



REPORT ON EUROMOLD 2007 December 5 – 8, 2007 Frankfurt, Germany

Leslie Payne, Executive Director, represented the Canadian Tooling & Machining Association (CTMA) at the Euromold trade show that was held in Frankfurt, Germany, December 5-8, 2007.

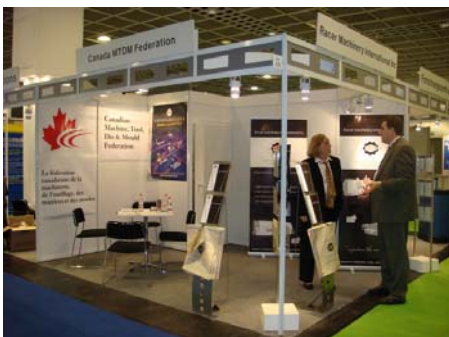
Now in its 14th year and with the concept of “*From Design to Prototyping to Series Production*”, the show was expecting more than 50-60,000 visitors and approximately 1,500 to 1,700 exhibitors from more than 45 countries – thus making Euromold the world’s largest machine-tool trade show.

The original concept of our participation this year was to use a translator to gather information for our members from the technical presentations, which are given mainly in German. Unfortunately our technically-competent, German-speaking director was unable to travel to Germany at the last minute and we were therefore not able to accomplish this objective.

Thanks to the efforts of Sally Damstra at the Canadian Plastics Industry Association (CPIA), we were able to partner with other industry associations (CPIA, CAMM and the Canadian MTDM Federation) as well as one of our member companies (Racer Machinery) by exhibiting in Hall 5.1 with a complete small booth package. All of the associations were able to promote the capabilities of their members by distributing information to visitors at the show. The CTMA distributed the remaining copies of our 2007 Buyer’s Guide & Members’ Capability Index during the 4-day show and also promoted the ISTMA-World Conference that will be held in Windsor, Ontario in 2010.

Booth Activity:

- Representatives from Israel, Malta, Australia, South Africa, Taiwan, Greece, Croatia, Italy, Ohio USA and CPIA member PCM Molds & Patterns Inc. from Quebec visited our booth. I visited with Maximillian Lorzel, Schroter Modell und Fromenbau, President of the German Pattern-Model Makers Association to confirm their participation at the World Conference that the CTMA is hosting in Windsor in 2010. The German tooling industry is very busy and has very little CNC capacity available until early 2008.
- Representatives from Turkey, China, France, Portugal, Italy and Germany visited our booth along with possible new member Pannon Plastic Inc. of Mississauga, Ontario.
- Representatives from Turkey, Spain, Finland, Malaysia and a private design consultant from Germany visited our booth.



Special Features:

1. A two-day forum organized by the Chinese Die & Mould Industry Association and Tool & Gauge Manufacturers Association of India (both partners of the CTMA through their membership in the International Tooling & Machining Association) provided the following information:

Manufacturers from almost all industries are currently evaluating the purchase of tools from China and India, or have even established supplier relations there – for local or global applications. This is also true for European die and mould manufacturers who face massive cost pressure and relocate part of their production, not only to follow their customers but also to serve new customers in the target markets. Cost savings from 40% to 70% are possible, but the process of finding the right supplier is intense and the necessary input very high. Which dies or moulds are suitable to be sourced from China or India, and what cost savings are realistic? How can a good cooperation with local tool builders be established, and what kind of input is necessary? What are the relevant facts to be kept in mind when establishing your own die and mould production? Due to the frequent lack of transparency, there is a strong interest in market information on the Chinese and Indian die and mould industry, in individual reports from companies already sourcing from or manufacturing in China or India, as well as in contacts to local tool building companies.

2. The Global Alliance of Rapid Prototyping Associations (GARPA) held its 9th Annual Conference during Euromold. An outline from this event entitled “*The Custom Manufacturing MegaTrend – Where China and the West Fit In*” is attached as Appendix A.
3. The Exhibitors Lecture Forum provided almost 40 speakers who presented information of relevance to the tooling industry over the 4 days of Euromold, however most were in German.

