Inspection Lot Creation (QM-IM-IL)

HELP.QMIMIL

Release 4.6C

SAP™

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Inspection Lot Creation (QM-IM-IL)

Purpose

In the *Quality Management* (QM) component, you process quality inspections on the basis of inspection lots [Page 7]. If you want to inspect a specific quantity of a material or a piece of equipment, an inspection lot must be created in the system. The documentation describes how inspection lots are created automatically or manually and how you use the inspection lots to process different types of inspections. Once an inspection lot has been created, you can inspect the goods, record the inspection results or defects, and complete the inspection with a usage decision.

Implementation Considerations

You should implement the *Inspection Lot Creation* component if you want to create inspection lots in the system. You must also implement the following additional QM components to be able to plan, process, and complete the inspections:

- *Basic Data* (QM-PT-BD)

- *Inspection Planning* (QM-PT-IP)

- *Results Recording* (QM-IM-RR)

- *Defects Recording* (QM-IM-RR-DEF)

- *Inspection Lot Completion* (QM-IM-UD)

Integration

You must also implement one or more of the following components in the logistics supply chain, depending on your requirements for inspection lot processing:

Component	You will need this component if you want to:
Materials Management (MM)	Manage materials and material stocks in the system and process inspections for goods movements
Production Planning and Control (PP)	Process inspections during production when production orders or process orders are released
Sales and Distribution (SD)	Process goods issue inspections when deliveries are created
Plant Maintenance (PM)	Process calibration inspections for equipment or functional locations when maintenance orders are released

Inspection Lot

Definition

A request to a plant to inspect a specific quantity of material or one or more pieces of equipment or functional locations. An inspection lot is documented by an inspection lot record in the R/3 System.

Use

The system uses the inspection lot to record, process, and manage information for a quality inspection. This information includes:

- Inspection processing data such as:
    - Inspection lot origin
    - Inspection date
    - Processing status of inspection lot
    - Account assignment information for cost settlement
- Inspection specifications (for example, the task list or material specification according to which the goods in the inspection lot will be inspected)
- Inspection results
    - Recorded characteristic values
    - Recorded defects
- Appraisal costs (for example, the costs incurred for inspecting the goods)
- Usage decision (a decision that specifies whether the goods in the inspection have been accepted or rejected)

An inspection lot can be created manually by the user or automatically by the system.

Integration

Inspection lots can be created automatically by events triggered in other components of the logistics supply chain. For example:

- Goods movements or stock postings in the *Materials Management* (MM) component (for example, goods receipt, goods issue, or a stock transfer)
- Creation of production orders or process orders in the *Production Planning and Control* (PP) or *Production Planning for Process Industries* (PP-PI) components
- Creation of deliveries in the *Sales and Distribution* (SD) component
- Creation and release of maintenance orders in the *Plant Maintenance* (PM) component
- Deadline monitoring of batch materials; for example, when the dates for recurring inspections or shelf life expiration are reached (*Batch Management* [LO-BM] component)

Partial Lot

Definition

A partial quantity of a material or product to be produced or manufactured.

Use

You can use partial lots to manage goods or materials with different quality characteristics. If you confirm that the goods being produced for a production order are not consistent in quality, you can separate the materials according to their quality characteristics and maintain these quantities in separate partial lots. In this way, you can divide the total quantity of a production order into several smaller partial lot quantities.

Partial lots are typically used in production processes to manage batch materials (either in the form of raw materials or finished products).

Integration

A partial lot can contain the produced quantities of materials that are similar in quality and that were inspected in several inspection points. If the finished product is managed in batches, you can assign the partial lots to individual batches. You can assign several partial lots to a single batch.

Inspection Lot Creation

Purpose

Inspection processing begins with the creation of an inspection lot. An inspection lot can be created manually by the user or automatically by the system. In this process, the system or the user executes several functions that will create and prepare an inspection lot for processing in a quality inspection.

