

20 October 2021

LITHIUM REFINERY CLEANTECH PROGRESSES TO NEXT STAGE OF INTELLECTUAL PROPERTY PROTECTION

Emerging mineral processing technology company, Zeotech Limited (ASX: ZEO, “Zeotech” or “the Company”) is pleased to advise that it has filed under the Patent Cooperation Treaty (“PCT”) to protect and commercialise the intellectual property (“IP”) associated with mineral processing technology for the manufacturing (synthesising) of zeolites from lithium process by-product. By filing PCT, an applicant can subsequently seek patent protection in over 150 countries¹.

The Patent Cooperation Treaty enables Zeotech to seek international patent protection and extends the Company’s IP portfolio to include additional steps applied to its novel mineral processing technology for the manufacturing (synthesising) of zeolites, specifically utilising lithium process by-product as a feedstock.

In August 2020, the Company undertook a dedicated research program at The University of Queensland’s School of Chemical Engineering (“UQ”), utilising mine tailings and process residues as a feedstock under the conditions of Zeotech’s patent-pending technology to produce high value zeolites. During the research program, UQ developed a novel process (flowsheet) for the manufacture of synthetic zeolites from lithium process by-product² and a provisional patent application for the manufacturing (synthesising) of zeolites from lithium process by-product was lodged on 21 October 2020³.

On 26 May 2021, Zeotech advised after early commercial interest in the potential to apply the Company’s proprietary mineral processing technology as a cleantech solution for the lithium refinery industry, the decision was made to expand the current pilot plant program to include lithium process by-product (leached spodumene). UQ is currently undertaking bench-scale optimisation of two separate leached spodumene samples from large lithium refinery participants as part of the dual-feed pilot program. The decision to progress with PCT on lithium by-product process expands the Company’s IP portfolio and further enhances Zeotech’s cleantech proposition.

The filing of PCT for lithium by-product IP follows on from recent 11 October 2021 announcement⁴ that the Company was progressing to the National Phase of the patent granting procedure associated with mineral processing technology for the manufacturing (synthesising) of zeolites, after receiving an International Preliminary Report on Patentability, under Chapter II of the PCT (“IPRP”) that contained positive findings as to the novelty and inventiveness of the Company’s 100% owned patent application.

The IPRP(II) was especially promising as the International Preliminary Examination Authority examiner, expressed a view that all of the 26 claims in the PCT application forming the Company’s core proprietary technology were both novel and inventive.

¹ https://www.wipo.int/pct/en/pct_contracting_states.html

² ASX release dated 28/10/2020 “Commercial Grade Zeolite Produced from Li Process Residue”

³ ASX release dated 21/10/2020 “Patent Application Lodged Lithium Process Residue to Zeolite”

⁴ ASX release dated 11/10/2021 “Zeolite Technology Patent Application Enters National Phase”

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Zeotech, Managing Director Peter Zardo commented:

“Zeotech is developing a world’s first process for the low-cost manufacture of synthetic zeolites and values the dedication and support of the team at The University of Queensland’s School of Chemical Engineering, throughout the development of the Company’s proprietary technology.

The filing of PCT specific to utilising lithium process by-product as a feedstock to produce synthetic zeolites, enhances Zeotech’s IP position and cleantech proposition.

The Company is also buoyed by the recent positive view expressed by the International Preliminary Examination Authority examiner, as to the novelty and inventiveness of its core proprietary technology, offering positive direction, as it moves into the National Phase of the patent protection process.”

This Announcement has been approved by the Board.

- End -

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About Zeotech

Zeotech Limited (ASX: ZEO) holds proprietary mineral processing technology developed by The University of Queensland, for the low-cost production of advanced materials ‘synthetic zeolites’ and aims to utilise their unique properties for a sustainable future.

The strategy focuses on the low-cost manufacture of molecular sieve synthetic zeolites for global markets. The Company is developing innovative environmental management solutions, which include cleantech for lithium refineries to commercially manage by-product residue and developing economically viable carbon capture and conversion solutions, underpinned by low-cost ‘adsorbents and catalysts’ manufactured using Zeotech’s patent-pending technology.

About Zeolites

Synthetic zeolites are manufactured aluminosilicate minerals with a sponge-like structure, made up of tiny pores (frameworks) that make them useful as catalysts or ultrafine filters. They are commonly known as molecular sieves and can be designed to selectively adsorb molecules or ions dependant on their unique construction.

Zeolites play an important role in a cleaner and safer environment.

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- zeolites are an effective substitute for harmful phosphates in powder detergent, now banned in many parts of the world because of blue green algae toxicity in waterways;
- as catalysts, zeolites increase process efficiencies = decrease in energy consumption;
- zeolites can act as solid acids and reduce the need for more corrosive liquid acids;
- zeolites adsorbent capabilities see them widely used in water treatment i.e., heavy metal removal including those produced by nuclear fission; and
- as redox catalyst sorbents, zeolites can help remove exhaust gases and CFC's.

Forward-looking Statements

This release may contain certain forward-looking statements with respect to matters including but not limited to the financial condition, results of operations and business of Zeotech and certainty of the plans and objectives of Zeotech with respect to these items.

These forward-looking statements are not historical facts but rather are based on Zeotech current expectations, estimates and projections about the industry in which Zeotech operates, and its beliefs and assumptions.

Words such as "anticipates," "expects," "intends," "plans," "believes," "seeks," "estimates", "guidance" and similar expressions are intended to identify forward looking statements and should be considered an at-risk statement.

Such statements are subject to certain risks and uncertainties, particularly those risks or uncertainties inherent in the process of developing technology and in the endeavour of building a business around such products and services.

These statements are not guarantees of future performance and are subject to known and unknown risks, uncertainties, and other factors, some of which are beyond the control of Zeotech, are difficult to predict and could cause actual results to differ materially from those expressed or forecasted in the forward-looking statements.

Zeotech cautions shareholders and prospective shareholders not to place undue reliance on these forward-looking statements, which reflect the view of Zeotech only as of the date of this release. The forward-looking statements made in this announcement relate only to events as of the date on which the statements are made. Zeotech will not undertake any obligation to release publicly any revisions or updates to these forward-looking statements to reflect events, circumstances or unanticipated events occurring after the date of this announcement except as required by law or by any appropriate regulatory authority.