

PyroGenesis Canada Inc.

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PyroGenesis Canada reports success with PUREVAP project, which can reduce cost of making silicon metal

PyroGenesis Canada Inc (CVE:PYR) (OTCMKTS:PYRNF) reported more success on its PUREVAP project, which it confirmed is a process, which can "significantly" reduce the cost of making silicon metal.

The firm is collaborating on the project with HPQ Silicon Resources Inc (CVE:HPQ), a group focused on becoming the lowest cost producer of the metal.

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The process is patent pending and allows the transformation and purification of quartz (SiO₂) into metallurgical grade silicon metal (Mg Si) at prices that show its clean energy potential.

The PUREVAP method uses low cost highly reactive carbon sources, converting them into high purity silicon metal.

In comparison, conventional processes currently available use expensive higher purity carbon sources, said PyroGenesis Canada in a statement on Monday.

"Depending on the producer, making metallurgical grade silicon metal (98% to 99.5% silicon) in 2018 with a conventional process can cost between US\$1,450 and US\$2,000 per metric tonne," the firm told investors.

And more than 40% of that cost is directly attributable to the plus six metric tonnes of raw material (silicon dioxide and reductant) needed to produce 1 MT of metallurgical grade silicon metal, it explained.

"The carbon reductant used in those processes accounts for 30% of total cost. From that cost, 10% accounts for woodchip, and 20% for carbon, the latter being twice as expensive."

Using less feedstock

Having a process that uses less feedstock to make 1 MT of metallurgical grade silicon metal and allows the substitution of costly high purity reductant with readily available lower cost material would make the process more economically viable, and that is what PUREVAP offers, the company said.

Testing showed that GEN2 PUREVAP was able to produce commercially viable 99.73% silicon with 0.166% iron and 0.0424% aluminium, which is chemical grade metallurgical grade silicon metal.

"Being able to produce chemical grade metallurgical grade silicon underscores the versatility of the PUREVAP process and, as such, we continue to de-risk the project", said Pierre Carabin, the chief technology officer and chief strategist of PyroGenesis.

Price: 0.47

Market Cap: \$65.76 m

1 Year Share Price Graph



Share Information

Code: PYR

Listing: TSX-V

52 week High Low
0.77 0.455

Sector: Manufacturing & engineering

Website: www.pyrogenesis.com

Company Synopsis:

PyroGenesis Canada Inc. (TSX-V: PYR • OTCQB: PYRNF • FRA: 8PY), a high-tech company, is the world leader in the design, manufacture and commercialization of advanced plasma processes.

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Silicon metals is used in solar panels and electronic semi-conductors.

PyroGenesis a high-tech company that designs, develops, manufactures and commercializes advanced plasma processes. Its offerings are used in the defense, metallurgical, mining, advanced materials (including 3D printing), oil & gas, and environmental industries.

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