Process Flow

When an inspection lot is created, the following functions are executed in the sequence shown:
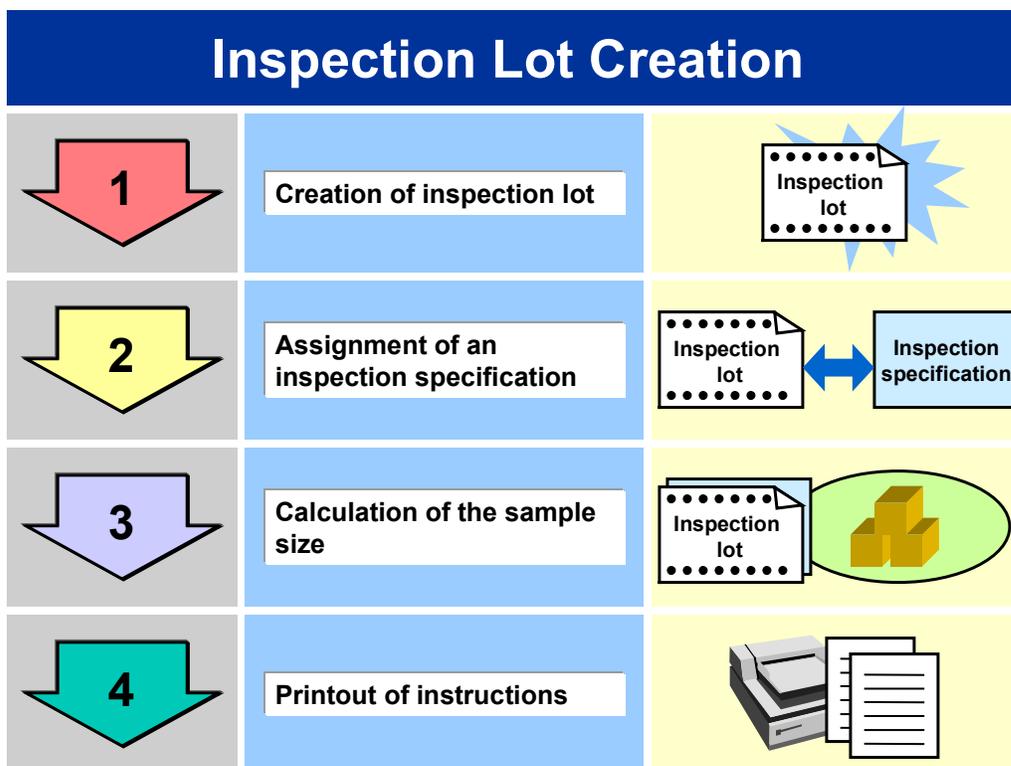
Each of the functions in this process can be executed automatically by the system or manually by the user. A combination of automatically and manually executed steps is also possible. Depending on your inspection processing requirements and system settings, not all of these functions are compulsory.

For more detailed information about the functions in this process, see:

- Inspection lot creation [Page 11]

- Assignment of an inspection specification [Page 20]

- Calculation of sample size [Page 25]

- Printout of instructions [Page 29]

Inspection Lot Creation

Result

When all steps in the inspection lot creation process have executed, the inspector can:

- Inspect the goods in the inspection lot and record inspection results and/or defects
- Complete the inspection

See also:

Results Recording [Ext.]

Defects Recording [Ext.]

Inspection Lot Completion [Ext.]

Inspection Lot Creation

Use

Inspection lots can be created automatically by the system or manually by the user. QM supports a number of variants for creating inspection lots in the system. The system uses the following basic controls to create an inspection lot and to determine how the inspection will be processed:

- Inspection lot origin [Page 13]

- Inspection type [Page 15]

- Inspection settings in the material master record [Ext.]

Prerequisites

To permit inspection lots to be created automatically or manually, make sure the appropriate controls have been set in the areas listed below, based on your requirements for inspection lot processing:

- Customizing for *Inspection Lot Processing*

- Customizing for *Inspection Lot Creation*

- Inspection settings in the material master record

- Quality info-record (for delivery relationships in procurement)

- Customer info-record (for delivery relationships in *Sales and Distribution*)

Features

Automatic Creation of Inspection Lots

If the appropriate system settings have been made, the system can create inspection lots automatically for a number of inspection lot origins. The following events can trigger the automatic creation of inspection lots:

- Goods movements [Page 32]

- Creation and release of orders [Page 57]

- Deadline monitoring of batch materials [Page 54]

- Creation of deliveries in SD [Page 68]

Manual Creation of Inspection Lots

You can create inspection lots manually for all inspection lot origins **except the following**:

- 10 (Delivery to customer with sales order)

- 11 (Delivery to customer without sales order)

- 12 (General delivery)

- 13 (Repetitive manufacturing)

- 14 (Plant maintenance)

Inspection Lot Creation

See also:

Inspection Lot Origin

Definition

Identifies the origin of an inspection lot when an inspection lot is created in the system.

