Maintenance Management

Provides Preventive and Corrective Maintenance
to Resources, Containers, Areas and Materials

Overview

Proper maintenance of equipment is critical to maintain the health and performance of manufacturing assets to reduce unplanned downtime. There are four different types of maintenance: corrective, preventive, condition based and predictive. Corrective maintenance is performed for unplanned downtime; preventive maintenance is based on pre-defined time and usage schedules; condition-based is triggered when certain conditions are observed; and predictive maintenance estimates the remaining useful life and failure probabilities. A maintenance involves the execution of a set of tasks as defined in a checklist, the replacement of spare parts, and the collection of data either for historical or verification purposes.

The Maintenance Management module supports the creation of maintenance plans and their associated activities. The MES ensures that maintenance plans are followed as defined and keeps track of the maintenance history for every equipment. As a fully integrated module, the usage counters are automatically increased as material is processed and prevents equipment from being used if maintenance is due. The system also checks the certifications of maintenance technicians and updates the inventory of spare parts as they are consumed. The Scheduling module is alerted of planned maintenance down times to ensure that equipment is unavaliable.
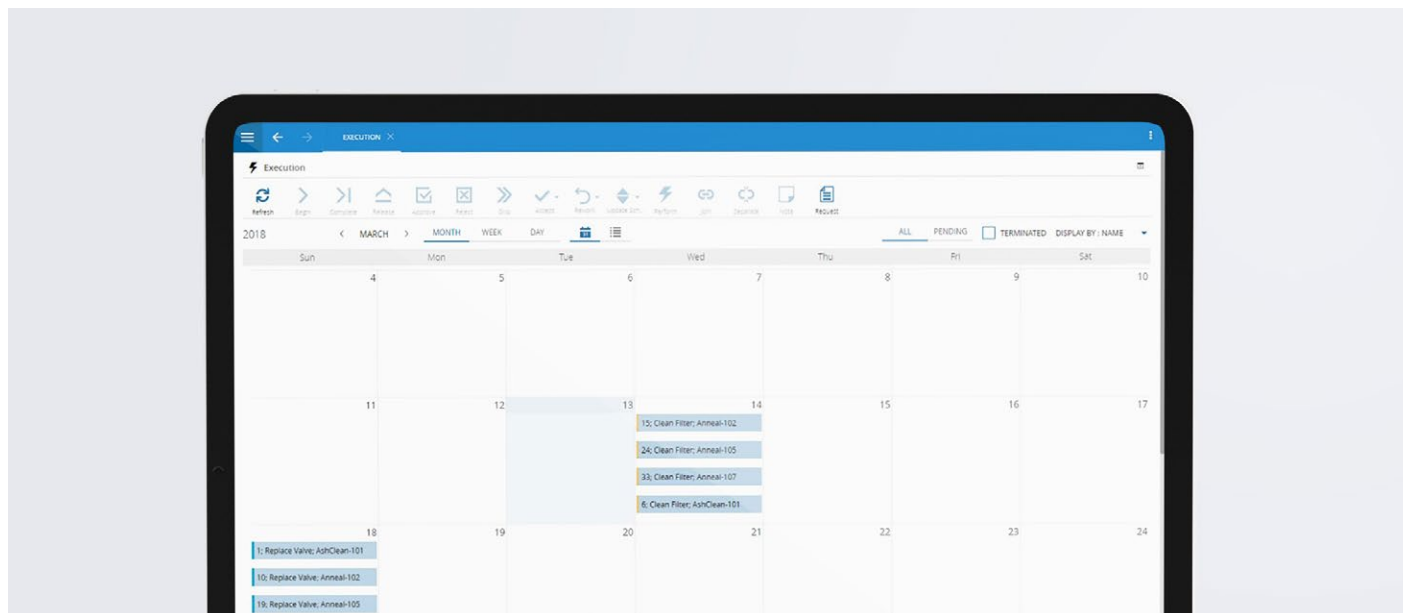

Figure 1 Maintenance activities visualization

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Key Features

- Support time-based, usage-based and ad-hoc (on demand) maintenance activities
- Support multiple maintenance plans per resource (equipment), container, area or material
- Support maintenance grace periods, between a user defined early due and late due
- Prevent resources, containers or materials from being used if a maintenance activity is after late due
- Define a checklist, data collection, a list of a SPC charts and a list of spare parts for every maintenance activity
- Support linked maintenance activities, (e.g. define that an annual maintenance includes a monthly maintenance)

- Support approving, rejecting, releasing, beginning, completing, accepting and reworking maintenance activities
- Trigger business rules when different schedule states of a maintenance activity are reached
- Enforce and track maintenance labor personnel and labor hours
- Automatically calculate costs based on labor and parts
- Visualize maintenance activities in a calendar view or as a table
- Integrate with material tracking, resource tracking, data collection, SPC, labor tracking, costing and Scheduling

Benefits

- Improved operational equipment effectiveness
- Better equipment utilization
- Better visibility and planning of maintenance personnel

- Reduction of downtime
- Improved maintenance history and traceability
- Improved spare parts inventory management

Figure 2 Maintenance activities visualization

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