



## MPP Mission Statement

To create value by delighting our customers and enhancing the capabilities of the entire company.

### FREE PUBLIC P/M DESIGN SEMINARS

**Boston, MA – March 16, 2005**

**Kansas City, KS – April 14, 2005**

For additional seminar dates, or to sign up for a seminar on-line, visit our website at [www.metalpowder.com](http://www.metalpowder.com) or contact Inge Bohnet at 1.800.783.2420 or one of the following sales managers:

Gary Fulton	828.441.1138
Hilda Gomez (Mexico)	52.442.217.05.03
Vince Licari	248.398.3299
Steve Patrick	814.834.5408
George Shturtz	814.781.5101
Larry Totzke	714.970.5500
Tony Zimmerman	740.342.4512

### Divisions

#### MPP Anaheim

Anaheim, CA 1.800.767.9706  
Mark Sowerbutts, Plant Manager

#### MPP Canada

Blenheim, Ontario 1.519.676.8161  
Phil Goodwin, Operations Manager

#### MPP Ford Road

St. Marys, PA 1.888.359.9992  
John Mosco, Plant Manager

#### MPP Mexico

Querétaro, Mexico 011.52.442.217.05.03  
Juan Manso, Operations Manager

#### MPP Ridgway

Ridgway, PA 1.888.809.6671  
Nick Gismondi, Plant Manager

#### MPP Washington Street

St. Marys, PA 1.888.741.2352  
John Mosco, Plant Manager

## MPP Plants Expand Capabilities

### Presses, Furnaces, and Secondary Finishing Equipment Have Been Added

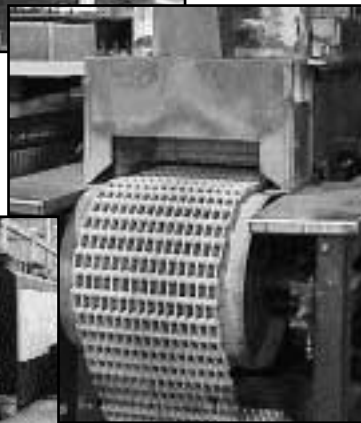
2004 has been a busy year at most of MPP's six operating divisions, which have expanded capacity and improved capabilities by adding presses, sintering furnaces, and a variety of secondary finishing and other equipment. Probably the most dramatic changes have come at our MPP Mexico Division, which has almost doubled its capacity over the past year. MPP Mexico has added several presses in a variety of tonnage capacities, with the largest addition being a 100-ton press. Also added was a continuous belt steam treat furnace. (Steam treating provides sealing of porosity, corrosion resistance, and improved overall appearance of parts.) Mexico's capability enhancements included the addition of EDM equipment, lathes, and an automated tapping machine capable of tapping 1,000 shock absorber pistons per hour.



MPP's Anaheim Division recently added this 500-ton Yoshazuka press.

MPP Anaheim has added a 500-ton, multi-level Yoshazuka press to its already extensive press capacity. (MPP Anaheim has more large-part pressing capacity than any P/M facility west of the Mississippi.) Anaheim has also added a ceramic belt high-temperature sintering furnace, effectively tripling its capacity in that area. High temperature sintering is critical for processing P/M stainless steel and other highly alloyed materials, including soft magnetic P/M materials. Other Anaheim additions are a custom-designed 100% thread validation system (used to guarantee 100% perfect parts on an axle spindle nut) and an automated induction hardening system used for localized surface hardening.

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The Anaheim Division also added this high-temperature ceramic belt furnace, effectively tripling its capacity for high-temperature sintering



MPP Mexico has added this continuous-belt steam treat furnace.



### COST SAVERS

These parts are just a few examples of how MPP customers have achieved significant savings by using the net-shape capability of powder metallurgy.



#### PRINTER TIMING BELT PULLEY

Two P/M parts are sinter-bonded together to form this timing belt pulley for a high-speed commercial printer. The assembly replaces a hobbled gear that was assembled to a machined aluminum collet. The conversion to P/M produced a cost saving of more than 80%.



#### BRASS COUNTERWEIGHT

This brass counterweight is used in the robotic arm of a tape library retrieval system. The part was designed specifically for P/M, and represented a cost saving of more than 50% over proposed alternative methods such as forging and casting.



#### STAINLESS STEEL LATCHBOLTS

These stainless steel P/M latchbolts, which are used in a safety exit device, replaced investment cast stainless steel parts and reduced costs by more than 40%.

