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REVIEWER'S REPORT

Manuscript No.: IJAR-59635

Title: Enhancing Petroleum Storage Tank Integrity in Saudi Arabia under Vision 2030: Integrating API 653 Inspection, Corrosion Risk Assessment, and Risk-Based Maintenance Strategies.

Recommendation:

Accept as it is .....

Accept after minor revision.....

Accept after major revision .....

Do not accept (*Reasons below*) .....

Rating	Excel.	Good	Fair	Poor
Originality		√		
Techn. Quality		√		
Clarity		√		
Significance		√		

Reviewer's ID: JPR-284

Detailed Reviewer's Report

The manuscript addresses an important and relevant engineering topic concerning the integrity and safety of petroleum storage tanks in Saudi Arabia in the context of Vision 2030. It provides a comprehensive review of API 653 inspection practices, corrosion risk assessment, nondestructive testing techniques, remaining-life prediction, and risk-based maintenance strategies. The integration of technical inspection methods with environmental protection, operational continuity, and industrial development is a notable strength. The review methodology is reasonably explained, and the discussion is supported by relevant recent literature. The proposed integrity management framework offers practical value for petroleum storage operators and maintenance professionals. However, some minor revisions are required before publication. The authors should carefully review grammatical errors, sentence structure, and formatting throughout the manuscript. The incomplete sentence in Section 6.3 should be corrected, and the presentation of Tables 1 and 2 and Figures 1 and 2 should be checked for completeness and consistency. Furthermore, the authors should strengthen the explanation of the practical applicability of the proposed framework to Saudi petroleum storage facilities and ensure consistency in technical terminology and references. Overall, the manuscript makes a valuable contribution to petroleum storage tank integrity management and is suitable for publication after minor revision.