ASX ANNOUNCEMENT

6 April 2020

Patent for revolutionary lithium extraction technology granted to Lithium Australia

HIGHLIGHTS

- Lithium Australia has received a 'Certificate of Grant' from IP Australia for its LieNA® lithium processing technology patent.
- Patent grant now provides legal protection in Australia for 20 years over the LieNA® technology.
- LieNA® significantly improves metallurgical recovery of lithium from fine and contaminated spodumene.

Background

Hard-rock lithium production has a major sustainability issue; that is, poor recoveries of spodumene, from the mine onwards to the production of lithium chemicals. The LieNA® process developed by Lithium Australia NL (ASX: LIT) ('Lithium Australia' or 'the Company') can improve recoveries, reduce the footprint of mining operations, lessen environmental impacts and enhance sustainability. LieNA® is the subject of a co-funded government research project aimed at providing lithium producers with improved ESG (environmental, social and governance) performance.

Proprietary technology

Lithium Australia continues to work towards commercialisation of its proprietary LieNA® technology for the improved recovery of lithium from spodumene, the most common hard-rock source of lithium for the production of critical battery chemicals.

While the recovery rate of lithium from conventional spodumene beneficiation varies, it can be as low as 50% owing to the concentrate offtake specification constraints applied by the current generation of lithium chemical producers, all of which commence the process by roasting the concentrate. LieNA® (which, importantly, does not require a roasting stage) can recover lithium from the fine and contaminated spodumene that otherwise reports to waste or tailings streams during current concentration processes.

LieNA® consists of a caustic digestion process followed by acid leaching to recover the desired lithium chemical. Because no roasting is required, LieNA® is a more environmentally friendly solution to processing spodumene. Together, Lithium Australia and ANSTO (the Australian Nuclear Science and Technology Organisation) have completed extensive test work on the LieNA® technology, with final recovery of lithium reported as greater than 85%.

With its ability to process fine and contaminated spodumene that would otherwise go to waste, LieNA® has the potential to not only expand current hard-rock lithium resources, thereby reducing mining costs, but also enhance the sustainability of spodumene production and the subsequent manufacture of lithium chemicals.



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Patent grant

The Commissioner of Patents has granted Patent Number 2017306576 with priority details 2016903041 effective from 2 August 2016. As this is a standard patent, Lithium Australia now has long-term protection and control over the invention for up to 20 years.

Comment from Lithium Australia managing director Adrian Griffin

"Lithium Australia continues its emphasis on developing novel solutions to lithium processing problems. Commercialisation of the LieNA® process is an opportunity to improve the sustainability of the lithium-ion battery industry. We see an immediate application for it in Australia, which produces well over half the world's lithium requirements and nearly all of the spodumene needed; however, significant quantities of the latter never make it into the process supply chain. The problem starts with the very nature of the mineral and the processes currently used to recover lithium from it. That problem may be solved with more efficient processing – and that remains our focus. LieNA® could help mitigate much of the waste in the lithium industry."

Authorised for release by the Board.

Adrian Griffin

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About Lithium Australia NL

Lithium Australia aims to ensure an ethical, sustainable and efficient supply of energy metals to the battery industry (enhancing energy security in the process) by creating a circular battery economy. The recycling of old lithium-ion batteries to new is intrinsic to this plan. While rationalising its portfolio of lithium projects/alliances, the Company continues to develop its proprietary extraction processes for the conversion of *all* lithium silicates (including mine waste), and of unused fines from spodumene processing, to lithium chemicals. From those chemicals, Lithium Australia plans to produce advanced components for the battery industry globally, and for stationary energy-storage systems within Australia. By uniting resources and innovation, the Company seeks to vertically integrate lithium extraction, processing and recycling.

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