



PyroGenesis Additive Confirms Production, and Orders, for Both Ti-6Al-4V Grade 23 & Grade 5 MIM Cut

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MONTREAL, QUEBEC--(Marketwired - Sept. 18, 2017) - PyroGenesis Additive, a division of PyroGenesis Canada Inc. (<http://pyrogenesis.com>) (TSX VENTURE:PYR)(OTCQB:PYRNF), a high-tech company (the "Company" or "PyroGenesis") that designs, develops, manufactures and commercializes plasma waste-to-energy systems and plasma torch products, is pleased to announce today that, further to its press release dated August 14, 2017, wherein it was announced that the Company had developed a new plasma-based atomization process to produce metal powders for 3D printers, specifically the MIM cut titanium (Ti-6Al-4V) powder Grade 5 (which for the purposes herein, we define as small fine metal powders, that can be used by metal 3D printers, typically in the 5um-25um size range), and wherein it was also announced that it seemed that the same process might make titanium MIM cut Grade 23, the Company now confirms that this process can, in fact, make titanium MIM cut Grade 23 powder in commercial quantities. Further to this, the Company is also pleased to announce that it has already received orders for samples of both Grade 5 and, most notably, Grade 23 Ti-6Al-4V MIM cut powders.

Mr. P. Peter Pascali, President and CEO of PyroGenesis, provides an overview of today's announcement in the following Q&A format:

Q. What is the attraction of MIM cut powders?

A. The use of a MIM cut powder allows improved surface finish and increased definition of the parts. MIM cut refers to a powder size traditionally intended for use in the Metal Injection Molding industry, hence the phrase "MIM". We also use this term to describe this same size cut (i.e., the finest powder size produced by plasma atomization, typically below 25um), and which we are seeing a potentially explosive demand for by metal 3D printers. The press has most recently noted the increased interest in using this fine powder by 3D printer manufactures such as Desktop Metal, Markforged and 3DEO. These new printing technologies hold the promise of much higher throughput and reduced costs compared to mainstream printers.

Of note, and where PyroGenesis Additive has applicability, is that the metal 3D printer demands for this MIM cut cannot be serviced by the powders which traditionally were used by Metal Injection Molding, as they are not pure enough.

The MIM cut powder of Ti-6Al-4V has traditionally only been available, in commercial quantities, as Grade 5. Given PyroGenesis Additive's new plasma-based process, as described in its September 12, 2017 news release, it is now able to address this market by producing extremely narrow size distributions, at significantly higher production rates, with higher yields (i.e. little to no waste), and at much lower operating costs for both Grade 5 and Grade 23 in commercial quantities.

To the best of our knowledge, we know of no other company that offers commercial quantities of Ti-6Al-4V Grade 23 MIM cut.

Once again, PyroGenesis Additive is inventing, and innovating, thereby enabling 3D printers to reach new levels.

Q. What is the difference between Grade 5 and Grade 23?

A. The primary difference between the two is oxygen content, with Grade 23 having less oxygen content than Grade 5 (i.e. maximum oxygen content of 0.13% vs 0.20%). Since MIM cut powders are smaller, there is a tendency to have increased oxygen content due to more exposed surface area.¹ Therefore, it is very difficult, in this particle range to have low oxygen content which is sometimes preferred.

Q. Why is it a challenge to make Grade 23?

A. There are two challenges in making Grade 23 MIM cut powder: 1) quality and 2) quantity.

First, quality: because of its small size and relatively high surface area, the powder tends to pick up oxygen easily. By carefully controlling the operating environment of the plasma reactor, it is possible to minimize the oxygen pickup and, consequently, the oxygen content of the final powder.

Second, quantity: plasma processes have traditionally been designed to produce relatively large powders. By allowing to shift the particle size distribution to smaller sizes, the new PyroGenesis process maximizes the amount of powder available in the MIM cut range.

Q. Can you give us an update on sample orders and shipments?

A. To date, PyroGenesis Additive has received six (6) unique sample orders, including one sample order for our Grade 23 and Grade 5 MIM cut. Of these sample orders, we have currently shipped four (4).

