PyroGenesis Signs Energy Transition Contract with Leading Global Steelmaker to Consider Plasma Use in Primary Steel Production

April24, 2024

MONTREAL, April 24, 2024 (GLOBE NEWSWIRE) -- PyroGenesis Canada Inc. (http://pyrogenesis.com) (TSX: PYR) (OTCQX: PYRGF) (FRA: 8PY), a high-tech company (the “Company” or “PyroGenesis”) that designs, develops, manufactures and commercializes advanced plasma processes and sustainable solutions which are geared to reduce greenhouse gases (GHG) and address environmental pollutants, is pleased to announce that it has signed a small contract with one of the five largest steelmakers in the world to assess the applicability of PyroGenesis’ fully electric plasma torches for use in the client’s manufacturing facilities as a primary heat source in the steelmaking process, specifically during the production of direct reduced iron (DRI) for use in electric arc furnaces (EAF). The client’s name shall remain anonymous for competitive and confidentiality reasons.

The client, an overseas entity with manufacturing facilities on five continents, is one of the five largest companies of its kind.

The project agreement outlines the initial steps for providing plasma-specific data and analysis in support of the client’s energy-transition goals. The first step is a feasibility study to gather initial data for evaluating the potential use of plasma in the client’s factories as a process heating source for the DRI process. The duration of the study is approximately 60 days, commencing in April 2024.

Once the study is completed, and contingent on the results, the client has indicated that it may proceed to a live experimental validation study within their facilities, using PyroGenesis’ plasma torches, as per a separate to-be-negotiated agreement.

“This agreement acknowledges the continued interest in our solutions by the iron and steel industry. Combined with the advances we are making in developing a patented plasma solution for use in iron ore pelletization, the project announced today represents yet another example of the fast-growing shift taking place across multiple heavy industries which are all being challenged to decarbonize,” said P. Peter Pascali, President and CEO of PyroGenesis. “Steelmaking is an industry where we continue to make inroads where, obviously, the potential is enormous. This particular client is considering plasma as a heat source further down the value chain, and we are proud that our electric plasma torches are under serious consideration as part of their commitment to change in such a major process step.”

The client’s goal is to understand how plasma can be used during the reduction step of iron ore, where oxygen is removed from iron ore pellets or powders to convert the raw ore into a metallic state, thereby creating “sponge iron” that is then added to an EAF for processing into steel. The DRI method for ore reduction for use in EAF was originally developed to overcome some of the challenges of the traditional blast furnace method, including the high costs of capital investment in an integrated steel mill, limited supply in some regions of the coking coal required by blast furnaces, and perhaps most importantly, the environmental impact that blast furnace methods can have.[i]

The Company’s development of plasma torches is part of the Company’s three-tiered solution ecosystem that aligns with economic drivers that are key to global heavy industry. Plasma torches for use in process heating and industrial furnaces within manufacturing facilities is part of the Energy Transition & Emission Reduction tier, where fuel switching to the Company’s electric-powered plasma torches helps heavy industry reduce fossil fuel use and greenhouse gas emissions.

About PyroGenesis Canada Inc.

PyroGenesis Canada Inc., a high-tech company, is a proud leader in the design, development, manufacture and commercialization of advanced plasma processes and sustainable solutions which reduce GHG and are economically attractive alternatives to conventional “dirty” processes. PyroGenesis has created proprietary, patented and advanced plasma technologies that are being vetted and adopted by multiple multibillion dollar industry leaders in four massive markets: iron ore pelletization, aluminum, waste management, and additive manufacturing. With a team of experienced engineers, scientists and technicians working out of its Montreal office, and its 3,800m^2 and 2,940m^2 manufacturing facilities, PyroGenesis maintains its competitive advantage by remaining at the forefront of technology development and commercialization. The operations are ISO 9001:2015 and AS9100D certified, having been ISO certified since 1997. For more information, please visit: www.pyrogenesis.com.

Cautionary and Forward-Looking Statements

This press release contains “forward-looking information” and “forward-looking statements” (collectively, “forward-looking statements”) within the meaning of applicable securities laws. In some cases, but not necessarily in all cases, forward-looking statements can be identified by the use of forward-looking terminology such as “plans”, “targets”, “expects” or “does not expect”, “is expected”, “an opportunity exists”, “is positioned”, “estimates”, “intends”, “assumes”, “anticipates” or “does not anticipate” or “believes”, or variations of such words and phrases or state that certain actions, events or results “may”, “could”, “would”, “might”, “will” or “will be taken”, “occur” or “be achieved”. In addition, any statements that refer to expectations, projections or other characterizations of future events or circumstances contain forward-looking statements. Forward-looking statements are not historical facts, nor guarantees or assurances of future performance but instead represent management’s current beliefs, expectations, estimates and projections regarding future events and operating performance.

Forward-looking statements are necessarily based on a number of opinions, assumptions and estimates that, while considered reasonable by the Company as of the date of this release, are subject to inherent uncertainties, risks and changes in circumstances that may differ materially from those contemplated by the forward-looking statements. Important factors that could cause actual results to differ, possibly materially, from those indicated by the forward-looking statements include, but are not limited to, the risk factors identified under “Risk Factors” in the Company’s latest annual information form, and in other periodic filings that the Company has made and may make in the future with the securities commissions or similar regulatory authorities, all of which are available under the Company’s profile on SEDAR+ at www.sedarplus.ca. These factors are not intended to represent a complete list of the factors that could affect the Company. However, such risk factors should be considered carefully. There can be no assurance that such estimates and assumptions will prove to be correct. You should not place undue reliance on forward-looking statements, which speak only as of the date of this release. The Company undertakes no obligation to publicly update or revise any forward-looking statement, except as required by

applicable securities laws.

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[i] https://www.mckinsey.com/industries/metals-and-mining/our-insights/decarbonization-challenge-for-steel