Cms connect

Connected intelligence for greater efficiency

Cms Digital Systems

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Cms | *your technology partner*

CMS CONNECT IS THE IoT PLATFORM PERFECTLY INTEGRATED WITH THE LATEST-GENERATION CMS MACHINES

CMS Connect is able to offer customised micro services through the use of IoT Apps that support the daily activities of industry operators - improving the availability and use of machines or systems.

The platform displays, analyses and monitors all data from connected machines. The data collected by the machines in real time become useful information to **increase machine productivity, reduce operating and maintenance costs and cut energy costs.**

CMS CONNECT IN 4 STEPS:

1 CONNECT THE CMS MACHINES TO THE INTERNET

2 COLLECT ALL CLOUD-BASED MACHINE DATA

3 MONITOR, EXAMINE AND ANALYSE
Data are monitored, examined and subsequently aggregated and analysed to become significant business-related content.

4 DECIDE AND ACT
Real-time data are conducive to decision-making, and to planning any corrective actions and improving production-related issues.

Events
Monitoring
Push notifications
Machine alerts
Energy saving
Technical service planning

IoT - INTERNET OF THINGS

The expression **Internet of Things** refers to a world in which "things" (devices, systems, machinery) become intelligent (smart) by being connected, i.e. able to log in to the Internet, and consequently exchange data on their state and access aggregate information from other entities. At one end, there is the **Internet,** as a system for transmitting information. At the other end, there are the products ("things") that are **smart** and **connected.The physical world connects to the digital world:** the data collected, aggregated and analysed become accessible on cloud platforms, where applications and services transform them into useful, value-generating information.

CMS CONNECT IS ACCESSIBLE FROM PCS OR SMART DEVICES AND INCLUDES THREE DIFFERENT, MUTUALLY INTEGRATED APPLICATIONS.

SMART MACHINE

Section designed for the continuous **monitoring of machine operation**, with information on:

Status: machine status overviews both live and on a historical basis. The representations provided allow machine availability to be checked - to identify possible bottlenecks in the production flow.

Monitoring: instantaneous, live display of the operation of the machine and its components (spindle, vacuum pump, etc.), of currently running programs and potentiometers.

Production: list of machine programs run within a given timeframe with best time and average running time.

Alarms: active and historical warnings.

SMART MAINTENANCE

This section provides a **first approach to predictive maintenance** by sending notifications when machine components indicate a potentially critical state associated with reaching a certain threshold. In this way, **it is possible to take action and schedule maintenance services, without any down-time.** By constantly monitoring the use of components, Smart Maintenance offers a genuine **"condition-based" maintenance service**, which allows action to be taken based on the efficiency of the components.Smart Maintenance also makes CMS' support to customers more specifically targeted and faster through a constant flow of data from the machine to the Service suppliers.

SMART MANAGEMENT

Section designed for KPI (key performance indicator) presentation for all the machines connected to the platform. The indicators provided assess:
• the availability and productivity of the machine;
• the efficiency of the machine;
• the quality of the product.

MAXIMISED SECURITY

CMS Connect uses the standard OPC-UA communication protocol, which guarantees the encryption of data at Edge interface level. CMS Connect's Cloud and DataLake levels meet all state-of-the-art cyber-security requirements. Customer data are encrypted and authenticated to ensure total protection of sensitive information.

Optimisation of production performance

CMS Connect offers suitable tools for observing and reckoning actual production data in order to identify any production defects and plan corrective actions. It is possible to keep track of any triggered alarms and analyse their causes, be alerted in case of repeated problems that may be observed by different operators, and obtain real-time production data - even remotely.

Efficiency

CMS Connect allows more effective machine use-related cost control to be achieved, the actual production costs for a given workpiece to be calculated, and machine stops to be tracked.

Diagnostics to support components warranty optimisation

The smart machines by CMS with CMS Connect cloud platform options will be able to generate notification alerts when the use thresholds set by the manufacturer are reached and parts need to be replaced. CMS Connect is able to monitor the state and main parameters of the main operating groups (spindle, vacuum pump, lubricator, etc.) - helping identify the potential causes of finished product quality degradation, thus reducing the warranty costs due to component misuse.

ADVANTAGES
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Productivity increase and downtime reduction

Production never stops with CMS Connect. CMS Connect checks the machine status in real-time, providing useful information for the decision-making process and for production planning.

Improvement of quality control

CMS Connect is able to monitor in real time the machine parameters that contribute to determining processing quality - such as the conditions of use and the state of the various machine operating units.

Maintenance costs down

CMS Connect allows for greater diagnostics accuracy with subsequent shorter troubleshooting time by the technical support staff.
The platform also makes it possible to check that the machine works in optimal conditions, extending the life of components.
Automatic and periodic maintenance notifications also allow for timely planning and better maintenance work organisation - including service scheduling in advance and routine maintenance planning.