PM
Master Data 2

Course Objective

➢Understand the concepts of

    ✓Bills Of Material (BOM)

    ✓Work Center

    ✓Task List

❖Above tasks are divided in to three parts from Part 1 to Part 3

Part 1 – BOM Course titles

Bill of Material
Equipment BOM
Functional Location BOM
Material BOM

BOM Course Objectives

- ➢ Describe the concepts and criteria for:
  - ✓ Functional Location BOM
  - ✓ Equipment BOM
  - ✓ Material BOM
- ➢ Understand BOM usage for the planning of maintenance activities

Bill of Materials

✓ A Bill of Material (BOM) is a structured list of components that make up an object.

✓ A BOM is used to represent the structure of an object during spare part planning.

Assignment of Bill of Material

➢ Two ways of assigning BOM to a technical object are:

  ✓ Direct assignment or
  ✓ Indirect assignment

➢ Direct assignment is done through the creation of an Equipment or Functional location BOM. The BOM is created specifically for that technical object.

➢ Indirect assignment is done through the creation of a Material BOM that is entered into the Construction type field in the technical object record.

Part 1 – Course titles

Bill of Material
Equipment BOM
Functional Location BOM
Material BOM

Equipment BOM

➢ Direct assignment of the bill of materials to the equipment record.

➢ List of components (stock and non-stock) that are regularly used during the maintenance of the equipment.

➢ Will be created when:
   ✓ A new equipment record is created.
   ✓ An existing equipment record requires a spare parts list.

Creating Equipment BOM

➢ The BOM is created with reference to an individual piece of equipment.

➢ Components are specific for the individual piece of equipment.

➢ Enables material planning in maintenance orders and task lists to be performed more effectively.

➢ Multiple BOM for an equipment can be created.

Maintaining Equipment BOM

- ➢ Updating equipment BOM ensure data integrity

- ➢ Equipment BOM are changed when:
  - ✓ Additional component required
  - ✓ Existing component needs to be removed or substituted or quantities changed
  - ✓ BOM header description needs to be changed

- ➢ Equipment BOM are deleted when:
  - ✓ Equipment master record flagged for deletion

Part 1 – Course titles

Bill of Material
Equipment BOM
Functional Location BOM
Material BOM

Functional Location BOM

➢ Direct assignment of the bill of materials to the functional location.

➢ List of components (stock and non-stock) that are regularly used during the maintenance of the functional location.

➢ A functional location BOM is used in the following situations:

   ✓ When identical equipments are installed.

   ✓ Where common spares used for more than one equipment (Coupling used by motor and gearbox).

Creating Functional Location BOM

➢ The BOM is created with reference to an individual functional location.

➢ Components are specific for the individual functional location or equipment installed at the location.

➢ Enables material planning in maintenance orders and task lists to be performed more effectively.

➢ A functional location BOM can contain material BOM.

Maintaining Functional Location BOM

➢ Functional location BOM are changed when:
- ✓ New component required
- ✓ Existing component needs to be removed or substituted or quantities changed

➢ Functional location BOM are deleted when:
- ✓ Functional location master record flagged for deletion
- ✓ Functional location BOM created incorrectly

➢ Updating functional location BOM ensures that accurate information is available for planning

Part 1 – Course titles

Bill of Material
Equipment BOM
Functional Location BOM
Material BOM

Material BOM

- ➢ A material BOM is created with a direct link to a material master record.

- ➢ Contains a list of stock or non-stock components

- ➢ Can be used by multiple technical objects.

- ➢ A material BOM is used in the following situations:
  - ✓ For assemblies
  - ✓ For identical equipment that have a material number.

Material BOM cont..

➢ Enables material planning in maintenance orders and task lists to be performed more effectively.

➢ A material BOM can contain other material BOM.

➢ Can be created with reference to another material BOM.

Part 2 – Work center Course titles

Work center over view
Work center Maintenance
Work center hierarchy

Course Objectives Work Centers

➢ Discuss the concepts of work centers

➢ Understand the different work center categories and its usage.

