



**Follow the Leader!**



Vania Grandi & RTFT GDPL team 2016

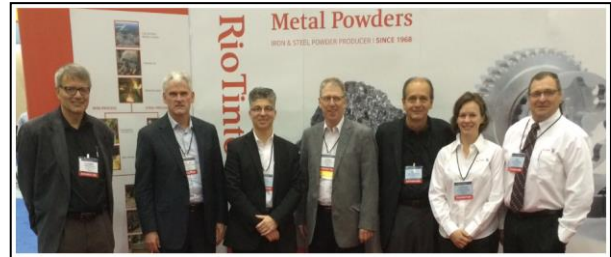
Vania Grandi, RTMP GM Metallics had the opportunity to participate in a 1,000 kilometer (625 mile) bike challenge with nine other employees of Rio Tinto and it was an incredible team building experience. The event, called Pierre Lavoie, le Grand Defi, was started by a former Rio Tinto employee eight years ago and has grown into a huge event that contributes millions of dollars to Quebec schools. Its aim is to provide funds for kids to participate in more physical activity and eat healthier because it leads to lifelong health benefits. The challenge started on June 16 in Saguenay-Lac-Saint-Jean to finish at the Olympic Stadium in Montreal on June 19. What a great example of strength and perseverance to follow!

**Jimmy Dufresne was Appointed Head of Production Department for the Powder Plant in Canada**



Since the beginning of the year, Jimmy Dufresne has led the Production Department at Rio Tinto Metal Powders. In his role, Jimmy and his team collaborate with all departments to make sure tons are produced as planned and delivered on time and on budget. Jimmy holds an MBA from UQAM University and has worked for RTFT since 1996. He has all the experience to accomplish this challenge. Do not hesitate to contact Jimmy by email at [Jimmy.Dufresne@riotinto.com](mailto:Jimmy.Dufresne@riotinto.com)

**Congress & Exhibitions**



From left to right: Vladimir Paserin, Thomas Stephenson, Carlo Coscia, Claude Gelinias, Mark Kesterholt, Christina Morin and Joel Thompson.

Thanks for visiting our staff at RTMP's booth during the annual PowderMet 2016 in Boston. It's always a pleasure to see you!

RTMP's next presence onsite will be at the World PM2016 Congress & Exhibition in Hamburg, Germany, from October 9<sup>th</sup> to 13<sup>th</sup> at booth #70. Come and visit us, we have a gift for you!

**RTMP contributed to develop TM4 New Technology Advancement of Three New SUMO MD Electric Motors**

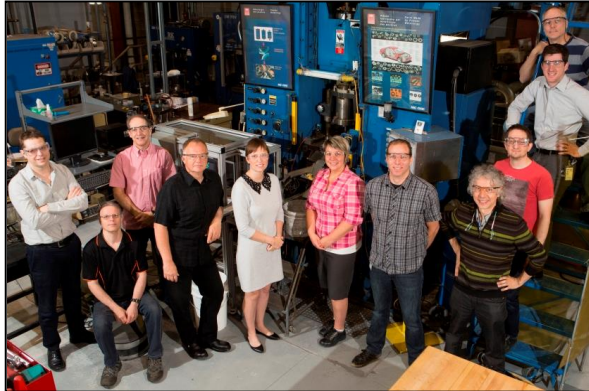
TM4, a company wholly owned by Hydro-Quebec, who designs and manufactures electric motors, generators, power electronics and control systems, introduced three new SUMOTM MD powertrain options offering an increase of up to 45% in torque and speed. This new technology was developed in house with the support of Rio Tinto Metal Powders and National Research Council. Until now, the main rotor technology found in TM4's electric motors was based on surface mounted permanent magnets. The desire to limit the use of rare-earth magnets has resulted in a technology choice that leverages the torque of TM4's external rotor design and decreases by 25% the use of rare-earth magnets. Substituting some of the magnets with soft magnetic composites (PM parts), adds up to 45% extra torque and operating speed compared with previous technology in same package dimensions. Moreover, this new design allowed a cost reduction compare to the original motor design.





» September 2016

## RTMP finds the right mix



National Research Council Canada (NRC) Team

As a major producer of metal powders in over thirty countries, Quebec-based Rio Tinto Metal Powders (RTMP) has earned its place as a world-leading supplier for the iron and steel powder industry. With products that serve the automotive, appliance, electric tool and lawn & garden industries, RTMP has a strong interest in releasing new innovations into the marketplace that meet the evolving needs of their customers. One such product is RTMP's flagship FLOMET™ mix technology, a combination of binder-treated powders that bond small additive particles to larger iron powder particles to increase the productivity of compacting presses and part-to-part consistency. In addition to improving powder flow rate, this technology also provides a safer and cleaner work environment. RTMP builds strong partnerships to help develop and market specialty mix products including a twenty-year partnership with the National Research Council (NRC). Combining resources for strong collaboration, NRC and RTMP have seen an increased demand for the FLOMET™ technology platform from customers across the globe, particularly in the creation of press/sinter structural parts for the automotive sector. As a result, the use of RTMP's proprietary technology has expanded to include warm pressing mixes, green

machining products, soft magnetic composites and environmental applications. As part of the longstanding partnership, RTMP has gained access to state-of-the-art facilities and knowledgeable experts, allowing them to expand their fields of application and advance the science of metal powders. "The success of FLOMET™ right now is strongly linked to the NRC partnership," says Rio Tinto Ferrous Products R&D Director Chantal Labrecque. The ongoing collaboration has also enabled RTMP to obtain several technology patents, including one for their highly successful line of FLOMET™ mixes.

Strategically located on the St. Lawrence River in Sorel-Tracy, Quebec, RTMP's Canadian manufacturing plant provides easy access by ship, rail and truck routes to allow a year-round gateway for its global suppliers, distributors and close collaborators. RTMP's collaboration with NRC has helped the company establish themselves as a key player in the manufacturing and development of essential end-user products for the automotive industry. *A global reach* - With a solid track record of success, it is no surprise that RTMP continues to trust NRC as an extension of their R&D team. "NRC significantly contributed to developing the second generation of these products, improving their performance and our process control," adds Chantal Labrecque. With an eye on the future and access to world-class expertise, RTMP continues to develop new technologies, which include the third generation of FLOMET™ products, an improved lubrication system and materials for soft magnetic composite applications. These activities are conducted in partnership with NRC. All with the goal of pressing forward and forging strong bonds toward the future.

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



ISO 9001

TS 16949

**Rio Tinto Metal Powders**

Sorel-Tracy (Quebec) Canada

[www.gmp-powders.com](http://www.gmp-powders.com) / [info.gmp@riotinto.com](mailto:info.gmp@riotinto.com)