Use

The system uses inspection lot origin and the inspection type [Page 15] to determine how an inspection lot will be created and processed.

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> The inspection lot origins are predefined by SAP in Customizing for *Inspection Lot Creation*. You **cannot** define your own inspection lot origins.

In Customizing for *Inspection Lot Creation* (*Maintain inspection lot origins and assign inspection types*), you can define the following control parameters for each inspection type:

- Number range (user-defined or system-generated inspection lot number)

- Dynamic modification criteria

- Task list type that will be selected when the system assigns an inspection specification to the inspection lot

- Task list status that will be selected when the system assigns a task list to the inspection lot

Structure

The standard system contains the following predefined inspection lot origins:

Number	Inspection lot origin	Lot creation
01	Goods receipt	Automatic / manual
02	Goods issue	Automatic / manual
03	Production	Automatic / manual
04	Goods receipt from production	Automatic / manual
05	Miscellaneous goods receipts	Automatic / manual
06	Return from customer	Automatic / manual
07	Audit	Manual
08	Stock transfer	Automatic / manual
09	Recurring inspection	Automatic / manual
10	Delivery to customer with sales order	Automatic
11	Delivery to customer without sales order	Automatic
12	General delivery	Automatic
13	Repetitive manufacturing	Automatic
14	Plant maintenance	Automatic

Inspection Lot Origin

15	Sample management	Manual
89	Miscellaneous	Manual

Integration

In Customizing for *Inspection Lot Creation* (*Maintain inspection lot origins and assign inspection types*), you can assign one or more inspection types to each inspection lot origin.

Inspection Type

Definition

Determines how a material, piece of equipment, or functional location is to be inspected.

Use

When an inspection lot is created, the system uses the inspection lot origin [Page 13] and active inspection type(s) to determine how the inspection lot will be processed. Depending on whether the inspection lot is created automatically or manually, the system determines the inspection type as follows:

- When the system creates an inspection lot automatically, it determines the inspection type automatically. For more information on how the system determines the inspection type in such cases, see Inspection Type for Automatically Created Lots [Page 17].

- When you create an inspection lot manually, you must first specify the inspection lot origin. If more than one inspection type is active for a material in the material master, the system prompts you to choose an inspection type.

> Although the standard system contains a number of predefined inspection types, you **can** define additional inspection types to meet your requirements for inspection lot processing.

Controls associated with the inspection type

In Customizing for *Inspection Lot Creation* (*Maintain inspection lot origins and assign inspection types*), you can define the following controls for each inspection type:

Inspection lot processing	• Assignment of a status profile
	• Proposal of a QM order type for the inspection type
	• Proposal of a selected set for the usage decision
Print control	• Specifying when inspection instruction will be printed
	• Specifying when sample-drawing instruction will be printed
Results recording	• Specifying the default recording view
	• Specifying which notification type will be created for activated defects
	• Specifying how many notifications will be created for each inspection lot
Inspection planning	Specifying the task list usage (for example, for goods receipt, production, and so on)

Structure

The standard system contains the following predefined inspection types:

Inspection Type

Inspection Lot Origin	Inspection Types	Description
01	01	Goods receipt inspection for a purchase order
	0101	Model inspection for a goods receipt for a purchase order
	0130	Goods receipt inspection for external processing
02	02	Goods issue inspection
03	03	In-process inspection for a production order
04	04	Goods receipt inspection from production
05	05	Inspection for other goods receipt
06	06	Inspection for a customer return
07	07	Audit
08	08	Inspection for a stock transfer
	0800	Inspection lot creation upon QM activation
09	09	Recurring inspection of batches
10	10	Inspection for a delivery to customer (with reference to sales order)
11	11	Inspection for a delivery to customer (without reference to a sales order)
12	12	Inspection for a general delivery
13	13	In-process inspection for repetitive manufacturing
14	14	Inspection in Plant Maintenance
15	15	Inspection for physical samples
89	89	Miscellaneous inspection

Integration

An inspection type is assigned to an inspection lot origin. You can assign more than one inspection type to a single inspection lot origin.

