Maintenance History

Technical systems management covers not only the demand for a documentation of the technical systems and support in planning and developing the maintenance notifications, but also a structure and long-term record of a maintenance history.

A maintenance history is important for the following reasons:

❑ Systems safety regulations require proof that the required maintenance and inspections have been carried out in the past.

Verification Requirement

❑ The history of a technical object contains important information regarding replacement investments. Apart from cost information, downtime factors and frequency of malfunction can also be a deciding factor in planning new investments.

Replacement Investments

❑ A detailed history is useful for maintenance planning. By analyzing completed orders, you can make comparisons between plants, technical systems, pieces of equipment or assemblies, from which you can conclude how to optimize your maintenance strategy. Being able to reference a similar archived order considerably simplifies and speeds up the planning process for the short-term planning of individual orders.

Repeat Planning

The automatic generation of the maintenance history is a feature of the PM System. When maintaining master data, creating and processing maintenance notifications, scheduling maintenance plans or processing orders, part of the maintenance history is created simultaneously.

Automatic Generation

The maintenance history consists of a:

❏ location history of the piece of equipment installed at functional locations

❏ notification history and completion confirmation documentation

❏ task history of completed orders including the resources used

This allows you to perform differentiated analyses by object, function or task-specific criteria.

The following examples illustrate the various options available:

Object-related History   At which functional locations was a particular pump installed over the past years? How was its usage related to its usage site?

Function-related History   Which pieces of equipment were installed at a particular functional location over the past years? Were there variations regarding the suitability of pieces of equipment from different manufacturers at this functional location?

Task-related History   At which functional locations or pieces of equipment was a particular type of damage determined, that ceased with the installation of a new replacement material?

Usage History

The usage history records the history of a piece of equipment in respect of its usage. It can relate to stages at which the piece of equipment was installed at a functional location, allocated directly to a usage site, for example a cost center, held in stock or transferred to a customer.

Definition

The occurrences that are to be considered as important for structuring a usage history can be defined using the customizing function.

As well as a usage history for a piece of equipment, you can also have a usage history for each functional location. This usage history provides information on all the pieces of equipment installed at the functional location over a period of time.

Object-related and Location-related
Usage History

New usage periods are created when the following is changed:

❑ location data for example functional location, location, area

❑ account assignment data, for example cost center, asset

❑ planning data, for example planning plant, planning group, responsible work center

❑ status, for example, freely available, undergoing testing, in production, cancelled

You can therefore not only record both locational and organizational changes, but also the changes to the condition of the piece of equipment.
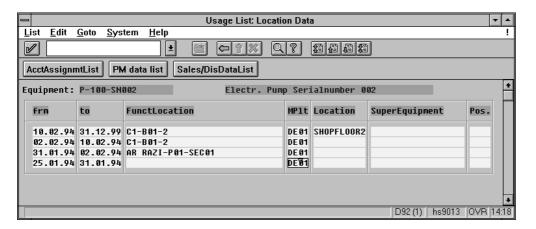

Figure 8-1: Equipment Usage History

You can also trace the individual changes to pieces of equipment, functional locations or assemblies, using change documents (planned).

Change Documents

Notification History

The status and notifications provide the individual maintenance notifications with additional information.

Notifications   Notifications are managed as historical notifications after completion. Together with the tasks resulting from the notifications, these form the notification history.

Tasks   If the tasks are global, they correspond to the whole notification. If, however, detailed completion confirmation for individual tasks or for repairing a fault is required, the action tasks are allocated to items within the notification. Predefined task catalogs, which contain frequent individual tasks for an object group, make it easier to create tasks. You can choose an unformatted text from the catalog.

Link to Order   If an order is created for a notification, or if the notification is assigned to an order, these links are also set in the history. In addition, new completion confirmations can be created during order processing or upon completion of the order and transferred to the history.

Selection and Evaluation   The archived maintenance notifications can be selected and evaluated according to variable criteria using the analysis and selection process of the PM System.
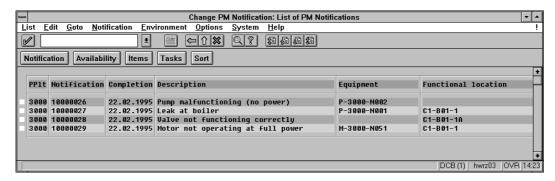

Figure 8-2: Selection of Completed PM Tasks

There are further extensive evaluation possibilities available in the PM-IS Information System.

Order History

Maintenance orders are continuously supplemented by the materials issued, and internal and external services rendered in the course of processing.

With the completion of an order, this information is transferred to the maintenance task history and is available for evaluations and statistics.

This part of the history contains a record of

❑   when tasks have been carried out on an object   **Contents of History**

❑   the type of tasks carried out

❑   the resources used for them

❑   the costs incurred

When an order is completed, detailed information on its development is available. This level of detail is usually not required over a longer period of time.

For this reason, it is planned that completed orders can be checked in separate archived orders. These are available over a longer period of time for analysis purposes, and are separate from the usual order reorganisation. These archived orders are automatically created when you delete the completed orders.   **Archived Orders**

Archived orders have the same structure as normal orders, although the information detail has been reduced in certain places. The following information is contained:

❑   order with reference to the maintenance objects

❑   notifications which led to this order or were assigned to this order in the course of processing

❑   planned and actual costs

❑   planned operations and their corresponding completion confirmations

❑   planned material and all material issued - both planned and unplanned

The system automatically structures the archived orders. However, a direct entry function for this history is planned. This will enable all tasks which are not processed in the PM System to be included in the order history.   **Direct Entry**

Selection and Evaluation   The order history can be selected and presented using the flexible analysis and selection methods available.

> What are the features of the maintenance history in the PM System?
>
> ❏   Comprehensive documentation of the life of a technical object
> ❏   Usage history, notification history and order history
> ❏   Analysis of history from the perspective of the function location, the piece of equipment and the type of task
> ❏   Automatic structuring of history upon installation/dismantling, notification creation and order completion