Future Participation in Euromold:

The ability to promote the members of our association from within our own booth was a good opportunity; however Hall 5.1 did not have the largest number of visitors. With numerous entrances to the show, the best location would be in Hall 8 or 9, and a booth in this location has been promised to us by the show organizers if we decide to return to Euromold next year.

Respectfully submitted,

*Les Payne, Executive Director
Canadian Tooling & Machining Association
December 19, 2007*

The Custom Manufacturing MegaTrend

Where China and the West Fit In

9th Annual International Conference



Date and Time: Friday 7 December 2007, 09:30 – 17:45

Location: Exhibition Center Frankfurt/Main, Germany, Hall 8.1, Room Symmetrie 2

Organizer: DEMAT GmbH (Frankfurt, Germany)

Chairman: Terry Wohlers, Wohlers Associates, Inc. (USA)

Conference Language: English

Fee Per Half Day: €140 + 19% VAT. GARPA members pay €126, plus VAT per half day. Special price for full day: €240, plus VAT. Registration fee includes entrance into the conference and exhibition, technical papers, lunch, GARPA reception and party, and a chance to win valuable prizes.

Registration: Phone 49 69 27 40 03 30, fax 49 69 27 40 03 40, or email verena.frenkler@demat.com. A registration form and other details are available at www.euromold.com.

Goal

To concentrate on the growing number of opportunities in custom, replacement part, and short-run manufacturing and the role of China, Europe, and other parts of the world.

Objectives

- Understand why custom manufacturing is becoming increasingly important
- Identify industries and companies that are among the first to embrace this emerging megatrend and others that are likely to follow
- Explore methods of additive fabrication for custom and short-run production
- Learn whether it is possible to obtain German quality at Chinese prices
- Discover how local, on-demand manufacturing can reduce shipping, inventory, and supplier relationship costs
- Consider the possible business opportunities in rapid manufacturing and what the future holds

Description

This special international conference will investigate the growing number of opportunities in custom and short run production and the role of China, Europe, the U.S., and other parts of the world. The conference will clarify why custom manufacturing is becoming increasingly important, especially in the West. Industry experts will discuss methods of additive fabrication for short run production and present new and exciting examples of rapid manufacturing. What's more, they will review ways in which companies might be able to achieve German quality at Chinese prices. The speakers will also identify industries and companies that have been an important part of this megatrend. And finally, they will consider new business opportunities and explore what the future holds.

Program

9:30 Dr. Eberhard Döring, Chief Executive
DEMAT GmbH (Germany)

9:45 **The Second Industrial Revolution**
Mr. Terry Wohlers, President
Wohlers Associates, Inc. (USA)

New methods of manufacturing are bringing about fundamental change in the way products are designed and delivered. With advances in additive fabrication, it is now possible to conceive a product and deliver it to a customer within days. In the near future, a staggering range of new and distinctive products is expected to burst onto the scene. A number of them will come from people working at home. As the custom manufacturing megatrend unfolds, expect to see the custom design of medical and dental products, jewelry, sportswear, military replacement parts, business jet interiors, high-end automobiles, and motorsports. Also, anticipate the development of collectables such as action and sports figures and personalized awards and gifts.

10:15 **The World is Not Flat**

Dr. Ping Fu, President and Chief Executive Officer
Geomagic (USA)

As the USA merges into the world economy, best practices in China will become best practices globally. Products developed in China will become global products. In this special presentation, Fu will provide her unique prospective on globalization, kind of a Thomas Friedman in reverse. (Friedman is the author of *The World is Flat*.) Fu sees the use of rapid manufacturing technology as an interruption to the painful outsourcing that many accept as the inevitable outcome of globalization. Will American business be able to reinvent itself? Can a nation based on democracy and run by lawyers find a way to balance shareholder value with human value? How long can China, a nation run by engineers, be content as the world's sweatshop?