Inspection Type for Automatically Created Lots

Use

When the system creates an inspection lot automatically, it must determine which inspection type to use. Depending on various system and Customizing settings, the system normally selects one of the following inspection types:

- **Default inspection type**

- **Preferred inspection type**

For inspection lot origins 01, 03, 10, 11, 12, 14, the system may select an inspection type other than one of the above. Special rules apply for these inspection lot origins (see "Features" below).

Prerequisites

To ensure that the system can select a default inspection type or preferred inspection type, make sure the following conditions have been met:

- You define the default inspection type in Customizing for *Inspection Lot Origin* by assigning an inspection type to variant 01 for the corresponding inspection lot origin. The system uses the default inspection type if this inspection type is active in the inspection settings of the material master.

- In the *Inspection settings* of the material master, you can specify a preferred inspection type for each inspection lot origin. If you set the indicator *Preferred inspection type* for an inspection type, the system uses this inspection type to automatically create an inspection lot. This inspection type has priority over the default inspection type.

    If you do not set the indicator for the preferred inspection type and several inspection types are active in the material master, the system uses the default inspection type.

    If you set the indicator for the preferred inspection type, but the corresponding indicator for activating the inspection type is not set, the system uses the default inspection type.

Features

Special rules apply when the system determines the inspection type for the inspection lot origins listed in the following table:

Inspection lot origin	Determination of inspection type

Inspection Type for Automatically Created Lots

01 − GR for purchase order	• If *QM in Procurement* is not active or a status profile does not exist for the vendor/material combination in the quality info record, the system selects an inspection type in the following sequence:
	− Preferred inspection type in material master
	− If the indicator for the preferred inspection type is not set, the system selects the default inspection type
	• If *QM in Procurement* is active and a quality info record with a status profile exists, the system determines the inspection type on the basis of the status that **follows** the current status. If an inspection type is not assigned to the status during which the inspection lot was created, the system selects the default inspection type.
	• If a goods receipt is posted for an externally processed production operation, the system selects the inspection type stored in the operation of the order. You can store this inspection type in the respective operation of a routing.
03 − Production	With this lot origin, you must specify an order type when you create a production or process order. You can assign an inspection type to this order type in Customizing.
	When the system creates an inspection lot automatically, it selects this inspection type if it is active in the inspection settings of the material master. If not, the system searches for an inspection type in the following sequence:
	• Preferred inspection type in material master
	• If the indicator for the preferred inspection type is not set, the system selects the default inspection type
10, 11, and 12 − Deliveries in SD	With these lot origins, you can assign an inspection type to the delivery category.
	When the system creates an inspection lot automatically, it selects this inspection type if it is active in the inspection settings of the material master. If not, the system searches for an inspection type in the following sequence:
	• Preferred inspection type in the material master
	• If the indicator for the preferred inspection type is not set, the system selects the default inspection type
14 − Plant maintenance	With this lot origin, the system selects the inspection type that is assigned to the order type in Customizing for *PM Orders and Service Orders*.

Inspection types in customer enhancements	If the system finds an inspection type in a customer enhancement, this inspection type has priority over all others.
	Exceptions – this does not apply:
	• To inspections for deliveries (lot origins 10, 11, and 12)
	• To source inspections
	• To recurring inspections (lot origin 09)
	• If an inspection type is specified in a status profile in a quality info record

Assignment of an Inspection Specification

Use

Once an inspection lot has been created, an inspection specification is usually assigned to it. The system can assign an inspection specification automatically or you can assign one manually.

An inspection specification must be assigned to an inspection lot if you want to record inspection results for inspection characteristics (that is, the corresponding indicator is set in the inspection settings of the material master). If you do not set this indicator, an inspection specification does not have to be assigned to the inspection lot. In this case, you can only record defects for the inspection lot.

Integration

An inspection specification can consist of the following objects:

- A task list (for example, an inspection plan, a routing, or a master recipe)

- A material specification

- Specifications from the variant configuration (for a product variant)

- Specifications from the batch determination

Features

Criteria for selecting an inspection specification

When the system selects an inspection specification, it takes the following criteria into consideration:

- Material, vendor, and customer to which the inspection specification applies

- Key date (or valid-from date) of inspection specification

- Plant

- Task list status

- Task list type (for example, inspection plan, routing, reference operation set)

- Inspection lot origin

- Inspection type

- Task list usage (goods receipt, production, plant maintenance, and so on)

Assigning an inspection specification

The system can assign an inspection specification automatically or you can assign it manually under the following circumstances:

- If the material for which an inspection lot is being created has been assigned to only one inspection specification, the system automatically selects and assigns this specification to the inspection lot.

