

Review Form 3

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|--------------------------|--|
| Journal Name:            | Journal of Materials Science Research and Reviews  |
| Manuscript Number:       | Ms_JMSRR_130298  |
| Title of the Manuscript: | MODELLING OF SURFACE ROUGHNESS AND DELAMINATION IN DRILLING PB PANELS WITH COATED CARBIDE SPADE DRILLS -RSM APPROACH |
| Type of the Article      | Original Research Article  |

PART 1: 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. A minimum of 3-4 sentences may be required for this part. |   |  |
| Is the title of the article suitable? (If not please suggest an alternative title)   | Needs revisions   | Title is suitable to the article.<br>No need of alternative title.   |
| 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.      | Needs revisions   | Revision done. Attached as revised manuscript  |
| Is the manuscript scientifically, correct? Please write here.  | <div><div>□</div><div>Model development for surface roughness and delamination: A mathematical model was developed to predict surface roughness and delamination during drilling of PB panels using Response Surface Methodology (RSM).</div></div> <div><div>□</div><div>Factors affecting response variables: The study investigated the influence of feed rate and spindle speed on surface roughness and delamination.</div></div> <div><div>□</div><div>RSM analysis: Analysis of Variance (ANOVA) was employed to validate the developed models. The high coefficient of determination (R2) indicated a good fit between the model and experimental data.</div></div> <div><div>□</div><div>Key findings: Feed rate was identified as the most significant factor affecting both surface roughness and delamination. Surface roughness decreased with increasing spindle speed and increased with increasing feed rate. Delamination followed a similar trend.</div></div> <div><div>□</div><div>Further validation: The verification experiments confirmed the accuracy of the model in predicting surface roughness within acceptable limits.</div></div> | Revised manuscript is attached as per reviewer comments.<br>Figure 13 is attached  |
| Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.                              | Needs improvements  | Improved and revised manuscript submitted.   |

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| Is the language/English quality of the article suitable for scholarly communications? | Grammer check needed   | Grammer checked   |
| <u>Optional/General</u> comments  | <p>Model development for surface roughness and delamination: A mathematical model was developed to predict surface roughness and delamination during drilling of PB panels using Response Surface Methodology (RSM).</p> <p>Factors affecting response variables: The study investigated the influence of feed rate and spindle speed on surface roughness and delamination.</p> <p>RSM analysis: Analysis of Variance (ANOVA) was employed to validate the developed models. The high coefficient of determination (R2) indicated a good fit between the model and experimental data.</p> <p>Key findings: Feed rate was identified as the most significant factor affecting both surface roughness and delamination. Surface roughness decreased with increasing spindle speed and increased with increasing feed rate. Delamination followed a similar trend.</p> <p>Further validation: The verification experiments confirmed the accuracy of the model in predicting surface roughness within acceptable limits.</p> | Revised manuscript is attached as per reviewer comments.<br>Figure 13 is attached |

PART 2:

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|  | 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? | <u>(If yes, Kindly please write down the ethical issues here in details)</u> |   |