Ovation™ Plant Prognostics Plugin Advanced Application

Features

- Interacts with the Ovation Intelligence Framework Expert System to provide automated response and mitigate deteriorating conditions

- Uses expert system-based predictive analytics at the local plant level to enable immediate resolution of impending process or equipment anomalies to avoid downtime or catastrophic damage

- Provides native access to high-speed, high-resolution data through tight integration with the Ovation control system

- Analyzes real-time Ovation data captured at I/O resolution from Controllers or networks

- Enhances operator situational awareness by providing decision-making support through real-time alerts and guidance for abnormal processes or equipment behaviors

- For continuous improvement, Advanced Pattern Recognition (APR) and machine learning capabilities constantly monitor plant processes and equipment health

- Augments Monitoring and Diagnostic (M&D) center capabilities by focusing on the remediation of short-term, plant-specific events

Operations and Maintenance Challenges

Moving on from reactive operations and maintenance approach to a predictive, diagnostic, and prognostic strategy helps extend equipment life and reduce overall costs resulting in increased plant safety, reliability, and availability. While centralized, remote M&D centers are an important part of this transition, the focus must be on analyzing plant sites using time-lagged data for long-term events and patterns rather than short-term events that require immediate response.

Power plant operators and owners need a solution that enhances situational awareness and enables informed decision making to maintain equipment health and reduce process failures in a cost-effective manner.

EMERSON.

Ovation Plant Prognostics Plugin Solution

The Ovation Intelligence Framework and Ovation Prognostics Plugin work together to offer a solution that goes beyond simple diagnostics. These applications identify impending process deviations or equipment anomalies and trigger mitigating action to avoid downtime or catastrophic damage.

The Intelligence Framework is a high-level, expert system software environment for developing and maintaining advanced applications. Several Ovation application-specific plugins, such as the Prognostics Plugin and Performance Monitor Plugin extend the base framework to enable high-level analysis of plant conditions.

The framework tightly integrates real-time, high-resolution Ovation data with plugin applications and unit-specific expert rules. Interfacing simultaneously with numerous data sources such as the Ovation Analytics Studio, Ovation Process Historian (OPH), Ovation Enterprise Data Solutions, and non-Ovation equipment through standard communication protocols, the framework makes data available to plugin applications.

The Prognostics Plugin uses complex modeling based on Advanced Pattern Recognition (APR) and machine learning capabilities while interacting with the Ovation Intelligence Framework. Collectively, they alert and guide operators or the control system to take immediate action and avoid future equipment or process failures.

Additionally, the plugin utilizes native Ovation range-checking and data-quality functions so there is no need to manually remove invalid data samples before a data set is used by the plugin's prognostic models and functions.

EMERSON™