Q. So, in conclusion, when will this success translate into more substantial orders?

A. It is important to put these sample orders in context. We never expected to receive any sample orders during the ramp-up phase. It is, as you can imagine, very difficult to project any sales from these sample orders. However, I think it is safe to say that given the amount of interest, the timing, and the type of clients we are seeing, we can expect that some future long-term contracts might be in the very near future. If that is true, one can well imagine that the impact on the Company could be so significant that whether that happens in a week, a month, or six (6) months, the difference in timing is a drop in the bucket when compared to the commercial implications.

I can say however, that these sample orders have translated into company visits; both to our facilities and to theirs... and remember this is all during ramp-up.

As previously announced, PyroGenesis Additive will be exhibiting at this year's TCT show in Birmingham, England (Sept 26 - 28). The TCT Show is one of the world's leading events dedicated to 3D printing, Additive Manufacturing and product development as over 250 exhibitors are showcased to

more than 7,000 attendees. We invite those who will be attending the show to stop by our booth# C61 and speak with our sales team: Mr. Massimo Dattilo, VP, PyroGenesis Additive, and Mr. Alex Pascali, Sales Manager, PyroGenesis Additive.

Separately, PyroGenesis announces today that it will be presenting at The MicroCap Conference on October 5, 2017, at the Essex House in New York City. The MicroCap Conference is an exclusive event for investors who specialize in small and microcap stocks. Mr. Pascali will provide an overview of the Company's business, during a live presentation and has scheduled several one-on-one meetings with investors who are registered to attend the conference. This event is exclusive to portfolio managers, analysts, and private investors.

About PyroGenesis Canada Inc.

PyroGenesis Canada Inc. is the world leader in the design, development, manufacture and commercialization of advanced plasma processes. We provide engineering and manufacturing expertise, cutting-edge contract research, as well as turnkey process equipment packages to the defense, metallurgical, mining, advanced materials (including 3D printing), oil & gas, and environmental industries. With a team of experienced engineers, scientists and technicians working out of our Montreal office and our 3,800 m² manufacturing facility, PyroGenesis maintains its competitive advantage by remaining at the forefront of technology development and commercialization. Our core competencies allow PyroGenesis to lead the way in providing innovative plasma torches, plasma waste processes, high-temperature metallurgical processes, and engineering services to the global marketplace. Our operations are ISO 9001:2008 certified, and have been ISO certified since 1997. PyroGenesis is a publicly-traded Canadian company on the TSX Venture Exchange (Ticker Symbol: PYR) and on the OTCQB Marketplace (Ticker Symbol: PYRNF). For more information, please visit www.pyrogenesis.com.

This press release contains certain forward-looking statements, including, without limitation, statements containing the words "may", "plan", "will", "estimate", "continue", "anticipate", "intend", "expect", "in the process" and other similar expressions which constitute "forward-looking information" within the meaning of applicable securities laws. Forward-looking statements reflect the Company's current expectation and assumptions, and are subject to a number of risks and uncertainties that could cause actual results to differ materially from those anticipated. These forward-looking statements involve risks and uncertainties including, but not limited to, our expectations regarding the acceptance of our products by the market, our strategy to develop new products and enhance the capabilities of existing products, our strategy with respect to research and development, the impact of competitive products and pricing, new product development, and uncertainties related to the regulatory approval process. Such statements reflect the current views of the Company with respect to future events and are subject to certain risks and uncertainties and other risks detailed from time-to-time in the Company's ongoing filings with the securities regulatory authorities, which filings can be found at www.sedar.com, or at www.otcmarkets.com. Actual results, events, and performance may differ materially. Readers are cautioned not to place undue reliance on these forward-looking statements. The Company undertakes no obligation to publicly update or revise any forward-looking statements either as a result of new information, future events or otherwise, except as required by applicable securities laws.

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SOURCE PyroGenesis Canada Inc.

¹ "Titanium Powder Metallurgy: Science Technology and Application", Ma Quian and Francis H. Froes editors, Elsevier, 2015, 2015, p.340.

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