

PROJECT DEVELOPMENT PHASE

PERFORMANCE TESTING

| | |
|------------|---|
| TEAM ID | PNT2022TMID39426 |
| PROJECT ID | Hazardous Area Monitoring For Industrial Plant Powered By IoT |

NTF- RA:

| | | | | | | | | | |
|--------------------------|--|---|--|--|--|--|--|---|--|
| | | TEAM ID - PNT2022TMID39426 | | | | | | | |
| NFT - Risk Assessment | | | | | | | | | |
| S.No | Project Name | Scope/feature | Functional Changes | Hardware Changes | Software Changes | Impact of Downtime | Load/Volume Changes | Risk Score | Justification |
| 1 | Hazardous Area Monitoring for Industrial Plant Powered By IoT | Unfamiliar order | Low | No Changes | Moderate | NIL | >5 to 10% | YELLOW | Reporting the hazard to control node or by using cloud service |
| NFT - Detailed Test Plan | | | | | | | | | |
| S.No | Project Overview | NFT Test approach | Assumptions/Dependencies/Risks | Approvals/SignOff | | | | | |
| 1 | This mechanism is feasible because it is easy to install, user friendly, wireless, detection, predicts the risk, is bidirectional, affordable. | controlling the hazard at industrial working environment. | High speed, not cost effective and controlling the hazard at industrial working environment. | Reporting the hazard to control of node or by using cloud service | D. SETHURAMAN YOGAN, D. SETHURAMAN, LAKSHMI | | | | |
| End Of Test Report | | | | | | | | | |
| S.No | Project Overview | NFT Test approach | NFR - Met | Test Outcome | GO/NO-GO decision | Recommendations | Identified Defects (Detected/Closed/Open) | Approvals/SignOff | |
| 1 | This mechanism is feasible because it is easy to install, user friendly, wireless, detection, predicts the risk, is bidirectional, affordable. | controlling the hazard at industrial working environment. | This mechanism is feasible because it is easy to install, user friendly, wireless, detection, predicts the risk, is bidirectional, affordable. | This mechanism is feasible and it is easy to set up. Test results are easy to access in every field. | Industrial hazard is the danger or chance of accidental injury to the worker while engaged in his accustomed work in the plant. The manufacturing operations in industries are to produce harmful gas leakage, overflowing or mechanical electrical explosion, accidents due to improper operating conditions and fault in systems. Identifying industrial hazard allows engineers to protect their worker from accidents, injuries, and fatalities. | High cost savings, Greater job satisfaction and higher motivation can be obtained by the workers if their expectations of safety from hazards are fulfilled by the industrial working environment. | When problem occurs, the investigation based on the problems found there will be more possibilities to make the show to be applicable. | D. SETHURAMAN YOGAN, D. SETHURAMAN, LAKSHMI | |

| | | | | | | | | | |
|----------------------------|--|---|--|--|--|--|--|---|---|
| TEAM ID - PNT2022TMID39426 | | | | | | | | | |
| NFT - Risk Assessment | | | | | | | | | |
| S.No | Project Name | Scope/feature | Functional Changes | Hardware Changes | Software Changes | Impact of Downtime | Load/Volume Changes | Risk Score | Justification |
| 1 | Hazardous Area Monitoring for Industrial Plant Powered by IoT | Unfamiliar order | Low | No Changes | Moderate | NIL | >5 to 10% | YELLOW | Reporting the hazard to control of node or by using cloud service |
| NFT - Detailed Test Plan | | | | | | | | | |
| S.No | Project Overview | NFT Test approach | Assumptions/Dependencies/Risks | Approvals/SignOff | | | | | |
| 1 | High speed, not cost effective and controlling the hazard at industrial working environment. | | High speed, not cost effective and controlling the hazard at industrial working environment. | Reporting the hazard to control of node or by using cloud service | | | | | |
| End Of Test Report | | | | | | | | | |
| S.No | Project Overview | NFT Test approach | NFR - Met | Test Outcome | GO/NO-GO decision | Recommendations | Identified Defects (Detected/Closed/Open) | Approvals/SignOff | |
| 1 | High speed, not cost effective and controlling the hazard at industrial working environment. | controlling the hazard at industrial working environment. | This mechanism is feasible because it is easy to install, user friendly, wireless, detection, predicts the risk, is bidirectional, affordable. | This mechanism is feasible and it is easy to set up. Test results are easy to access in every field. | Industrial hazard is the danger or chance of accidental injury to the worker while engaged in his accustomed work in the plant. The manufacturing operations in industries are to produce harmful gas leakage, overflowing or mechanical electrical explosion, accidents due to improper operating conditions and fault in systems. Identifying industrial hazard allows engineers to protect their worker from accidents, injuries, and fatalities. | High cost savings, Greater job satisfaction and higher motivation can be obtained by the workers if their expectations of safety from hazards are fulfilled by the industrial working environment. | When problem occurs, the investigation based on the problems found there will be more possibilities to make the show to be applicable. | D. SETHURAMAN YOGAN, D. SETHURAMAN, LAKSHMI | |

DTP:

| NFT Test approach | load test | | | | | |
|-------------------|---|--|--|--|--|--|
| step 1 | Python script to connect IBM watson IoTplatform to get data from cloud | | | | | |
| step 2 | IBM simulation | | | | | |
| step 3 | line chart IBM watson IoT platform board | | | | | |
| step 4 | Installing ibm iot using command prompt window and node-red on ibm cloud | | | | | |
| step 5 | Run python code with connection of ibm cloud and deploying in node -red | | | | | |
| step 6 | Simulation of deploying node-red on ibm cloud and then displaying temperature and humidity values in mobile application | | | | | |
| step 7 | Detecting temperature and humidity through mobile application | | | | | |
| step 8 | database schema node -red dashboard | | | | | |

