Website Audit Report for oilpro-tanks.replit.app

Executive Summary

This report details a comprehensive audit of the website `https://oilpro-tanks.replit.app/`, focusing on its functionality, security, performance, accessibility, and overall quality, particularly from the perspective of an API 653 tank inspector. While the website presents a clean design and intuitive navigation for basic data entry, it suffers from significant functional limitations and a lack of critical features necessary for a complete API 653 tank inspection.

Audit Findings

Initial Website Exploration and Documentation

The website provides a basic interface for creating new inspection reports, importing Excel data, and using templates. The navigation is straightforward, with clear links to Dashboard, New Report, Import Excel, and Templates. Data entry for basic tank information and thickness measurements is possible, and a simple inspection checklist is present. However, key functionalities like saving drafts and generating reports were found to be non-operational.

Technical Analysis and Security Assessment

During the technical analysis, it was observed that the website lacks several crucial HTTP security headers, which could expose it to common web vulnerabilities. These include `X-Content-Type-Options`, `X-Frame-Options`, `X-XSS-Protection`, `Content-Security-Policy`, and `Referrer-Policy`. No broken links or 404 errors were identified during the crawl.

Performance and Accessibility Evaluation

The website demonstrates a relatively fast initial load time (around 304ms). It also appears to be responsive, adapting well to different screen sizes, which is a positive aspect for user accessibility across various devices.

Content and User Experience Review

The website's design is clean and modern, offering a visually appealing interface. The navigation is intuitive, and the process for initiating a new report is clear. However, the user experience is severely hampered by the non-functional 'Save Draft' and 'Generate Report' buttons. The lack of detailed input fields for critical inspection data and the absence of clear error messages further detract from the overall usability.

Shortcomings for a Full API 653 Inspection

Shortcomings for a Full API 653 Inspection:

1. **Settlement Survey:** The website lacks any dedicated section or functionality to record and analyze tank settlement data, which is a critical part of API 653 inspections.

2. **Detailed Appurtenance Inspection:** While there's a checkbox for 'Appurtenances inspected', there's no provision to input detailed information for individual appurtenances (e.g., nozzles, manways, vents, ladders, platforms), including their condition, specific findings, or recommendations.

3. **Comprehensive Inspection Findings & Recommendations:** The current checklist is very basic. A full API 653 inspection requires detailed sections for recording specific observations, defects, and anomalies, along with corresponding recommendations for repair or further action.

4. **Corrosion Rate and Remaining Life Calculation/Display:** Although the thickness measurement table indicates 'Auto-calculated' for Corrosion Rate and 'Auto-determined' for Remaining Life, the actual calculated values are not displayed, nor is there an option to review or override these calculations. This is crucial for assessing tank integrity.

5. **Attachment of Supporting Documents/Photos:** There is no functionality to upload or attach supporting documents, such as photographs of inspection findings, NDT reports, or previous inspection records, which are essential for a complete inspection report.

6. **Functional Report Generation:** The 'Generate Report' button does not appear to work, which is a major impediment to producing the final API 653 inspection report.

7. **Data Import/Export:** The 'Import Excel' option in the navigation suggests data import, but its functionality is not accessible or clear. There is no explicit export functionality for the collected data or generated reports.

8. **Historical Data Management:** There is no clear way to manage or access historical inspection data for a tank, which is vital for trend analysis and determining corrosion rates accurately over time.

9. **Repair Recommendations and Follow-up:** The current system does not allow for detailed input of repair recommendations, their categorization (e.g., urgent, routine), or tracking of their completion.

10. **Regulatory Compliance and Code References:** A comprehensive API 653 report often includes references to specific clauses within the API 653 standard that justify findings or recommendations. This is missing from the current interface.

11. **Visual Documentation (Photos/Sketches):** The platform lacks features to upload and integrate visual documentation such as:
    - Photos of identified repairs.
    - A comprehensive profile picture of the entire tank.
    - Sketches and drawings detailing NDE test locations and discontinuity specifics.
    - Tank drawings illustrating the layout of nozzles, repads, manways, ladders, gauges, and other appurtenances for each project.

12. **Venting System Inspection:** There is no specific section or fields to document the inspection and condition of the tank's venting system, which is a critical safety and operational component.

13. **Secondary Containment Inspection:** The platform lacks a dedicated section for recording the inspection and condition of the secondary containment system, which is crucial for environmental protection and regulatory compliance.