IPC

Maintenance Management System

GAMED

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IPC – Maintenance Management System

Efficient maintenance and TPM organisation.

Overview

Reducing expensive downtimes, saving repairing charges and avoiding quality problems – these are the main contributions of the maintenance department to a high productivity of the production process. Additional targets are a safe and eco-friendly operation and securing the asset values by continuous improvements.

Efficient maintenance operations cost money. On the other side the company will profit by reduced production costs, increased life cycle of the machinery and lowered material stock. Besides cost monitoring the validation of the maintenance performance will get a central task for controlling and optimisation measures.

During customer audits, the organization, planning and performance of maintenance jobs are checked to assess the machinery status. The proof of service quality is a premise for a top rating of the company.

Classic organizational structures are not adequate to meet the challenges successfully. The strategic change to an integrated service management will involve the production team as well as the production planning and quality assurance.

An integrated service management needs a tool to support the personnel in planning, coordination, performance and controlling of all activities.

IPC was developed with a leading industrial firm who first introduced TPM and autonomous team work in Austria. The flexibility is a main focus of IPC to provide customer specific modifications and an easy system integration. From SME to big companies, IPC is used today in various industrial branches and other sections very successfully.

The benefits at a glance:

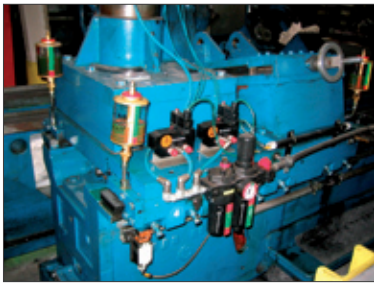
- TPM support (planned and autonomous maintenance)
- Planning, coordination and controlling of work orders
- Systematic damage report und repairing
- Reduction of downtimes and search times
- Economic material stock and purchasing support
- Technical analysis and cost evaluation
- Key figures and visualization
- Reports for quality control, audits, insurances, etc.

Scope of functions

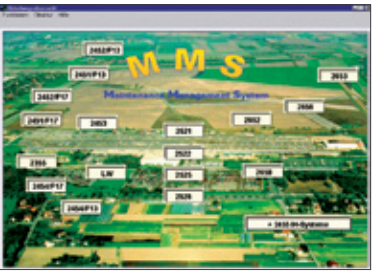
- Management of machines and materials
- Document management
- Services and inspection
- Repairing
- Evaluation and statistics
- Stock keeping and purchasing
- Management of test equipment
- PLC resources management

Safety, tidiness, cleanness

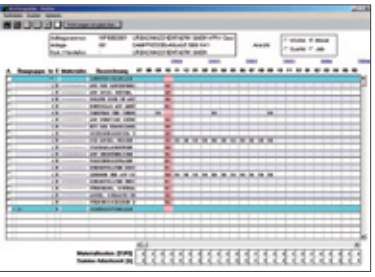
Workshop



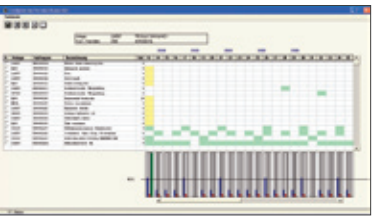
Marking and visualisation



System entrance via layout



Service schedule



Capacity planning

Machines, production lines, transport systems, equipment of building and infrastructure and other facilities are managed in IPC. Complex machines may be structured into components and sub units to define accurate service locations and to gain detailed technical evaluations. Machines are embedded into company specific structures like site, area, department and cost center. By this, global trends and reports are available.

Main spare parts are defined in IPC together with supplier and order data and will be assigned to relevant machines or components. IPC offers a predefined and adjustable catalogue of material ID's and various searching functions by technical parameters. A cross reference lists all installation points of particular spare parts.

The warranty period of new machines is monitored to ensure guarantee repairs or other measures before deadline.

IPC may store any document like graphics, photos or videos. Documents are assigned to machines, spare parts or work orders. The electronic document management saves space and search times. The user will build up the document archive step by step. For new machines, electronic manuals of the supplier may be taken over directly. Training videos, photos of damages or measuring data logs are common applications of the document management in practice.

Regularly cleaning and servicing, inspections and safety checks will reduce unplanned downtimes, quality problems and accidents. For each machine, the task schedule is defined with work instructions, due dates and required qualifications or external providers. The performance interval may be defined by time or throughput units (e.g. operation hours, tons, quantities). For autonomous maintenance strategies, the production team is supported by graphical tools and performance guidance in their job list.

IPC displays work orders by due dates and checks available personnel capacities. After coordination of priorities, the work orders are released and should be integrated into the production schedule. Released orders may also be dispatched to individual staff members for execution (weekly job schedule).

