ASX RELEASE

3 July 2020

PROGRESS WITH TOPAZ MULLITE FIBRE RESEARCH AT THE UNSW

Chase Mining Corporation Limited ("CML" or "The Company") provides the following update on the collaborative topaz research project being undertaken with the University of New South Wales ("UNSW") by its wholly owned subsidiary Topfibre Pty Ltd as the industry partner.

The most recent report from the UNSW contains further evidence of proof-in-concept progress in the production of mullite fibre from Topaz project and other advances made, including metal infiltration of mullite preforms.

Attached below is a summary of the report as supplied by Professor Charles C Sorrell and the team of researchers of these results.

Compilation of data for patent application/s is ongoing.

No further work sitework has been undertaken to progress the MLA due to COVID 19 restrictions.

Authorisation

The provision of this announcement to ASX has been authorised by the Board of directors of Chase Mining Corporation Limited.

Dr Leon Pretorius

Executive Chairman and CEO

3 July 2020

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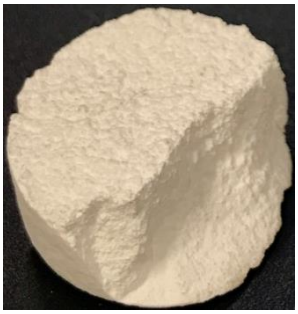
UNSW-CHASE MINING RESEARCH PROGRAM
SUMMARY PROGRESS REPORT 15

23 January 2020 – 30 June 2020

Topics

1) Fabrication of porous mullite preforms



This work investigated the formation of (a) large-scale porosity with the use of three polymers, (b) fine-scale porosity with the use of flake graphite, and (c) no filler. This effort was key to the eventual success in achieving essentially full metal penetration of the compacts. It also was aimed at examination of the most effective means of controlling the porosity so that the preforms alone could be manufactured directly for applications in (a) catalytic convertors and (b) filters. These applications are feasible because a striking feature about the preforms is that, despite having the porosity of loose powder, they are so strong that, as shown in the figure to the right, they exhibit the conchoidal fracture characteristic of fully dense solids.

2) Metal infiltration of porous mullite preforms

Preliminary work on the inducement of porosity with the use of tyre rubber and polypropylene as fillers confirmed the potential to achieve extensive infiltration of mullite preforms. This work was successful, as demonstrated by experimentation:

1 May 2020	Feasibility of infiltration of mullite preforms
5 June 2020	Feasibility of extensive infiltration of mullite preforms with large-scale porosity
10 June 2020	Feasibility of extensive infiltration of mullite preforms with fine-scale porosity

The figure to the right shows the microstructure of the first preform to exhibit extensive infiltration. These composites, which consist of interpenetrating networks of both mullite and aluminium alloy, have potential applications in friction pads for vehicular transport, impact pads for mining, and body armour for the military.

3) Milling, mixing, and blending of topaz

This work aimed at controlling the porosity in order to engineer the microstructure so that the preforms would be in the form of bulk shapes suitable for (a) liquid metal infiltration and (b) permeability to gases and liquids.

This work confirmed that the porosity and general pore size could be manipulated but the method for blending of topaz and fillers was not adequate to allow systematic control of the microstructure. Achievement of this goal is likely to require investigation of particle size classification, wet-mixing, and use of different calcining temperatures.

Future Work

For commercialisation purposes, the following parameters must be investigated systematically:

(a) new Al alloys;

(b) mixing techniques;

(c) porosity/pore size distribution;

(d) calcining temperature*;

(e) graphite content;

(f) infiltration temperature; and,

(g) infiltration time.

*The study of calcining temperature will include continuing efforts to coarsen the mullite whiskers into fibres.

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