



TNChe Asia 2024 Conference
" Decarbonization, AI and Digital Transformation
for Sustainability in Process Industries "
Presenter's Biodata & Abstract



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Title of Presentation "Predictive Monitoring for Process Plants by AI-based, GIVES EARLY WARNING OF FAILURES. SAVE OPERATION COST and INCREASE AVAILABILITY."

Presentation Abstract:

SAMGUARD – The Digital AI “Plant” Guard, patrolling overall plant operation 24 x 7 to detect upcoming known and unknown Equipment Failures and Process Abnormalities.

Join the SAMGUARD journey for your Digital AI “Plant” guard by AI Predictive Analytic platform, providing early detection of operational and quality anomalies by continuously analyzing thousands of sensors in real-time.

Uniquely, SAMGUARD’s approach to predictive analytics combines Human Intelligence (HI) with Artificial Intelligence (AI) to produce a new machine learning approach by using domain knowledge to enhance machine learning, guiding users to the right areas of the plant to search



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for potential issues that could affect overall equipment effectiveness (OEE)

Besides, one of capabilities of SAMGUARD is detecting Undefined, non-repeating problems.

Generally, Undefined problems do not repeat themselves, like most cases in the process industry. In these cases, the issue never occurs in the same place or in the same way twice, making it unexpected. Examples of undefined problems include equipment failures, small process deviations, and changes to the operating process because of equipment failure, malfunction, or abnormality. In process plants, non-repeating problems occur more often than repeating problems, but they remain hard for most solutions to predict and analyze.

In addition, we will present case studies in other Chemical and Petrochemical plants how AI predictive analytics detects non-repeating problems and helps several plants reduce repair cost, eliminate equipment downtime, and increase plant operational efficiency.