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COVER LETTER

Dear Prof. Ljubiša Balanovic, dear Reviewers in *Journal of Mining and Metallurgy, Section B: Metallurgy*,

We would like to submit the enclosed manuscript entitled “**Thermodynamic re-assessment of the Al-Sn-Zn ternary system**” by *Ting Cheng, and Lijun Zhang* for possible publication in **Journal of Mining and Metallurgy, Section B: Metallurgy**.

In this paper, a thermodynamic re-assessment of the Al-Sn-Zn ternary system was performed by means of the CALculation of PHase Diagram (CALPHAD) approach. The thermodynamic descriptions of the binary Al-Sn, Al-Zn and Sn-Zn systems from the literature were directly adopted, and the newly reported experimental phase equilibria, enthalpies of mixing and activities of Al in the ternary liquid phase were taken into account. A set of self-consistent thermodynamic parameters for the ternary Al-Sn-Zn system were finally obtained. A comprehensive comparison between the presently calculated phase equilibria/thermodynamic properties and the experimental data indicates that the present thermodynamic descriptions of the ternary Al-Sn-Zn system show very good agreement with most of the experimental data. The further direct comparison with the calculated results due to the previous assessment demonstrates that a significant improvement was achieved by the present assessment though fewer ternary interaction parameters were utilized.

No conflict of interest exists in the submission of this manuscript, and the manuscript is approved by all authors for publication. I would like to declare on behalf of my co-authors that the work described was original research that has not been published



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previously, and not under consideration for publication elsewhere, in whole or in part.

We deeply appreciate your consideration of our manuscript, and we look forward to receiving comments from the reviewers. Correspondence and phone calls about this manuscript should be directed to Prof. Dr. Lijun Zhang at the following address, phone, fax number and E-mail address:

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Thank you so much for your consideration!

Best wishes!

Sincerely,

A handwritten signature in blue ink that reads "Lijun Zhang".