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| Book Name: | [**Chemical and Materials Sciences: Research Findings**](https://www.bookpi.org/bookstore/product/chemical-and-materials-sciences-research-findings-vol-1/) |
| Manuscript Number: | **Ms\_BPR\_6099** |
| Title of the Manuscript: | **Post-Processing Heat Treatment of LPBF 316L Steel: Influence on Mi-crostructure-Properties Evolution** |
| Type of the Article | **Book Chapter** |

**Special note:**

**A research paper already published in a journal can be published as a Book Chapter in an expanded form with proper copyright approval.**

**Source Article:**

**This chapter is an extended version of the article published by the same author(s) in the following journals.**

**Materials, 18(5), 1102, 2025.**

**Available:** [**https://doi.org/10.3390/ma18051102**](https://doi.org/10.3390/ma18051102)

**Materials, 15(6), 684, 2025.**

**Available:** [**https://doi.org/10.3390/met15060684**](https://doi.org/10.3390/met15060684)

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| PART 1: Comments | | |
|  | Reviewer’s comment **Artificial Intelligence (AI) generated or assisted review comments are strictly prohibited during peer review.** | 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. A minimum of 3-4 sentences may be required for this part.** | The introduction is brefily described that the corrosion resistance is least affected at 1050 oC but remains inferior to the as-built state. Prestraining (0.12 plastic strain) increases YTS by 1.2-1.7 times (to 690-699 MPa) and ultimate tensile strength by ~1.2 times (762-770 MPa) but reduces ductility by 1.5 times. Subsequent annealing at 900-1050 oC induces recovery and partial recrystallization, restoring ductility and achieving a strength-ductility product of 40.3 GPa·%, though prior thermal stabilization hinders recrystallization. |  |
| **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. | Yes |  |
| **Is the manuscript scientifically, correct? Please write here.** | Yes |  |
| **Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.**  **-** | Yes. It is necessary to give a generalized overview of the state of the issue under consideration and provide relevant bibliographic references. Based on the review, the conclusion of the Introduction should briefly state the relevance of the study and formulate a specific aim of the work. |  |
| Is the language/English quality of the article suitable for scholarly communications? | Yes |  |
| Optional/General comments |  |  |

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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)* |  |

**Reviewer details:**

**Vinay Kumar Pal, India**