## Come Join Us at IFPE Next March!

### MPP to Exhibit at the International Exposition for Power Transmission Show

Mark your calendar for March 15 through March 19, 2005, when MPP will be exhibiting at IFPE 2005, the International Exposition for Power Transmission. MPP will be exhibiting with a redesigned trade show display (Booth # S-13249). IFPE 2005 is the leading international exposition and technical conference for hydraulic, pneumatic, electrical and mechanical power transmission components, systems and controls. In 2005, the IFPE will be co-located with CONEXPO-CON/AGG, the world's largest international gathering for the construction industry. More than 100,000 industry professionals are expected to attend the joint shows.



The shows are sponsored by a diverse group of industry associations, including the Association of Equipment Manufacturers, Associated General Contractors, American Gear Manufacturers Association, the National Fluid Power Association, and the Fluid Power Society. Evidence of the event's international scope can be found in the fact that sponsors include the Fluid Power Associations of Britain, Canada, Japan, and Taiwan, as well as the China Hydraulic, Pneumatic & Seals Association.



You can register on-line to attend at [www.ifpe.com](http://www.ifpe.com) and [www.conexpoconagg.com](http://www.conexpoconagg.com).

Visit MPP at Booth #S-13249 at the 2005 IFPE and CONEXPO.

## Price Increases in Wrought Steel Offer Added Incentive for Move to P/M

Significant price increases and supply shortages of wrought steel are another reason that customers are making the move to P/M. Over the past several months, a combination of short supplies and rising demand have caused steel prices to rise significantly. In the P/M industry, however, prices and supply have remained relatively stable. Because powdered metal is still a relatively small part of total steel production, the large price increases and supply shortages that have characterized the wrought steel industry during the past year have not impacted the P/M industry. These factors, when coupled with the basic cost savings offered by P/M's net-shape capability, are making P/M the preferred choice for more and more companies this year.

To see some real examples of how MPP has helped customers achieve significant cost savings on their products, take a look at the "Cost Savers" in the margins of the inside pages of this issue of *The Metal Powder Press*. Then, take a closer look at MPP!

### The Next Level

## Living Our Mission Statement

*"To create value by delighting our customers and enhancing the capabilities of the entire company." MPP Mission Statement*

If there was ever a year that we literally lived by the words of our Mission Statement, it was 2004. As you will read elsewhere in this newsletter, we have expanded capacity at our plants, enhanced our high temperature sintering and secondary finishing capabilities, expanded and improved our Design Seminar, and we've re-designed and expanded our web site. Last, but certainly not least, we have helped new and existing customers cut their costs by providing a cost-effective alternative to the price increases and supply problems that have plagued the steel and other metal markets this past year. It all adds up to what we say in our Mission Statement – creating value by delighting customers.



A. Elliott Archer, President & CEO



COST SAVERS

## P/M Design Seminar is Expanded and Improved

If you haven't attended one of MPP's free Design Seminars in a while, you're in for a surprise. In the past year, MPP's highly-acclaimed Design Seminar has been significantly expanded to include more information on P/M materials, design factors, tooling considerations, and emerging P/M technologies. For many years, MPP has offered free Design Seminars to help prospective customers understand the basics of powder metallurgy, how to design with P/M, and how to specify the right material for their application. Attendees receive the MPIF Design Solutions Guide and other materials free of charge, as well as breakfast and lunch.

In addition to the basics of P/M technology, seminar attendees learn:

- How to save 30% - 80% versus casting, extrusion, forging, stamping and other processes
- How to design for P/M, including tooling design
- How to specify P/M materials, including aluminum and other non-ferrous materials
- How to utilize optional finishing techniques

Two types of seminars are offered. Regularly scheduled public seminars are held in several cities during the year (see the front and back pages of this newsletter for dates and locations of upcoming seminars.) In-house seminars can be scheduled in your office or plant.

You can register online or call 800-783-2420 to schedule an in-house seminar.



### COMPRESSOR VALVE PLATE

MPP won the 2000 Grand Prize in the ferrous category of the annual MPIF Part-of-the-Year Competition for this copper-infiltrated steel compressor valve plate. The plate replaced a four-piece brazed stamping that was plagued with high scrap rates that were due to voids in the joining of the individual pieces. The MPP plate resulted in an overall cost saving of more than 30%.

