Battery Management System (BMS) - Test Strategy

1. System Overview

The BMS monitors and manages battery parameters such as voltage, current, and temperature.

2. Test Objectives

- Validate voltage monitoring

- Verify fault detection

- Ensure compliance with ASPICE and ISO 26262

3. Test Levels

- Unit Testing

- Integration Testing

- System Testing

4. Test Environment

- HIL Simulator

- CANoe

- Python Scripts

5. Tools Used

- Jenkins

- Jira

- CAPL

- Python

6. Fault Injection Strategy

- Overvoltage

- Undervoltage

- Sensor failure

7. KPIs and Metrics

- Test Coverage

- Defect Density

- Test Execution Rate

8. Compliance

- ASPICE Level 2

- ISO 26262 Part 6