



» June 2017

**Exclusive Invitation for All RTMP's Customers during the POWDERMET2017**



Rio Tinto Metal Powders invites all customers to join a private evening during POWDERMET 2017 at the Bellagio Hotel in Las Vegas, Nevada, USA. Meet & greet RTMP's team and learn about their current Research & Development projects. Refreshments & Hors d'oeuvres will be served, plus a special entertainment mid-event that will certainly help your luck at the Casino. *Don't miss out!* For more information, please do not hesitate to contact Josiane Parent by email at [Josiane.Parent@riotinto.com](mailto:Josiane.Parent@riotinto.com). We are looking forward to seeing you in *Fabulous Las Vegas!*

**David Gagnon appointed Sales & Marketing Manager Asia, Metal Powders**



On May 1<sup>st</sup>, 2017 David Gagnon was appointed Sales & Marketing Manager – Asia for Rio Tinto Metal Powders. David has a degree in applied sciences, and joined Rio Tinto Metal Powders in 1996. He has served different managing roles for production, training, implemented LEAN management and for the past five years, serving in the position of Projects Technical Manager - Asia Powders Expansion. This appointment recognizes the contributions made to Rio Tinto Metal Powders during his tenure in the organization. In his new role, David will lead the Asia metal powder sales team to implement Rio Tinto Metal Powder's strategies in the fast-growing Asia PM market, and report to Bob Wang, Global Account Manager, Metal Powders. David will be relocated to Suzhou, China with his family. Do not hesitate to contact David by email at [David.Gagnon@riotinto.com](mailto:David.Gagnon@riotinto.com).

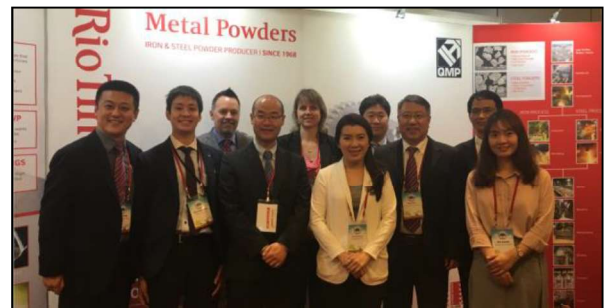
**PMAI PM-17 Conference & Exhibition in New Delhi, India**



Rajeev Sherry, Philippe François, Bob Wang & Prakash Khole

In February, RTMP participated in the annual PMAI PM-17 Conference & Exhibition in New Delhi, India. Thanks to all of you who visited us. It is always a pleasure to meet in person!

**Successful presence of RTMP team and Asian agents at the APMA 2017**



From left to right: James Qian, Ryosuke Satoi, David Gagnon, Bob Wang, Julie Campbell-Tremblay, Anchalee Kiattisakrri, C.S. Lee, Ray Guo, Odyssey Wang & Mandy Nie.

RTMP's team and Asian agents were present at the 4<sup>th</sup> International Conference on Powder Metallurgy in Hsinchu, Taiwan from April 9 to 11. Our R&D team presented papers on *High Density Lubricant Systems for Warm and Cold Compaction* (Ray Guo, Odyssey Wang) and on *Development of a Prototype Diffusion Bonded Copper Powder* (Julie Campbell-Tremblay, Ray Guo, Albert Xin, Hu Li). RTMP attends all major Congress & Exhibitions of the PM Industry to be accessible worldwide for all our customers.

**Rio Tinto Metal Powders**  
**A Committed Long Term Global**  
**Business & Technical Partner**





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## Mark Kesterholt recipient of the 2017 MPIF Distinguished Service to Powder Metallurgy (PM) Award



We are very glad and proud to announce that Mark Kesterholt was nominated as a recipient for the 2017 MPIF Distinguished Service Award. We want to send Mark our congratulations and are looking forward to seeing him on stage during the POWDERMET Industry Luncheon

Ceremony on June 14<sup>th</sup> & at RTMP booth #107.

## 2017 Technology Trends and Developments in Powder Metallurgy

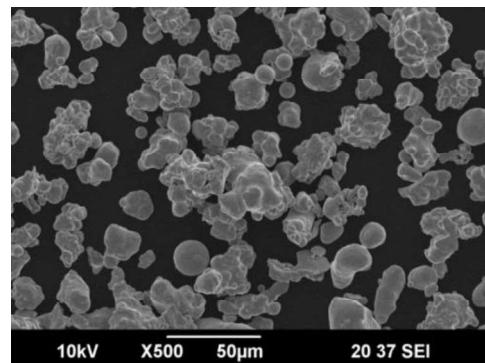
The current macroeconomic environment is increasingly uncertain, notably when it is linked to the automotive industry. The high level of trade incorporated into the supply chain of most car manufacturers makes forecasting the future of automotive manufacturing difficult. On the global stage, trade is being threatened by changes in the structure of the European Union and a generally more protectionist attitude. However, general economic indicators remain somewhat positive, calling for a moderate growth of car sales across most of the world's regions. For the powder metallurgy industry, the outlook remains generally positive with volumes that are expected to increase slightly compared to 2016.

### Important Future Trends in Powder Metallurgy

Given the outlook, it is expected that more pressure will be exerted on controlling costs and this is shaping developments for the next couple of years. As an example, we see a positive trend for inventory rationalization through the reduction of the number of grades held in inventory. From a technical perspective, this translates into using the same press-ready powder mix for more applications, which implies that each premix is expected to cover a wider range of applications. This puts front and centre

the notion of premix performance, where premixes are expected to deliver accretive value to the parts manufacturing operation. Current efforts are dedicated to mapping out the performance requirement and identifying potential solutions to increase premix performance while reducing the downsides. This translates into different alloys that were not previously considered, such that the mechanical performance is maintained while increasing the compressibility. Along these lines, efforts are also being deployed to increase the stability of the premixes such that less variation appears at the press. It is expected that more stable premixes can lead to a reduction in scrap rates and contribute to keeping costs low.

Technological changes in manufacturing methods and in the traditional role of powder metallurgy are developing at a fast pace. Additive manufacturing is opening new design opportunities that may see powder metallurgy extend its reach beyond the traditional press and sinter production process. It is expected that the technology will continue its growth trajectory. In the development of feedstock metals for additive manufacturing applications, water-atomized powders with custom particle size range are being considered as viable alternatives to gas-atomized and plasma-processed spherical powders. The year 2017 may see commercial introduction of water-atomized powders for several additive manufacturing technologies. *Article written by Vincent Paris, Engineer Research, Products Development.*



**Figure1.** Scanning electron microscope image of a water-atomized powder being tested for additive manufacturing applications.



**Rio Tinto Metal Powders**

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