- If the material has been assigned to several different inspection specifications (for example, several different inspection plans), the system cannot assign the inspection specification automatically. In this case, you must assign the specification manually.

> The system cannot calculate the sample size for the inspection lot until you assign the inspection specification manually.

Selecting an inspection specification if several specifications apply

In the inspection settings of the material master, you can specify that a material can be inspected on the basis of several different inspection specifications. For example, you can set the following indicators simultaneously:

- *Inspect according to batch*

- *Inspect with material specification*

- *Inspect with task list*

- *Inspect according to variant configuration*

In this case, the system chooses the inspection specifications in the following order:

1. Specifications from variant configuration or batch determination

2. Material specification

3. Task list

> The specifications from the variant configuration and batch determination are mutually exclusive, since they apply to different inspection lot origins. The variant configuration applies to inspection lot origins 1, 3, and 4, while the batch determination applies to inspection lot origins 10, 11, and 12.

See also:

Assigning an Inspection Specification Manually [Page 22]

Master Inspection Characteristics and Class Characteristics (Effect Upon Lot Creation)

Assigning an Inspection Specification Manually

Use

You can assign an inspection specification manually:

- When you create an inspection lot manually

- If the system creates an inspection lot automatically, but cannot select an inspection specification

- If you want to assign a different inspection specification to an inspection lot that currently has a specification assigned to it.

Prerequisites

If the sample size has already been calculated for the inspection lot, you must reset the sample calculation [Page 74] before you can assign another inspection specification to an inspection lot.

Procedure

The following procedure describes how to assign a different inspection specification to an inspection lot that already has a specification assigned to it.

1. Choose *Logistics → Quality management → Quality inspection → Inspection lot processing → Inspection lot → Change*.

   The initial screen for changing an inspection lot appears.

2. Enter the number of the inspection lot you want to change.

3. Choose *Enter*.

   The screen for changing the inspection lot appears.

4. Choose tab page *Inspection specs*.

   The information for the inspection specification appears.

5. Choose *Edit → Choose task list/spec*.

   If only one inspection specification has been assigned to the material, the specification is automatically copied into the inspection lot.

   If several inspection specifications have been assigned to the material, the system displays a dialog box from which you can select a specification.

6. Save the inspection lot.

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   If you save an inspection lot without assigning an inspection specification to it, the system cannot calculate the sample size and you cannot record results or make the usage decision for the inspection lot.

Characteristic Specifications from the Variant Configuration

Purpose

When you inspect a configurable product that can be assembled from different parts, you can use a combination of different specifications to carry out the inspection. In addition to a task list and/or material specification, you can inspect the product using characteristic specifications from the variant configuration.

> A customer orders a pump with several configurable parts. One of these parts consists of a drive shaft with a feather key. The "length of the feather key" is defined as an inspection characteristic for a quality inspection.

When you record inspection results, you process and valuate the characteristic specifications in the same way that you valuate the other inspection characteristics. No knowledge of object dependencies are required in this process.

You can inspect a product using characteristic specifications from the variant configuration for the following inspection lot origins:

- 01 (goods receipt for purchase order)

- 03 (inspection during production)

- 04 (goods receipt from production)

Prerequisites

To inspect a product using characteristic specifications from the variant configuration, the following conditions must be met:

- The indicator for an inspection on the basis of the variant configuration is set for the desired inspection type in the inspection settings of the material master.

- Class characteristics from the Classification System are linked to master inspection characteristics in QM. This allows the system to copy the characteristic specifications from the variant configuration into the inspection lot.

> If qualitative characteristics are to be valuated on the basis of a selected set, the system **always** uses the valuation assigned to the respective codes in the selected set. This is the case even if the code recorded in results recording was selected as a characteristic specification in the configuration.

Process Flow

1. A sales order specifies a configurable product based on a customer's specifications.

2. The system creates an inspection lot as follows, depending on the inspection lot origin:

Inspection lot origin	Lot creation process

Characteristic Specifications from the Variant Configuration

01 (Goods receipt for purchase order)	A purchase requisition, created in material requirements planning, leads to the creation of a purchase order. When a goods receipt is posted for the purchase order, the system automatically creates an inspection lot.
03 (Inspection during production)	A production order is created for a sales order ("make-to-order" production). When the production order is released, the system automatically creates an inspection lot.
04 (Goods receipt from production)	A production order is created for a sales order ("make-to-order" production). When a goods receipt is posted for the production order, the system automatically creates an inspection lot.

