Review Form 1.7

Journal Name:	**Journal of Engineering Research and Reports**
Manuscript Number:	**Ms_JERR_115563**
Title of the Manuscript:	**The Method of the Probability Analysis of Area with Dissolved gases in Power Transformer Insulating Oil**
Type of the Article	**Original Research Article**

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PART 1: Review Comments

	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)*
Compulsory REVISION comments **1. Is the manuscript important for scientific community?** (Please write few sentences on this manuscript) **2. Is the title of the article suitable?** (If not please suggest an alternative title) **3. Is the abstract of the article comprehensive?** **4. Are subsections and structure of the manuscript appropriate?** **5. Do you think the manuscript is scientifically correct?** **6. Are the references sufficient and recent? If you have suggestion of additional references, please mention in the review form.** **(Apart from above mentioned 6 points, reviewers are free to provide additional suggestions/comments)**	1. The manuscript introduces a novel method for analysing dissolved gases in power transformer insulating oil, which is crucial for monitoring transformer health and predicting faults. By utilizing normal distribution theory and the ANSI/IEEE C57.104 standard, the manuscript proposes a diagnostic tool that can potentially streamline maintenance evaluations and improve accuracy. However, the manuscript lacks clarity in describing the methodology and could benefit from more detailed explanations and validation studies to demonstrate its effectiveness. Overall, the manuscript addresses an important aspect of power engineering and has the potential to contribute to the field with further development and refinement. 2. The title, "The Method of the Probability Analysis of Area with Dissolved Gases in Power Transformer Insulating Oil," is descriptive but could be improved for clarity and conciseness. A more suitable title could be "A Novel Probabilistic Analysis Method for Monitoring Dissolved Gases in Power Transformer Insulating Oil," which is more succinct and highlights the novelty of the method. 3. The abstract provides a comprehensive overview of the manuscript, introducing the importance of transformer insulating oil and the focus on dissolved gases analysis for preventive maintenance. It outlines the use of normal distribution theory and ANSI/IEEE C57.104 to create a diagnostic tool and describes the method's development, testing, and feasibility. However, some parts could be clarified further, such as the specific steps of the proposed method and the validation process. Overall, the abstract effectively summarizes the key points of the manuscript but could be improved with more detailed explanations. 4. The subsections and structure of the manuscript appear to be appropriate, as they follow a logical flow from introduction to conclusion. The manuscript includes sections such as Introduction, Literature Review, Research Methods, Verification, Discussion, and Conclusion, which are standard for a research paper. However, some sections could be further developed or clarified, such as the Research Methods section, which could benefit from more detailed explanations of the methodology used. Overall, while the structure is generally appropriate, some sections may require more depth or clarity. **5.** The manuscript appears to be scientifically sound in its approach, as it utilizes established theories such as normal distribution and ANSI/IEEE C57.104 standard for dissolved gases analysis. The repeated testing and verification mentioned also suggest a rigorous approach to validation. Nonetheless, a more detailed examination of the methodologies and results would be necessary for a definitive assessment of scientific correctness. 6. The references in the manuscript are somewhat limited, and there is scope for including more recent and diverse sources to strengthen the literature review. Adding references from the past five years could enhance the relevance and completeness of the manuscript. Additionally, including sources that discuss related topics such as advanced diagnostic techniques for power transformers or the application of data analysis in maintenance could provide a broader context for the study.	

	Aside from the points mentioned, here are some additional suggestions for the manuscript: • **Discussion on Limitations:** Discuss the limitations of the proposed method, such as the assumptions made or the potential sources of error, to provide a more balanced view of its applicability. • **Future Research Directions:** Suggest potential future research directions, such as extending the method to other types of equipment or exploring additional parameters for analysis.	
Minor REVISION comments **1. Is language/English quality of the article suitable for scholarly communications?**	The language and English quality of the article are generally suitable for scholarly communications. However, there are some areas where improvement could be made to enhance clarity and readability. Some sentences are long and complex, which could make it difficult for readers to follow the argument. Additionally, there are instances of awkward phrasing and grammatical errors that could be addressed to improve the overall quality of the writing.	
Optional/General comments	Overall, the manuscript provides a comprehensive overview of a novel method for analyzing dissolved gases in power transformer insulating oil. The use of normal distribution theory and ANSI/IEEE C57.104 standard as a diagnostic tool is innovative and shows potential for improving maintenance practices in the field of power engineering. However, there are areas where the manuscript could be strengthened: • The bibliography would benefit from additional references to enrich the scholarly context and support the assertions made in the manuscript. • Clarity and Structure: The manuscript would benefit from clearer organization and structure, especially in the methodology section. Providing a step-by-step explanation of the proposed method would help readers better understand the process. • Validation and Testing: While the manuscript mentions that the method was repeatedly tested and verified, more details on the validation process and the results of these tests would strengthen the credibility of the proposed method. • Language and Grammar: There are instances of awkward phrasing and grammatical errors throughout the manuscript. A thorough proofreading and editing process would improve the overall quality of the writing. In conclusion, while the manuscript presents an innovative approach to dissolved gases analysis in power transformers, addressing the above-mentioned areas would improve its clarity, credibility, and overall impact	

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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