10:45 Break and Refreshments

11:15 **The Future of Custom Manufacturing in China**

Mr. Gordon Styles, Managing Director and Owner
Star Prototype (China)

How will China join in with the custom manufacturing megatrend? Currently, most of China does not see any point in doing a few hundred parts when so much money can be made making millions of parts. As with any developing country, China's costs will inevitably rise, as will its skills. Already, we are seeing textile-related industries move from China to Vietnam. Indeed, China will learn to do low volumes efficiently. When the market dictates that it wants UNIQUE, and it wants it FAST, there will be millions of Chinese people ready to provide this service.

11:45 **About Lead Times and Lap Times: RM in Motor Racing**

Mr. Tillmann Paul, Production Engineer
Toyota Motorsport GmbH (Germany)

Manufacturing in motor racing can be characterized by three major requirements: High quality, short lead times combined with high flexibility, and low volume production. Quality is crucial because parts are designed for maximum performance and operated at their limits. The main advantages of rapid manufacturing are shortened lead times that permit a later design freeze, as well as greater geometric freedom. It is crucial to find applications where these advantages compensate for the inherently inferior properties of RM parts. New applications of RM will emerge as improvements are made to material properties, dimensional tolerances, and part repeatability.

12:15 **Expert Panel Discussion**

Join the morning speakers for an interactive session of questions and answers. Seek answers to difficult and probing issues and problems.

13:00 Buffet Lunch

14:15 **Custom Manufacturing: A Growing Opportunity for Europe**

Dr. Philip Dickens, Associate Dean of Research and Professor
Loughborough University (England)

Until recently, custom manufacturing was a standard practice. In the past, clothing, suits of armor, swords, and saddles were special made for customers. It was not until the Industrial Revolution of the late 1700s that mass production became common. Over the past 250 years, the West developed technically and economically, while China largely maintained a culture of peasants, which are now being employed to manufacture low cost products for the world. Today, the West cannot compete against China for many products, but customization may be a solution. Dickens will explore which products are most opportune for customization, why customization needs to be local, and how rapid manufacturing can play a key role in this activity.

14:45 **Indirect Rapid Manufacturing of Metal Components**

Mr. Tom Mueller, Partner and Co-Founder
Express Pattern (USA)

Rapid manufacturing applications have largely been limited to non-metallic materials due to limitations of additive fabrication (AF) for metals. However, the use of AF to create an intermediate step in the manufacture of a metal component, such as AF patterns for investment casting, has grown tremendously over the past few years. Such use of AF technology might be termed "indirect rapid manufacturing." Currently, the production value of indirect rapid manufacturing is many times larger than that of direct rapid manufacturing. Indirect RM is providing new alternatives and is leading to fundamental changes in the process of selecting a method of manufacturing.

15:15 Break and Refreshments

15:45 **Additive Metal in a Production Environment: The Emergence of a Disruptive Technology**

Mr. Greg Morris, Principal and Chief Operations Officer
Morris Technologies, Inc. (USA)

Over the past two years, our industry has seen dramatic progress in the capabilities of several additive fabrication technologies. These advances have revolutionized how some parts are designed and manufactured, both at the prototype and short-run production phases. Morris Technologies was the first company in North America to introduce additive metal fabrication based on Direct Metal Laser Sintering technology from EOS. Morris will explore the role of metal technologies, as well as the critical quality systems and processes that must accompany them in a production environment. Also, he will explain why he believes these technologies will revolutionize the way some products are designed and manufactured.

16:15 **More Iterations, More Competitive: The Push for Formula One Success**

Mr. Steve Nevey, Business Development Manager
Red Bull Racing (England)

The aim for any Formula One team is to fully optimize every part of the racing car. A way of doing this is to test as many iterations of a given part or system as possible. Rapid prototyping has significantly increased the throughput of Red Bull Racing's wind tunnel testing program. The development of additive fabrication technology has seen some fascinating applications, to the point where the team is starting to put components produced by AF onto the racing car itself.