance and non-stick qualities but they don't glide well on cotton at high temperatures. Most importantly, Silverstone coatings are only coatings — thin layers which can peel off, abrade, or be scratched by buttons and zippers.

B&D would not settle for a "me too" soleplate. It wanted a unique product which offers a sustainable competitive advantage. And because some users prefer black PTFE-coated while others prefer the look of shiny stainless, it had to offer that choice. B&D's 18 specifications included smoothness, appearance, glide (under a variety of conditions), wear-, UV-, stain-, corrosion-, and scratch-resistance, and even a temperature shock test in which coated soleplates are subjected to alternate heat and water quench.

Magnaplate's metallurgists developed the ideal surface enhancement — smooth and slippery, with an amorphous, non-crys-



talline structure. Not just a "paint on" over the base metal, this new MAGNAGLIDE coating becomes an integral part of the existing aluminum substrate. Locked and sealed, it cannot be peeled, scraped, or rubbed off by a button or zipper.

At first it appeared that MAGNAGLIDE could not be applied cost-effectively; handling, shipping, and masking added too much to the cost. But in an innovative redesign, rather than working with the traditional cast soleplate, we coated a separate soleplate wrap which can be handled and coated with ease. The pre-treated wrap is then affixed to the cast soleplate.

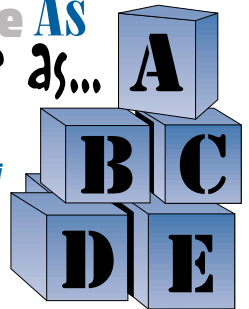
The final problem solved was finding an aluminum alloy to serve as a suitable substrate for the two MAGNAGLIDE versions — black MAGNAGLIDE NS® ("NS" for non-stick) and shiny MAGNAGLIDE INOX®. This eliminated manufacturing of wraps from two different materials.

MAGNAGLIDE enhancements meet all B&D requirements, including:

- Good glideability. MAGNAGLIDE NS is slicker than Silverstone. MAGNAGLIDE INOX has the slickest non-stick coating with the easiest glide available on any iron from any manufacturer
- Durability
- Good wear, stain, scratch, and corrosion resistance
- Excellent starch release properties
- Good thermal transfer
- Does not promote aluminum blistering (outgassing) or discoloration from heat
- Economical
- Premium appearance, befitting a premium product.

In tests against all competition — Silverstone, anodized aluminum, stainless steel, etc. — MAGNAGLIDE-treated soleplates proved superior. Initial consumer reaction, as well as orders from retailers such as Walmart and Target, have also been extremely positive. Black & Decker believes that our MAGNAGLIDE surface enhancements deserve much of the credit.

Magnaplate Surface Enhancement Can Be As Simple as...



Prepared by Ed Aversenti

Based on our 45 years of applying "synergistic"

surface enhancement coatings to virtually every shape, size, and type of metal surface, we've discovered that the most successful projects usually have one thing in common; we must work closely and in partnership with our customers. In today's buzzword vocabulary, that process is called "concurrent engineering." But we've been doing that since we started solving surface-enhancement problems.

Ideally, there are five stages of interaction between Magnaplate and you, our customers. So we've organized our customer service around what we call "the five-part dynamics of surface enhancement."

Stage A — Pursuing Parameters

The first step is to discuss all aspects of the application with you. Starting the process is as easy as phoning us or E-mailing info@magnaplate.com. Then we'll talk about what your process requires. What specifications are key? What parameters govern technical decisions and needs? What metal or metals are involved? What geometries? What areas of the part require masking? What does your part do? What performance problems have you experienced? What problems can you anticipate? And what quality management and process documentation issues must be addressed?

Comprehensive implementation of Stage A is guided by your completing our Engineering Data Form (EDF #31).

There's **No Debate** — They Enhance *The Way We Operate*

In every business, certain personnel are counted on to keep the company fine-tuned to customers' needs. At Magnaplate we are fortunate to have a number of people with a wealth of experience doing just that, keeping us energetic and responsive.