3. The characteristic specifications from the sales order are copied into the inspection lot. All other information (for example, control indicators) is supplied by the master inspection characteristic.

Result

If a master inspection characteristic that is linked to a class characteristic is also contained in the task list and/or material specification, the system selects the inspection specification from the following sources in the order shown:

1. Variant configuration

2. Material specification

3. Task list

If the master inspection characteristic is not contained in the task list or material specification, it is appended to the last operation of the inspection specifications contained in the inspection lot.

If you inspect a product without a task list, the system creates an operation in the inspection specifications contained in the inspection lot (in such cases, you must define a corresponding operation number in Customizing for the inspection type).

See also:

Variant Configuration [Ext.]

Link Between Master Inspection Characteristic and Class Characteristic [Ext.]

Calculation of Sample Size

Use

Once an inspection specification has been assigned to an inspection lot, the sample size must be calculated for the inspection lot. The sample size can be determined as follows:

- The system calculates the sample size automatically.

- You trigger the calculation of the sample size manually and the system then calculates the sample size.

- You can enter the sample size manually.

The sample size must be calculated before you can print the sample drawing instructions or the inspection instructions (see Printout of Instructions [Page 29]).

Prerequisites

The system can only calculate the sample size automatically if you use an inspection specification to inspect the goods in the inspection lot.

Features

The following table describes the methods in which the sample size can be calculated for an inspection lot:

Method	Description
Automatic calculation of the sample size	If you intend to inspect the goods in an inspection lot using an inspection specification, the system uses the sampling procedures assigned to the inspection characteristics in the inspection specification and the existing quality level to calculate the sample size automatically.
	If you intend to inspect the goods in an inspection lot without an inspection specification, the system calculates the sample size using one of the following controls in the inspection data of the material master:
	• Value entered for the *Inspection %* field
	• 100% inspection indicator
Triggering the calculation of the sample size manually	You may want to trigger the calculation of the sample size manually even though you intend to inspect the goods with an inspection specification. In this case, you must:
	• Set the *Manual sample calc.* indicator in the inspection settings of the material master
	• Trigger the sample calculation in the inspection lot by choosing *Edit → Sample calc.*

Calculation of Sample Size

Manual entry of the sample size	If you intend to inspect the goods in an inspection lot without an inspection specification and you want to enter the sample size manually, you must activate the *Manual sample entry* indicator in the inspection settings of the material master.

Result

After the sample has been calculated automatically or entered manually, the system changes the inspection lot status to reflect that the sample size has been calculated. If in the process of calculating the sample size, the system determines that the current inspection stage for the lot is a "skip", the system displays a corresponding message and the inspection lot status is set accordingly.

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> In some cases, the system may display a message that the sample size has been calculated. However, after checking the sample size, you determine that the sample size is zero. This occurs if the inspection specification contains only optional characteristics, which are not used in the sample calculation.

See also:

Calculating the Sample Size (Example) [Page 27]

Cancellation of Sample Calculation [Page 74]

Calculating the Sample Size

The table and information below provides an example of how the system calculates the sample size:

Operation	Characteristic	Sampling procedure assigned?	Sample size
10	10	Yes	3 kg
	20	No	1kg
	30	Yes	5 kg
20	10	No	1 kg
	20	Yes	2 kg

- Sampling procedures are assigned to characteristics 10 and 30 in operation 10, and characteristic 20 in operation 20. The system calculates the samples for these characteristics on the basis of these sampling procedures.

- For the characteristics without sampling procedures, the sample size is based on the unit of measurement defined in the material master (1 kilogram in this example).

The system checks the sample size for each characteristic and uses the largest individual sample size as the sample size for the inspection lot. In this example, the sample size for the inspection lot is taken from characteristic 30.

Resetting the Sample Calculation

Use

In some cases, you may want to reset or cancel the sample calculation for an inspection lot (for example, because you want to use a different inspection plan to inspect the goods). As you can only reset the sample calculation under certain conditions, the system first checks whether the status of the inspection lot will allow you to execute this function.

