

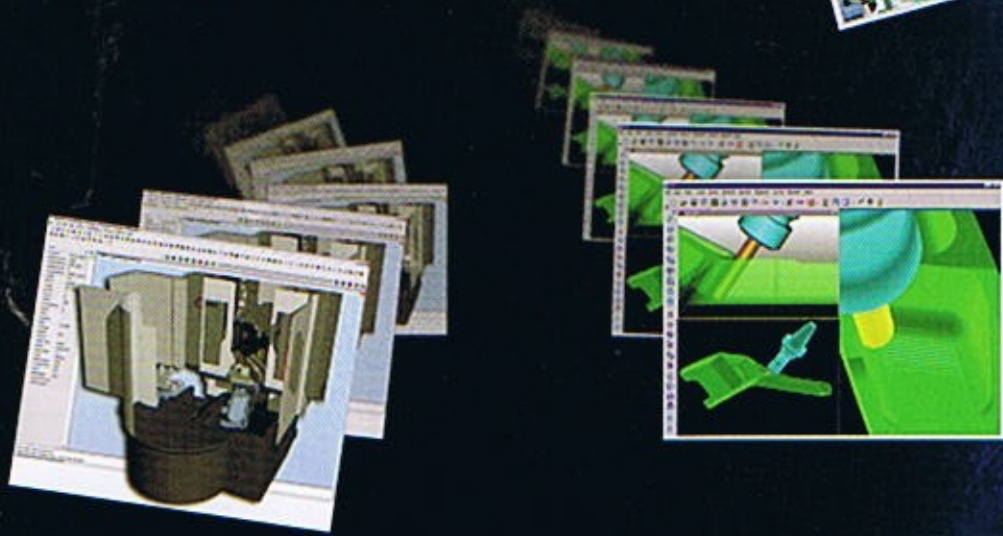
# TOOLING & PRODUCTION **T&P**

Strategic Guidance for  
Large Plant Management

NOVEMBER 2007

## Software Industry Insights

Looking Five Years Ahead



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**Material Boys**

## features

- 14 Way cover repairs get Eaton back to work in short order
- 16 Fabricators are learning the gains are to the swift
- 22 Lasers and material handling streamline chassis production
- 23 Agile metal suppliers make their delivery a specialty
- 26 The right skimmer handles all the burdens of waste oil
- COVER STORY**
- 28 **Foretelling Software Developments**  
*Looking through the crystal ball*
- 36 **Enterprise Metrology Sleuth**  
*Sleuth foils a wily culprit, an EMS network hacker*
- 38 **From remanufactured to new: How a fabricator upgrades**
- 40 **FABTECH International & AWS Welding Show 2007**

## departments

- |   |  |
|---|--|
| 4 <b>First Cut</b><br><i>Material boys</i>  | 35 <b>Product Spotlight</b><br><i>HQC quick-change collets</i> |
| 6 <b>News &amp; Analysis</b><br><i>EMO Hannover 2007 gives boost to machine tool sector</i> | 44 <b>Techspex</b><br><i>Grinding machines</i>                 |
| 10 <b>Straight Talk</b><br><i>Auto industry war</i>   | 46 <b>Marketplace</b>  |
| 12 <b>Shop Talk</b><br><i>Where to program: In office or on floor</i>                       | 47 <b>Classifieds</b>  |
| 21 <b>Financial Analysis</b><br><i>Why gold really shines</i>                               | 47 <b>Index of Advertisers</b>                                 |
|   | 48 <b>Tooling Around</b><br><i>Reducing tungsten demand</i>    |



## about the cover

Art director Melody Tinder adds a graphical emphasis to the point that software development will take metalworking manufacturing to new worlds in the next five years.

## coming next month...

- Marvels of automation
- Flexible deburring strategies
- PLM and medical device manufacturing

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# Agile metal suppliers make their delivery a specialty

By Dave Rizzo

**E**ven in the face of increasing demand and diminishing supply, today's specialty-metal suppliers utilize numerous internal advantages and external resources to place small and large volumes of their product into the hands of manufacturers in a timely manner at predictable price points. As a result, manufacturers can maintain production schedules and stay within budget to retain competitiveness within their particular market.

A number of factors account for the present-day challenge that manufacturers face in obtaining raw metals — not the least of which could be referred to as the "China Syndrome."

"China is in the midst of a construction and durable goods building boom — all of which uses steel, which has accelerated since they were awarded the Olympic games," observes Tim Grady, chairman and CEO of consulting firm NetMark International Inc. Since 1986, NetMark has served more than 350 worldwide clients from its Atlanta headquarters.

At the same time, China plays a singular role in cornering supply, snapping up defunct steel mills from the Rust Belt, putting them on barges to China and then reassembling the plants with modern updates. To feed these mills, China sucks up huge quantities of scrap metal from all over the world. To a lesser degree, India's booming demand for goods also contributes to the migration of scrap and specialty metals to the Far East, further upping demand.

With the resultant shortage of scrap metal, steel in the United States has to be made from newly mined ore, which is more expensive than charging the furnace with scrap. This process also requires coke, made from coal, and coke prices increased 36.2 percent in 2005.



