

Review Form 3

Journal Name:	Journal of Engineering Research and Reports
Manuscript Number:	Ms_JERR_120237
Title of the Manuscript:	Multi-dimensional study on corrosion resistance of inorganic phosphate coatings
Type of the Article	

Review Form 3

PART 1: Review Comments

Compulsory REVISION comments	Reviewer's comment	Author's Feedback <i>(Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)</i>
<p>Please write few sentences regarding the importance this manuscript for scientific community. Why do you like (or dislike) this manuscript? Minimum 3-4 sentences may be required for this part.</p>	<p>This manuscript is significant for the scientific community as it provides an analysis of the resistance to corrosion of inorganic phosphate coatings under various conditions. I appreciate the detailed methodology and rigorous testing employed in the study, which enhances the reliability of the results. However, a more in-depth discussion on the underlying mechanisms of coating degradation could further enrich the manuscript. Additionally, the manuscript would benefit from a deeper scientific analysis of the results.</p>	
<p>Is the title of the article suitable? (If not please suggest an alternative title)</p>	<p>The title "Multi-dimensional study on corrosion resistance of inorganic phosphate coatings" is quite descriptive and appropriate for the content of the manuscript. However, to make it more precise and reflective of the study's specific focus, a slightly modified title could be suggested:</p> <p>"Comprehensive analysis of corrosion resistance in high-temperature and marine environments of TW-7 and AHP inorganic phosphate coatings".</p>	
<p>Is the abstract of the article comprehensive? Do you suggest addition (or deletion) of some points in this section? Please write your suggestions here.</p>	<p>The abstract of the article provides a detailed overview of the study, including the materials, methods, and results. However, it can be streamlined to improve clarity and readability. It could be shortened by focusing on the most critical points. Some sentences are complex and could be simplified for better understanding.</p>	
<p>Are subsections and structure of the manuscript appropriate?</p>	<p>The subsections and structure of the manuscript appear to be appropriate and well-organized.</p>	
<p>Please write few sentences regarding the scientific correctness of this manuscript. Why do think that this manuscript is scientifically robust and technically sound? Minimum 3-4 sentences may be required for this part.</p>	<p>The manuscript appears to be scientifically robust and technically sound due to its systematic approach to investigating the corrosion resistance of inorganic phosphate coatings. The experimental design is thorough, including multiple tests (dry hot air, synthetic seawater spray, and heat-resistant/synthetic seawater salt spray cycles) that comprehensively evaluate the coatings under various conditions. The use of appropriate analytical techniques, such as scanning electron microscopy (SEM), energy dispersive X-ray spectroscopy (EDX), and X-ray diffraction (XRD), ensures accurate and detailed characterization of the coatings. Additionally, the results are discussed with a connection to the experimental data, demonstrating a correlation between the observed phenomena and the coatings' chemical and physical properties. However, a more in-depth discussion on the underlying mechanisms of coating degradation could further enrich the manuscript.</p>	
<p>Are the references sufficient and recent? If you have suggestion of additional references, please mention in the review form.</p>	<p>It would be advisable to update the references to ensure that the manuscript is supported by recent and relevant studies in the field.</p>	

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Minor REVISION comments Is language/English quality of the article suitable for scholarly communications?	Yes, the language quality of the article is generally suitable for scholarly communications. However, during the review process, several grammatical errors were identified that should be corrected to enhance clarity and precision.	
<u>Optional/General</u> comments	-	

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

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