The staff members confirm executed orders in IPC. The confirmation dialogue is easy to use and may be supported by barcode devices. Damages or deviations, which were detected during the order execution, will be reported into IPC for a systematic persecution.

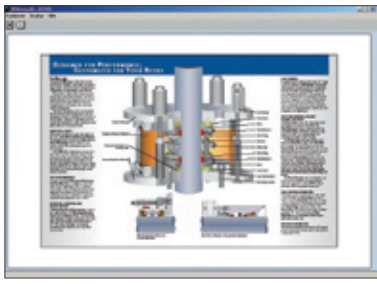
Machine damages may be reported from the production or maintenance personnel. The central message pool supports the planning and release of repair and project orders. For major repair orders or revisions, where different departments are involved, individual job orders and budget costs may be defined. At any time, the progress of orders may be displayed together with a comparison of planned and actual costs.

IPC offers numerous cost evaluations, technical reports and performance proofs for quality control requirements. No personnel effort for the documentation is necessary. All reports may be selected for the whole company, particular areas, machines or even for specific components. By comparison of key figures and trends, targeted strategies and improvement measures will be derived. Especially the technical availability of machines may be imported from other systems (e.g. OEE Analyser) and compared with the intensity of service jobs to find out the optimum of services for each machine.

With IPC, the stock of materials and spare parts is managed and optimised. The stock is organised by stores and stockyards and will be updated by income and outgoing bookings of materials. The accounting journal lists all material movements chronologically. Inquiries or material orders will be passed to the purchasing department or directly to the supplier via mail or fax. The purchasing statistics accumulates sales volumes by article and supplier and thus supports price negotiations for new orders. If the material stock is managed by the ERP system, IPC provides an interface to take over current stock data on user's request and to report the material demand for maintenance orders.

The management of test equipment and measuring devices is used as additional module or stand alone system. The location and status of each device is tracked and the due dates for next calibrations are indicated on time. The calibration results are acquired automatically or by operator's input and stored in the maintenance history of the device.

The Source Code Management is a central administration of programmes, system software, documentation, etc. for PLC's, measuring devices and other controllers including release check. Any PLC programme may be downloaded online into the programming device. After software modification, the programme is uploaded and stored as new release. The changes in a resource are archived chronologically and are traceable.



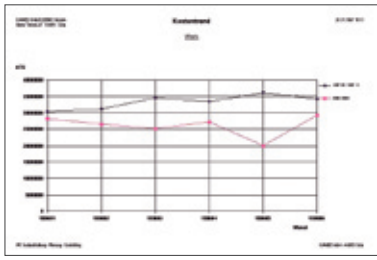
Document management

General features:

- User authorisation concept
- Multilingual frontend
- Print and export of tables and graphics
- Online help system
- Mailsystem
- Knowledge management

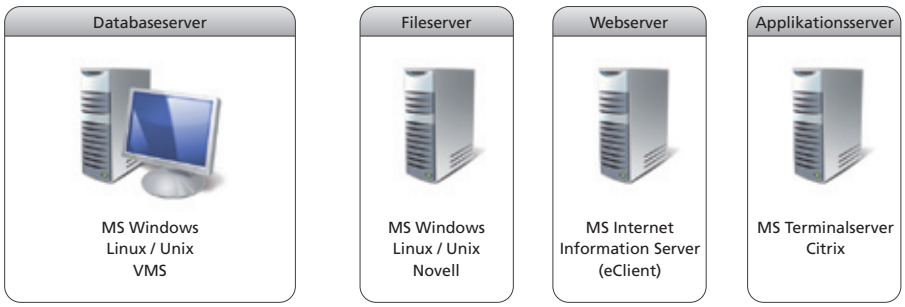
Interfaces:

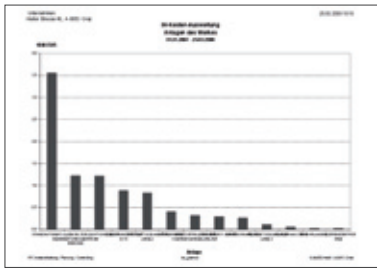
- ERP systems (SAP, XPPS, FRIDA, etc.)
- Counter for throughput oriented service intervals
- Import of basic material data (Excel, Datanorm, etc.)
- MS Outlook: due dates for further processing
- MS Project: due dates of repairs for detailed planning
- MS Office



Cost trend

System configuration





Cost analysis

Databasesystem
INGRES
MS SQLSERVER
ORACLE

System software
INGRES OpenRoad
MS Office

Clients
PC, Notebook
Thin Client

Contact person for IPC:

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