The key to any niche supplier's speed is the relations it maintains with mill sources and suppliers of raw materials.

"These factors hit about the same time, so we saw some rapidly accelerating prices for steel, stainless, nickel, and titanium that have not abated much," says Grady.

By some accounts, metal-commodity prices rose by 180 percent in the 2002-2006 time frame. As an example, the spot price of nickel alloys in 2005 hovered at approximately \$25,000 a ton, whereas current prices run about \$40,000 a ton. Over the same period, titanium has jumped from \$15 to \$60 per pound at its peak.

## Schedule wrecker

For manufacturers, price creep is bad enough. But even more insidious is the damage wreaked upon a production

schedule because of delays in obtaining materials. Some mills and downstream distributors have quoted delivery times of 80 weeks, an eternity in today's manufacturing environment.

"When you run short of key materials, you have to adjust production, which can idle workers, machinery, and output," says Grady. "This has a major ripple effect on price, efficiency, and delivery. Clearly, the manufacturer has to make up for the lost productivity and increased cost, and the likely way is to amortize it across the product coming off the assembly line, which creates a price-competitiveness risk."

## Niche suppliers

Like an agile running back, a new breed of specialty-metal suppliers is managing to

out-flank some of the more traditional heavyweight distributors. Chalk up their success to an approach that emphasizes solutions-based deliveries.

"When opening discussions with any potential client, the primary function of a metal supplier's staff should be to find what the customer's real needs are and the entire scope of the issues that drive those needs," advises Lew Weiss, president of All Metals & Forge LLC. "I've been in the industry for 47 years, and I can tell you that the days of merely 'filling orders' are numbered."

Counting itself as a niche supplier, Parsippany, NJ-based All Metals & Forge, comprises a unique combination of steel service center, forge facility, custom melt operation, custom

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bar producer, and information resource for OEMs. The company is ISO9001:2000/AS9100 and EN9100 registered and certified since 1994.

"One of the things that makes a supplier like All Metals unique is that it is global in scope – it draws materials from all over the world, process them as necessary, and then deliver them quickly to the manufacturer," explains Grady.

In this manner, niche suppliers take on a greater role in inventory management, stocking a wide variety of frequently requested metals such as stainless PH grades and tool steels, along with alloys of aluminum, carbon steel, cobalt, magnesium, molybdenum, nickel, tantalum, titanium, and tungsten. That way, many metals can be shipped on a JIT basis at a stable price. In some cases, delivery times can be reduced from one year to eight or 10 weeks.

#### Speed sells

The key to any niche supplier's speed is the relationships it maintains with mill sources and suppliers of raw materials. Specialty-metal suppliers also apply a global perspective to get the big picture on predicting the future availability of metals so that they can stock up in advance.

"What makes a niche supplier like All Metal Forge singular is that they look into the future," says Grady. "They've mapped out the metals market all the way to the year 2010, and they are constantly lining up supply sources based on anticipated need. This allows them to lock in metal supplies and then provide a more stable price for their customers, particularly on long-term agreements."

#### Adding value

Besides getting a fix on expensive grades of material, some specialty suppliers provide additional value by custom melting materials to create extremely hard-to-locate alloys for exacting aerospace, petroleum, defense, automotive, and marine applications.

"The ability to create an alloy of metal, like Inconel 909, Udimet 720, Rene 41, or other oddball grade is pretty critical when you're dealing with an old blueprint from a U.S. government contract," explains Grady. "In one case, a defense company needed to manufacture a tank part, but the date on the print was 1954 and the material was no longer produced. They only needed a small quantity, so a mill wouldn't touch this requirement. But All Metals & Forge could do it because they melt as little as 250 pounds up to full mill heats of an alloy."

In-house forging operations that include rolled rings and custom hand-rolling of bars in shapes such as round, flat,

"Custom hand-rolling is a secondary process that raises cost, but provides end-user savings because they don't have to be machine down an oversize that creates a lot of material waste," says Weiss. "The finished product also has the improved structure and qualities of bar instead of a shape made from cut plate, not to mention significantly quicker deliveries all around."

Other added-value services customarily provided by some specialty suppliers include: cold and hot forming, heat-treating, cutting, machining, extrusions, and rolling and welding operations — all of which helps OEMs shorten the duration between receiving materials and turning out finished products.

#### The customer wins

With a long-arm reach, speed and maneuverability of a wide receiver, global specialty metal suppliers are increasing establishing themselves as a valuable team player for any OEM.



By some accounts, metal-commodity prices rose 180 percent between 2002 and 2006.

square, hexagonal, as well as custom shapes and in-between sizes not available from mills or large service centers is another plus provided by specialty suppliers. Offering forms close to spec tolerances helps manufacturers reduce the time and expense of turning or cutting bar down from much larger pieces.

"The benefit to the manufacturer is that they can get material they need, when they need it, at a price they can depend on," sums up Grady. All Metals & Forge LLC, [www.rsleads.com/711tp-158](http://www.rsleads.com/711tp-158)

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