➢ Discuss the concepts of a work center hierarchy

➢ Create and manage work centers

Work Centers

✓ A labor work center is a grouping of craftsmen that perform maintenance work.

✓ A work center can also represent a piece of equipment used in maintenance operations

✓ The work center is used to plan maintenance activities in task lists and maintenance orders.

Work Centers Data

- ✓ Default values maintained in the work center data are copied to the PM order.

- ✓ Costing information used to determine the activity cost.

- ✓ Capacity details are used to schedule the operation.

- ✓ Operation can be scheduled using scheduling information

Part 2 – Work center Course titles

Work center over view
Work center Maintenance
Work center hierarchy

Creating Maintenance Work Centers

➤ When creating a work center, the work center category must be specified.

➤ Work center can be created by copying from existing work center.

➤ The information from the existing work center is copied into the new work center and can be changed as required.

➤ Work center can be renamed

Main Work Center

➢ A main work center will be used in the main work center field for the following objects:

- ✓ Task lists
- ✓ Maintenance orders
- ✓ Maintenance notifications
- ✓ Equipment
- ✓ Functional locations

➢ Used within capacity evaluation to aggregate operational work centers.

PM Machine Work Center

- ➢ Represent fixed machines and fleet objects that need to be scheduled and costed in maintenance orders.

- ➢ PM Machine work centers are used to assign against operations in maintenance task lists and orders.

- ➢ Used within capacity evaluation.

Work Center Capacity

➢ The capacity of a work center is the total number of hours per day a work center can perform maintenance activities.

➢ Commonly used three work center capacity categories are:

- ✓ 001 Machines
- ✓ 002 Labor
- ✓ 022 Pooled capacity

➢ For categories 001 & 002 the capacity is defined within the work center.

➢ Pooled capacity is created outside the work center and assigned to the work center.

Pooled Capacity

➢ Allows you to assign multi-skilled technicians to more than one work center.

➢ The capacity of the multi-skilled technicians is created as a pooled capacity separate to the work centers.

➢ The pooled capacity is then allocated to all relevant work centers.

➢ When maintenance activities are assigned to the work centers the pool capacity is used in capacity evaluation and leveling reports.

➢ If a change is made to the pool capacity it is reflected in all relevant work centers' available capacity.

Part 2 – Work center Course titles

Work center over view
Work center Maintenance
Work center hierarchy

Work Center Hierarchy

➢ Work centers are grouped together into a work center hierarchy.

➢ Each level within the hierarchy will be represented by a work center(s). Can consists of 3 levels.

➢ Hierarchies are used in capacity planning to cumulate available capacity and capacity requirements.

➢ Can consist of 3 levels.

➢ The lowest level of the hierarchy will consists of operational work centers.

➢ The second lowest level of the hierarchy will consists of main work centers.

➢ Hierarchy work centers are used in the first level of the hierarchy.

Transaction code tips

IR01 – Create Work Center

IR02 – Change Work Center

CR11 – Create Capacity

CR22 – Change Hierarchy

Part 3 – Task List Course titles

Task List over view
Equipment Task List
Functional Location Task List
General Task List

Course Objectives Task Lists

➢ Describe the concepts and criteria for:
- ✓ General Task Lists
- ✓ Equipment Task Lists
- ✓ Functional location Task Lists

➢ Understand usage of maintenance task lists for the planning of maintenance activities.

➢ Understand usage of maintenance task lists are used within preventive maintenance.

Maintenance Task Lists

✓A maintenance task list is a pre-defined sequence of maintenance events that are performed repeatedly within a company.

Maintenance Task List

✓Task lists are used for preventive and corrective maintenance

✓Task lists are copied into the Maintenance order

Maintenance Task List Structure

➢Task List Header
  ✓Description
  ✓General data

➢Task List operation
  ✓Operation sequence
  ✓Standard expected hours

➢Component / PRT assignment
  ✓Required components can be assigned
  ✓PRT can be assigned to an operation

Task List Header Detail

➢ Task list are created for each plant.