Prerequisites

You can only reset the sample calculation for an inspection lot if you have not:

- Marked the inspection lot for cancellation

- Recorded inspection results for the inspection lot

- Recorded defects for the inspection lot

- Made a usage decision for the inspection lot

Features

When you reset a sample calculation, the system:

- Displays information about the activities that have been processed for the inspection lot (for example, sample-drawing instruction was printed, inspection scope for the inspection lot was dynamically modified, physical samples were created, and so on)

- Sets the inspection lot status that existed before the sample size was calculated

Activities

You choose *Logistics → Quality management → Quality inspection → Inspection lot processing → Inspection lot → Reset sample*.

You then call up the desired inspection lot and save the data to reset the sample calculation.

Printout of Instructions

Use

Once the sample size has been calculated for an inspection lot, the sample-drawing instruction [Page 31] and inspection instruction [Page 30] can be printed. The system can print these instructions automatically or you can print them manually.

Prerequisites

You can only print out an inspection instruction if you use an inspection specification to inspect the goods in the inspection lot.

If you want the system to print out the instructions automatically when the inspection lot is created, you must set the appropriate indicators for the print control in Customizing for maintaining the inspection type.

Features

The system supports the following features for printing out instructions:

Specifying when an instruction should be printed out	In Customizing for maintaining inspection types, you can specify whether the sample drawing instruction and/or inspection instruction should be printed automatically when the inspection lot is created.
Printing an inspection instruction even though you will not record characteristic results	If you intend to use an inspection specification to inspect the goods, but have not set the *Inspect characteristics* indicator in the inspection settings of the material master, you cannot record inspection results. You can still, however, print out an inspection instruction containing a list of the characteristics.
Printing different inspection instructions for different work centers	If you assign a printer to one or more work centers, you can selectively print out different inspection instructions that apply to the different work centers.

Activities

If the appropriate settings have been made in Customizing, the system prints the instructions automatically when it creates an inspection lot.

To print out the instructions manually, you choose one of the following options when you create or change an inspection lot:

* *Extras → Print → Sample-draw. instr.*

* *Extras → Print → Insp. instr.*

Inspection Instruction

Definition

An instruction that describes the contents and procedures of an inspection to be carried out at a specific work center.

Use

The inspector uses the inspection instruction as a guideline for inspecting the goods in an inspection lot. The instruction can be printed out automatically by the system when an inspection lot is created or it can be printed out manually by the user.

Structure

The inspection instruction contains a summary of the data contained in the inspection lot and in the inspection specification (for example, the inspection plan). Typically, the inspection instruction contains the following type of information:

- Description of material/batch to be inspected

- Number of inspection lot

- Date of inspection

- Inspection operations subject to inspection

- Inspection characteristics to be inspected

- Inspection specifications for each characteristic:

    - Characteristic weight

    - Inspection requirement (for example, required or optional characteristic)

    - Recording form (for example, summarized value or original values)

    - Acceptance or rejection number

    - Valuation rule

    - Number of units to be inspected

    - Target value and tolerance ranges for quantitative characteristics

- Short and long texts for inspection method (if available)

Sample-Drawing Instruction

Definition

A printed instruction that contains all the information that you need to draw one or more physical samples from an inspection lot. The information in the sample-drawing instruction is generated on the basis of the data in the inspection plan and sample-drawing procedure.

Use

You use the sample-drawing instruction to determine how to process the physical samples in the inspection.

The system prints out the sample-drawing instruction automatically when an inspection lot is created (provided the function for an immediate printout was set in Customizing for *Inspection type*).

Structure

The sample-drawing instruction contains the following information:

- Header data, plant, inspection lot, inspection lot text, inspection plan, document number
- Physical-sample drawing
- Physical sample confirmation requirement (yes/no)
- Sample-drawing procedure and long text stored in header of sample-drawing procedure
- Sample-drawing item and long text stored for the sample-drawing instruction
- For each sample-drawing item, a list of physical samples to be drawn:
  - Physical sample categories (primary, pooled, and reserve samples)
  - Keys for physical-sample records
  - Physical sample container
  - Quantity of each physical sample with unit of measurement
  - Which physical samples are used to create the partial samples
  - Partial samples in the inspection plan (partial-sample number, operation number, sizes, and units of measure)
- Distribution of physical samples to work centers or laboratories

  If a sample-drawing procedure was assigned to the inspection plan, the system suppresses all sampling texts for the inspection characteristics. Instead, the system prints out the long texts stored in the sample-drawing procedure.

