

MRO in-service management

Providing total asset visibility

fact sheet

Siemens PLM Software

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► Summary

Teamcenter® software's maintenance, repair and overhaul (MRO) suite provides an in-service management solution that offers service organizations total visibility to configuration knowledge that comprehensively describes an entire base of capital assets in their operational state. Service teams use the solution to access, view and leverage a single integrated source of web-based information that maintains the true configuration and status of each operational asset – and its underlying systems, subsystems and components – in the field, as well as before and after the asset enters the service center.

Benefits

Improves productivity and decision making by enabling service teams to rapidly access and understand the configuration and usage of each capital asset in its current operational state – crucial for ensuring profitable performance based logistics (PBL) contracts

Facilitates better impact planning by providing service managers with full history views of a product/asset across all of its lifecycle states

Facilitates better asset utilization and maintenance planning by enabling service teams to assess accurate life characteristic status at the appropriate level

Increases point-of-service productivity by minimizing the time required to perform non-value tasks (such as searching for service information)

Improves value chain synergy by enabling service teams to exchange product and process information with distributed engineering, manufacturing and service organizations

Streamlines the validation process by enabling service organizations to ensure that approved configurations comply with their requirements before actual release

Improves data integrity by providing a neutral configuration structure that can be leveraged to define common asset models and variants

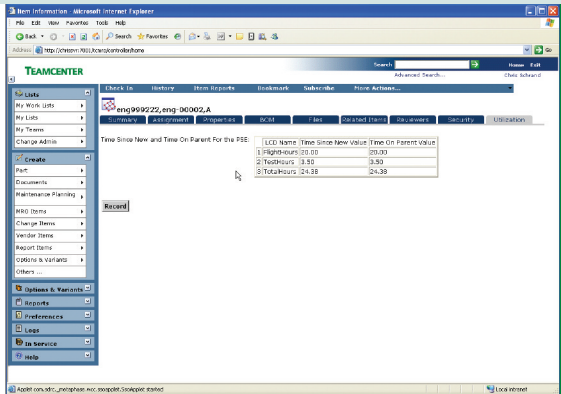
Teamcenter's in-service management solution provides service organizations with a wide range of operational knowledge above and beyond the design, engineering and manufacturing information generated earlier in the product lifecycle. Specifically, Teamcenter enables enterprises to capture and manage:

- Configuration information that describes capital assets in their operational state
- Change and event histories that describe individual assets and each of their traceable components, subassemblies and systems
- Technical information that defines the useful life of each of the asset's deployed components generically, as well as with respect to their specific usage and position
- Compliance standards and regulatory requirements that each operational asset must satisfy
- Quality levels that measure customer satisfaction, including asset availability, service turnaround and repetitive system events
- Profitability measures that monitor the performance of the service organization

Once this information is captured in Teamcenter, product teams and service/support organizations can leverage Teamcenter's configuration management capabilities to link physical product configurations (for example, configurations that incorporate serialized part and lot tracking) with each asset's as-designed, as-planned, as-built and as-maintained bill of material configurations.

These configurations enable service organizations to understand and manage an operational asset's allowable configurations. As a result, service teams are able to determine what approved parts, alternate parts and substitute parts can be used to resolve a service event and return an asset to service as rapidly as possible.

This total visibility also enables service teams to evaluate the impacts of proposed modifications, service bulletins and product/operational changes – as well as to assess the full impact of these changes in terms of their operational concerns and feed this information back to engineering and manufacturing before the proposed changes are implemented.



Features

Capture and management of as-built and as-maintained asset configurations

Definition, capture and management of usage data including the life characteristics of an asset's components, subsystems and systems

Capture and management of life characteristic counters (formula, derived and flow down), including tracking time-since-new, time-since-inspect, time-since-overhaul, time-since-repair and time on asset

Capture and management of deviations, waivers, variants and problem reports

Ability to support asset management from multiple perspectives, including on a non-traceable, serial, lot and serial-lot basis, as well as by location and position

Change management capabilities to monitor asset change and facilitate change impact analysis across system configurations

Workflow processing with service team rules and role definitions to facilitate review/approval, tasking and information flow throughout a global organization

Support for International Traffic in Arms Regulations (ITAR) export control to protect technical data access

Configuration validation to verify the compliance of approved configurations before release

Equally important, service teams can capture their event-related services experiences in Teamcenter and use its workflow capabilities to feed these experiences to engineering in continuous loops that facilitate both product and service improvement.

In addition, service organizations can leverage Teamcenter to provide service technicians with product and asset knowledge at the point-of-service. Typically, this knowledge will consist of operating procedures, training materials, technical manuals, service bulletins, compliance standards, safety procedures, preventive maintenance procedures, time-critical technical orders, animated simulations, engineering drawings/models, allowable configurations and a history of the asset and all of its parts.

Use cases

Improving service execution. Teamcenter rapidly delivers a full range of configuration and operational knowledge to service teams at their point-of-need. Access can be available at all enterprise locations from service centers to field locations and remote assignments. Service organizations can leverage Teamcenter's rules and role definition capabilities to ensure that the most recent service information is delivered in a format consistent with the task at hand and the individual technician's level of experience.

Measuring/improving service quality. For owners and operators of complex capital assets, the performance of the service organization plays a major role in determining the satisfaction of the asset's user communities. Many owners and operators measure the quality of their MRO processes by monitoring and trying to improve the performance of such metrics as service event turnaround, successful and accurate event resolution and expressed levels of customer satisfaction. Teamcenter enables operational, intermediate and service center teams to capture event-related service experience and monitor this information on a repeated basis to determine how factors such as improved processes, new technology and/or part enhancements directly influence service team performance. Equally important, Teamcenter's ability to provide service teams with web access to the latest, most accurate asset information improves organizational productivity and performance metrics, including first-time fix rates and MRO turnaround time. Teamcenter also provides the information required to support analytics and problem reporting, as well as for reporting part/asset performance and failure analysis.

Integrating service teams. Service organizations can use Teamcenter's in-service management solution in conjunction with Teamcenter's real-time conferencing, application sharing and visualization capabilities to enable team members to interactively work together around the globe. Managers can use Teamcenter's workflow capabilities to assign service tasks to team members while leveraging the in-service management solution to make sure that the right parts and the right information are ready to resolve both scheduled and unscheduled service events as quickly and cost effectively as possible.

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