➢ Each task list will belong to a task list group and will have its own counter number.

➢ Statuses are used to control the creation and use of the task lists.

➢ A maintenance strategy is entered if the task list is created for use within a strategy controlled maintenance plan.

➢ The profile is used when creating a task list to default details into the task list.

Task List Operation Detail

➢ The operations of the task list detail the activities to be performed within the task list.

➢ A task list can contain multiple operations.

➢ There are two types of operations:
   ✓ Internal Processing Operations
   ✓ External Processing Operations

➢ Depending on the operation control key the operation is planned differently.

Internal Processing Operations

➢ Following are the required details to create an internal processing operation:

- ✓ Work center
- ✓ Control key
- ✓ Operation description
- ✓ Work effort
- ✓ Number of people

➢ An operation can only have one work center assigned.

➢ Additional work centers can be added to add additional operations.

External Processing Operation

➢ To plan maintenance activities for external processing use:

    ✓ Defined Control key indicating it as external operation.
    ✓ This control key will allow you to specify services using service master records for work agreed between the vendor and SABIC. (e.g. motor overhaul, motor rewiring) or using text services

➢ Purchasing information containing following info must be entered.

    ✓ Planned delivery time
    ✓ Cost element
    ✓ Material group
    ✓ Vendor
    ✓ Purchasing Group
    ✓ Purchasing Organization

Service Specification

➢ Against the external operation the individual services are planned.

➢ Service master records or text services are used to plan the required activities.

➢ For each service the quantity, unit of measure and price is required.

Task List Operation Detail (Cont.)

➢ It is possible to assign the following items for an operation:

  ✓ Components
  ✓ Production Resource Tools
  ✓ Maintenance Packages
  ✓ Relationships
  ✓ Inspection Characteristics

➢ Additional text to describe the operation can be entered using long text for an operation.

Production Resource & Tools

➢ If a PRT is required to complete an operation the PRT is planned against the operation.

➢ The required usage and PRT control key are entered for each PRT assigned to the operation.

Maintenance Packages

➢ If the task list is used for a strategy based preventive maintenance plan, the strategy is entered on the task list header.

➢ One or more maintenance packages are assigned to the individual operations.

➢ The maintenance package defines when the operation is to be performed i.e the frequency.

➢ When the maintenance package falls due, the operations assigned to the package will be included in the maintenance order.

Part 3 – Task List Course titles

Task List over view
Equipment Task List
Functional Location Task List
General Task List

Equipment Task Lists

➢ Created specifically for a piece of equipment and is unique for that piece of equipment.

➢ It is possible for an equipment to have more than one task list created.

➢ Each task list is given a counter number to identify it.

➢ Equipment task list can be created by copying and required data can be changed.

Part 3 – Task List Course titles

Task List over view
Equipment Task List
Functional Location Task List
General Task List

Functional Location Task Lists

➢ Created specifically for a functional location and can only be used for that functional location.

➢ It is possible to have more than one task list created for a functional location.

➢ Each task list is given a counter number to identify it.

➢ When creating a functional location task list is possible to copy from an existing task list and make the necessary changes.

Part 3 – Task List Course titles

Task List over view
Equipment Task List
Functional Location Task List
General Task List

General Task Lists

➢ Used as a common task list for equipment or functional locations. Not specific to any equipment and functional location

➢ Logical naming conventions are given to general task list group names. Can also be identified with group name and counter

➢ Each task list within a general task list group has a unique counter.

➢ Used for preventive, corrective and refurbishment maintenance.

Transaction code tips

IA01 – Create Equipment Task List

IA02 – Change Equipment Task List

IA11 – Create Functional Location Task List
IA12 – Change Functional Location Task List

IA05 – Create General Task List
IA06 – Change General Task List

Summary

You should have understood the concept of

BOM – Bill Of Material

Work Center

Task List