Ed Aversenti, Vice President and Corporate Director of Operations

A top executive at Magnaplate since 1985, Ed Aversenti has overall responsibility for direction and coordination of technical, sales, production and processing activities for all corporate subsidiaries and offshore licensees. "With operating units in New Jersey, California, Texas, Wisconsin and Canada and licensees across the globe," he says, "we've become a worldwide company. One vital thing top management must do in that situation is carefully supervise training and oversee operational control so that Magnaplate continues to function effectively as a service company."

Ed is perfectly suited for the job, both by education and experience. He holds a degree in business administration from Pepperdine University and one in chemistry from Hayward State College. He served as District Manager (West) for the Furane and Plating Chemicals divisions of M&T Chemicals. He is well versed in the exacting sciences of metallurgy, polymers and electroplating, and in related fields such as production engineering, heavy metals effluent control and treatment, industrial chemistry, and concurrent engineering. Ed is also the author of many articles on surface enhancement, including "Concurrent Engineering for Surface Enhancement Coatings," and "Application of 'Synergistic' Coatings to Solve Production Problems in the Adhesives Industry."

Corey Wesnitzer, Vice President, General Manager, General Magnaplate Texas

Having been brought up in a machine shop environment since the age of 14, Corey has an ideal background for "synergistic" coatings. "I have always had a curiosity about how things worked and what could make them better," he says. This interest has carried over to his work with Magnaplate's diverse customer base — food processing, packaging, petroleum, semiconductor, transportation, and the many other industries we service.

Corey's degree from Bowling Green State University includes a major in manufacturing technology and a minor in business management. He joined us to head our California subsidiary in 1990. Under his watch we not only developed a stronger surface enhancement coating operation, but also an award-winning, state-of-the-art pollution control system. Prior to joining Magnaplate, he gained extensive metallurgical and metal finishing experience with Cleveland Twist Drill and with Multi-Arc. He is an active member of the American Society for Metals (ASM).

Martin Chadwick, Operations Manager, General Magnaplate California

British native Martin Chadwick, who has been with us since 1989, took over the reins in California two years ago when Corey Wesnitzer moved to Texas. Martin has almost 25 years of experience in the metallurgical coating industry, including special expertise in metal finishing and hazardous materials management.

An active member of the Electronics Packaging Society and Britain's Institute of Metal Finishing, Martin majored in engineering and minored in materials technology at Britain's Waltham Forest University.

Darren Dayke, Operations Manager, General Magnaplate Wisconsin

A Magnaplate team member for more than five years, Darren was well prepared for his responsibilities when he took over the direction of our Wisconsin operations. His previous experience includes five years in Quality Control with Engelhard Industries and six years with OMI Sel-Rex where he was involved in the technical areas of metallurgy and in customer service. His training and expertise include scanning electron microscopy, failure and metallurgical analysis, and customer service.

Simple as... ABCD&E

Continued from front page...

Stage B — Choosing the Coating

Stage B is the selection of potential Magnaplate enhancement technologies. We review your blueprints, engineering drawings, specifications, and/or sample parts, to determine how best to solve your problems with one of our many possible surface treatment technologies.

Stage C — Testing the Technology

We send you several sample coupons, each coated with a different Magnaplate process. You will be able to see the "value added" to your prototype or production specimens.

Stage D — "Piloting" the Process

For a minimum evaluation charge, we run a pilot production process cycle on your parts and coordinate QC inspection. You then run reliability and failure analysis tests prior to naming us as a supplier.

Stage E — Scaling Up For Success

Full scale production begins upon receipt of your order

It sounds simple. But the enhancement of your parts through application of sophisticated metallurgical coatings is as much an art as a science. For optimum results, "concurrent engineering" helps to assure our mutual success.

Magnaplate Coatings Replace "Green Teflon"*

If you are seeking a surface enhancement coating for food contact surfaces and are considering the use of what is popularly referred to as "Green Teflon," think again. That coating uses chromic oxide in the green pigmentation; it cannot be used on food-contacting surfaces. As an alternative, consider the wide variety of Magnaplate "synergistic" coatings that are compliant with USDA, FDA, and AgriCanada for food and drug contact. These include many of the coatings in the following families: TUFRAM®, NEDOX®, MAGNAPLATE HMF®, LECTROFLUOR®, MAGNAGOLD®, and PLASMADIZE®.

*TEFLON is a registered trademark of DuPont

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



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