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| Book Name: | **Proceedings of the 8th International Conference on Solidification and Gravity** |
| Manuscript Number: | **Ms\_BPR\_3590.2** |
| Title of the Manuscript: | **Consideration of the timing effect of dendrite pinch-off on dendrite fragmentation during directional solidification of superalloys** |
| Type of the Article | **BOOK CHAPTER** |

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| PART 1: Review Comments | | |
| Compulsory REVISION comments | Reviewer’s comment | Author’s Feedback *(Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)* |
| **Please write a few sentences regarding the importance of this manuscript for the scientific community. Why do you like (or dislike) this manuscript? A minimum of 3-4 sentences may be required for this part.** | This study provides valuable contributions to understanding dendrite fragmentation during directional solidification, particularly by introducing a novel consideration of pinch-off timing. With some refinements in clarity, methodology description, and practical implications, this work has strong potential for advancing both theoretical models and industrial casting processes for superalloys. |  |
| **Is the title of the article suitable?**  **(If not please suggest an alternative title)** | **Yes** |  |
| Is the abstract of the article comprehensive? Do you suggest the addition (or deletion) of some points in this section? Please write your suggestions here. | **Abstract is fine** |  |
| **Are subsections and structure of the manuscript appropriate?** | **Yes** |  |
| **Please write a few sentences regarding the scientific correctness of this manuscript. Why do you think that this manuscript is scientifically robust and technically sound? A minimum of 3-4 sentences may be required for this part.** | The study presents a compelling case for considering the timing of dendrite pinch-off in predicting fragmentation events. However, it would be helpful to expand on why previous models have overlooked this factor and how your approach improves upon existing methodologies. |  |
| **Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.** | **Yes** |  |
| Minor REVISION commentsIs the language/English quality of the article suitable for scholarly communications? |  |  |
| Optional/General comments | The manuscript briefly touches upon flow-driven mechanisms but could delve deeper into how the timing effect modifies these processes. Does the timing effect influence one mechanism more than the other? Furthermore, it would be interesting to explore whether certain alloy compositions or solidification conditions make one mechanism more dominant over another. |  |

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| **PART 2:** | | |
|  | **Reviewer’s comment** | **Author’s comment** *(if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)* |
| **Are there ethical issues in this manuscript?** | *(If yes, Kindly please write down the ethical issues here in details)* |  |

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| **Reviewer Details:** | |
| Name: | **VijayKashimatt M G** |
| Department, University & Country | **The National Institute of Engineering, Mysuru, India** |