## MPP's Donald Bach Achieves Certified P/M Technologist Status

MPP has added to its long list of employees who are Certified Powder Metallurgy Technologists. Don Bach, MPP's Manager of Business Development, recently achieved Level I Certified P/M Technologist status. PMT certification is awarded by APMI International based on rigorous examinations covering the principles and practices of powder metallurgy. Certified P/M Technologists must demonstrate proficiency in subjects ranging from powder characterization and compaction to high density and specialty processing. MPP takes great pride in the fact that it has one of the highest percentages of Certified P/M Technologists of any P/M company in North America. Several MPP employees have achieved Level II certification.



Donald Bach,  
Manager of Business Development



### TRACTOR CAM

This high-strength cam is part of a 45-degree vari-drive cam assembly used in the cylinder drive unit of a combine tractor. Two finished cam parts are assembled opposing each other with the cam areas interlocking. MPP developed a special material and manufacturing process to achieve the combination of toughness and ductility needed by the application. These P/M parts resulted in substantial cost savings over previously-used cast parts.

## MPP Plants Expand Capabilities

(continued from page 1)

While MPP Mexico and MPP Anaheim have certainly been busy, other MPP divisions have been similarly occupied. MPP Canada has added a 750-ton Alpha press, a pair of 125-ton Alpha presses, and a 24-inch Abbott sintering furnace. MPP Canada has also added to its secondary finishing capabilities, which are among the most extensive in the industry. A good example is their double-disk grinding machine, which is used for close tolerance components requiring face-to-face parallelism tolerances of .0005 in. Other recent additions include a pot steamer, a tumbler/dryer line, and a pair of Wasino lathes. While all that activity was taking place in the plant, a centralized Engineering Center was being established.



This custom-designed 100% thread validation system is one of many new capabilities at MPP.

And, not to be outdone, MPP Ford Road installed a 20-inch annealing furnace and a 36-inch sintering furnace. These additions increased capacity at Ford Road by 40%.

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Metal Powder Products Co.  
17005-A Westfield Park Road  
Westfield, IN 46074  
Phone: 317-580-2420 800-783-2420  
Fax: 317-580-2444  
E-mail: mpp@metalpoderproducts.com  
Internet: www.metalpowder.com

We welcome your comments and suggestions. Please send us the names of others who should receive this newsletter.

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## MPP OFFERS FREE P/M DESIGN SEMINARS

Because of the importance of end-user understanding of the basics of powder metallurgy, MPP offers free P/M design seminars. These seminars are suggested for design engineers, purchasing personnel, and other specifiers of materials and components. Attendees will learn P/M design fundamentals, and will receive copies of the MPIF P/M Design Solutions Guide and other helpful materials. Lunch and materials are free of charge.

We also offer in-house seminars in your facilities. Seminars are limited in size, so register early.

## PUBLIC SEMINARS

Boston, MA – March 16, 2005  
Kansas City, KS – April 14, 2005

For additional upcoming seminars visit our web site at [www.metalpowder.com](http://www.metalpowder.com)

## IN-HOUSE SEMINARS

To arrange an in-house seminar at your plant or office, call 1-800-783-2420 or call one of the sales managers listed on page one.

**Call 1-800-783-2420 for a free copy of our Capability Brochure**

# Tired of High Prices and Short Supply? Take a Closer Look at P/M and MPP!

Significant price increases and supply shortages of wrought materials are another reason that customers are making the move to P/M – and MPP. Over the past several months, a combination of short supplies and rising demand have caused steel and other material prices to rise significantly. In the P/M industry, however, prices and supply have remained relatively stable.

These factors, when coupled with the basic cost savings offered by P/M's net-shape capability, are making P/M –and MPP– the preferred choice for more and more companies. Isn't it time you made the move to MPP? Call 1.800.783.2420 to find out how MPP can help you cut costs and improve performance.



40% cost saving



80% cost saving



50% cost saving

Visit our web site at [www.metalpowder.com](http://www.metalpowder.com) for more examples of MPP's know-how in manufacturing components for a wide variety of lawn & garden, heavy-duty equipment, architectural hardware, power tool, automotive, and fluid power applications.



**Metal Powder Products Company**

17005-A Westfield Park Road, Westfield, IN 46074  
317-580-2420 • 800-783-2420 • Fax: 317-580-2444  
[www.metalpowder.com](http://www.metalpowder.com)