



inSis.AI

An Industrial AI Platform to meet the deep-tech needs of manufacturing industry

inSis.AI is the new-age solution that caters to the predictive needs of the operational and maintenance teams in the manufacturing industry, and is built on the latest AI/ML and Gen AI technologies.

It is the intelligent layer which runs on the proven platform of Jaaji Technologies – inSis (Industrial Smart information Systems) - to meet specific use-cases in the process industry. It leverages the data from various digital solutions in manufacturing plants, and helps the end-users to analyze and predict critical parameters using various traditional AI/ML techniques like APR, PLS, ANN, MVR etc.

KEY MODULES

PredIT

Predicts product and equipment anomalies and quality parameters using deep learning models and advanced pattern recognition. Identifies KPI deviations based on process models in real-time.

Benefits: Helps in identifying potential issues before they occur, ensuring quality and reliability in manufacturing processes.

OptimizeIT

Uses Artificial Intelligence and Machine Learning models to identify relationships between process variables and use it for optimisation of the process.

Benefits: Enhances operational efficiency by optimizing process parameters for better performance and yield.

AskIT

Provides a natural language interface to convert the plant data into meaningful actionables. Generative AI and NLP technologies assist users by summarizing information and context.

Benefits: Simplifies user interactions and enhances decision-making by offering easy access to critical information using NLP.

An intelligent layer leveraging AI/ML for manufacturing

inSis.AI

Uses the power of AI to bring immense value from data, helps to optimize, enables easier and quicker operations.

inSis Suite

Enables digitalization and digital maturity, streamlines processes, improves data availability and quality.



Top Use-Cases

- Predict asset anomalies & failures
- Model-induced KPI monitoring & RCA
- Real-time batch deviation monitoring
- AI-based optimization guidelines
- Predict intermediates & product qualities
- Operator logs summarization
- AI Assistant for process information

Key Challenges Addressed



Real-time Product Quality Information

Ability to predict real-time quality metrics, like pH levels, before lab measurements.



Asset Anomaly & Failure Detection

Detecting early signs of equipment failures to ensure uninterrupted service.



Optimizing Operating Parameters

Finding the most efficient operating conditions in real-time by studying the potential scenarios.



AI-based Batch Monitoring

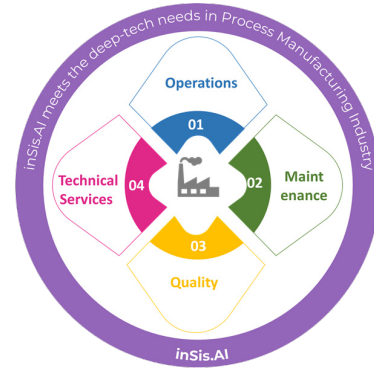
Collects, stores and analyses batch manufacturing records with real-time monitoring and optimisation.

Key Features

- Deployment - Available on Cloud & On-premise
- Subscription - Subscription-based model
- Access - Self-service & role-based access
- Use-cases - Ready-made solutions for industry

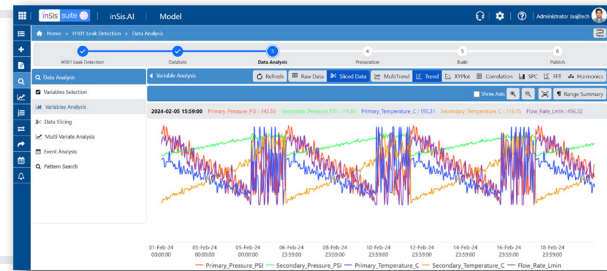
Technical Specifications

- Data Integration - Built-in support for data integration
- Processing - GPU support for faster processing
- Scalability - Scalable to multi-site operations
- Seamless Integration - Integration with other layers of inSis



Core Capabilities

- Predictability - Accurate quality predictions in real-time
- Reliability- Early failure detection & response timing
- Quality Assurance - Optimization of operating conditions
- Intelligent Management - Optimal conditions of process parameters



inSis.AI for Process Industries



- Predicts operational and performance degradations life cycle using ML & AI Model predictions
- Issues early notifications for anomalies of rotating assets like Pumps, Motors, Fans, Compressors etc.
- Provides real-time guidelines to operations teams for optimum and energy-efficient operations
- Predicts product qualities like CO/CO2 emissions, water quality, stream compositions etc.
- Helps in model-induced KPI monitoring that enables real-time root cause identification for KPI deviations
- Provides Generative AI-based assistant for natural language interface for energy information
- Consolidates documents and provide BOTs for summarisation of operations and energy information
- Provides a platform for customers to build self-service predictive analytics and models

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