



SIMATIC IT OEE-DTM

Efficiency analysis and control of manufacturing plants

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OEE-DTM

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SIMATIC IT OEE-DTM Product Option

Equipment Efficiency Control and Downtime Analysis

OEE-DTM Basic Functionality

Leverage OEE-DTM Basic Functionality for optimizing your Return of Investments (ROI) and maximizing the plant performance!

Production Management makes essential operating decisions to increase plant performance based on OEE for minimize production variability and to maximize economic performance of equipment.

SIMATIC IT OEE-DTM is a Product Option of SIMATIC IT Historian, which allows monitoring equipment efficiency and making informed decisions based on performance indicators.

To achieve these results, OEE-DTM manages several functions:

- **Downtime Splitting & Merging:** to optimize the downtime distribution analysis.
- **Downtime Distribution Analysis:** to understand how the plant is performing.
- **Root-Cause Analysis:** to analyze reasons of inefficiency and to prevent them from reoccurring.

In addition OEE-DTM Option supports the calculation of a pre-defined set of **Key Performance Indicators (KPI)** to benchmark performances and efficiencies from different perspectives and in particular:

- Availability Rate,
- Performance Rate,
- Quality Rate,
- OEE (Overall Equipment Efficiency),
- MTBF (Mean Time Between Failure),
- MTTA (Mean Time To Assist),
- MTBA (Mean Time Between Assist),
- MTTR (Mean Time To Repair),
- Cycle time,
- Speed loss and others.

Through these dedicated functions, under performing production areas are quickly identified and plant performances are constantly improved.

The integration with the entire SIMATIC IT environment enables corrective actions to react to efficiency decreases, thus dramatically improving economic return on assets.

High Performances, high Quality and high Availability...the everyday targets in the plant. In daily production operations many aspects affect plant efficiency. The 6 Big Losses are always around the corner:

- **Breakdown and Changeover limit equipment availability.**
- **Micro-downtimes and Reduced Speed affect equipment productivity.**
- **Non-conforming items and Changeover-scrap reduce production quality and yields.**

Companies must be able to immediately identify possible problems, to analyze them correctly and react in real-time using appropriate corrective actions. Measuring OEE (Overall Equipment Effectiveness) means controlling the operational performance of assets, through a total measure of efficiency that relates availability, productivity and quality.



SIMATIC IT OEE-DTM

A new era for your Business

OEE-DTM Configuration Portal

SIMATIC OEE-DTM offers to company executives a powerful tool for dominate your Business. A new technology that allows to customize KPIs and to compare equipments in different lines, areas, sites and Regions (table 1)*.

Starting from the collected information and through the Visualization and Analysis tool, the User is then able to have under control the actual performances against targets **anytime** and **anywhere, according to his last-minute needs, without needing a dedicated implementation.**

This flexibility helps not only supervisors or decision makers, but allows also operators to evaluate specific performances, improving it accordingly to his goals, without requiring any programmer support.

OEE-DTM Correction Portal

what to do in case of operational inefficiency? SIMATIC IT OEE-DTM does it for you

The **Correction Portal**, a *dynamic and flexible configuration*, allows putting in place corrective actions in order to prevent and correct the actual inefficient performance.

Defining and configuring the operational targets as first step, the Portal can automatically verify if the indicated conditions have been satisfied. In case they are not, the User can personally customize the way to notify the detected inefficiency: a notification with SIMATIC IT Messaging Manager, an e-mail message, a report using SIMATIC IT Report Manager or a pop-up window.

In addition the Correction Portal lets the User define **automatic** and **real-time corrective actions** that can **take care, react** or even **prevent** inefficiencies to occur.

Correction Portal enables defining the execution of a specific corrective rule from SIMATIC IT Production Modeler in order to timely and actively reacts to the exception forcing a specific compensating action that can be: machine set up, set point change, maintenance request for a specific equipment and consequent production reschedule, and others.

Correction Portal let you enter into the **Run-time Synchronization Era**, where every underperformance of your production plants generates automatic reactions that immediately bring production back on track.

**An innovative and advanced solution for SIMATIC IT Users who look for immediate benefits
A new era for your Business!**

The table shows all the customizable fields

- Key Performance Indicators (Availability rate, Performance rate, Quality rate, OEE, Speed loss, Cycle time and others)
- Type of chart (Gantt chart, bar graph, Pareto chart, trend, etc...)
- Per equipment, equipment group, equipment type
- Per time frame or period (run-time, hourly, daily, weekly, monthly)
- Indicators evaluation: per shift, order, product, production run, batch, team...
- Type of selection per plants, per site, per area, per machine etc...
- Production dashboard: critical KPI display in different views (i.e Odometer)
- Others...

(table 1)*



SIMATIC IT OEE-DTM within SIMATIC IT

Monitoring and managing manufacturing assets lifecycle

SIMATIC IT is the MES (Manufacturing Execution Systems) offer from Siemens. It is fully integrated in the consolidated and flexible architecture from Siemens for Automation: TIA (Totally Integrated Automation). SIMATIC IT is built fully exploiting the definitions of ISA-95 the reference normative for describing MES. ISA-95 fully describes Requirements for Overall Equipment Effectiveness and SIMATIC IT OEE-DTM Product Option fully matches these definitions.

In order to better highlight the product uniqueness and to improve the market approach SIMATIC IT is positioned using a product-bundle approach, where functionality is privileged against technicalities.

Three “entry point” bundles have been identified:

- SIMATIC IT Manufacturing Information System
- SIMATIC IT Genealogy
- SIMATIC IT Order Management

They can be scaled to a higher level of functionality consisting in:

- SIMATIC IT Tracking & Tracing
- SIMATIC IT Basic Production Management

They can then converge into the bundle representing the entire SIMATIC IT proposition, called:

- SIMATIC IT Production Suite

SIMATIC IT Historian is a lower entry level for data acquisition applications.

SIMATIC IT OEE-DTM Product Option is compatible with the following bundles:

- SIMATIC IT Historian
- SIMATIC IT Manufacturing Information System
- SIMATIC IT Tracking & Tracing
- SIMATIC IT Production Suite

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