See also:

Printout of Sample-Drawing Instruction [Ext.]

Inspections for Goods Movements

Whenever materials are moved from one place to another under certain conditions, the QM component can automatically create inspection lots, to permit an inspector to inspect the goods. The system can automatically trigger inspections for goods that are:

- Delivered by vendors (externally procured materials)

- Manufactured or produced during production (self-produced goods)

- Stored or moved within a warehouse

Such goods movements (also called material movements or stock movements) are events that cause a change in stock.

The primary goods movements are:

- **Goods receipt**

   This movement involves the receipt of goods from a vendor (external source) or from production (internal source). For example, these goods can be sent to the warehouse or posted directly to unrestricted-use stock.

- **Goods issue**

   This movement involves a material withdrawal, material issue, material consumption, or the shipment of goods to a customer. When goods are issued for production orders, the required materials are removed from the warehouse and used in production. The finished product can be returned to the warehouse (as a goods receipt from production) or shipped directly to the customer.

- **Stock transfer**

   In this movement, materials are moved from one storage location to another within the same plant or between different plants.

- **Return delivery**

   This movement involves the return of goods from a customer. For example, goods are returned because a wrong product was delivered, the goods are defective, or repairs are needed. A return delivery can be posted with reference to the original sales order.

Movement types

In inventory management, a three-digit movement type identifies the different goods movements. Examples of movement types include:

- A goods receipt for a purchase order (movement type 101)

- A goods issue to production (261)

- A transfer of goods from inspection stock to unrestricted-use stock (movement type 321)

When a goods movement occurs, the system must determine whether an inspection lot should be created for the movement type. If the following conditions are met, the system creates an inspection lot automatically:

- An inspection lot origin is assigned to the movement type

- An inspection type is active for the material in the inspection settings of the material master

Inspections for goods movements

The system can create inspection lots automatically for the goods movements listed below. For more information, refer to the following process descriptions:

- Inspection for a Goods Receipt [Page 39]

- Inspection for a Goods Issue [Page 41]

- Inspection for a Stock Transfer [Page 43]

- Inspection for a Return Delivery [Page 45]

- Early Inspection for a Goods Receipt [Page 47]

See also:

Stock Management in QM [Page 34]

Stock Management in QM

Use

If the *Materials Management* (MM) and *Inventory Management* (MM-IM) components are active in your system, you can use the functions in QM to manage the materials while they are in inspection stock. When an inspection lot is created automatically as a result of a goods movement, the QM component can:

- Record and track the material stock in an inspection lot

- Make the necessary stock postings to move the materials out of inspection stock

The QM component **cannot** manage stock movements for inspection lots that were created manually.

Features

You have the following options for processing material stocks in QM:

Processing options	What you should know
Processing materials as **non-stock-relevant** goods	If a material is not stock relevant, the system does not valuate and track the quantity of goods in an inspection lot. All inspection lots with the following inspection lot origins are not stock relevant: • 02 − Goods issue • 03 − Production • 06 − Return from customer • 07 − Audit • 10 − Delivery to customer on basis of sales order • 11 − Delivery to customer without sales order • 12 − Delivery (general) • 13 − Production inspection on basis of run schedule header • 14 − Plant maintenance
Posting stock-relevant materials to **inspection stock**	In inspection stock, QM has **exclusive** control over the material stock. This means that the material can only be posted in and out of inspection stock via the inspection lot. Materials can be posted to inspection stock for the following inspection lot origins: • 01 − Goods receipt • 04 − Goods receipt from production • 05 − Miscellaneous good receipts • 08 − Stock transfer • 09 − Recurring inspection

Posting stock-relevant materials to **unrestricted-use stock**	Unrestricted-use stock contains the valuated stock of materials for a company. Both QM and MM manage the goods in unrestricted-use stock. In QM, materials can be posted in and out of unrestricted-use stock for the same inspection lot origins that apply to postings to and from inspection stock.
Posting materials to **goods-receipt blocked stock** (movement type 103)	Goods-receipt blocked stock is a holding area for materials that have not been posted to a company's warehouse stock (for example, unrestricted-use stock). This stock (not to be confused with the valuated blocked stock) is managed by the QM and MM components. The materials posted to goods receipt blocked stock are not taken into account by material requirements planning (MRP) and are not valuated.
	You can post materials to goods receipt blocked stock for the inspection lot origin 01 (goods receipt). You post the materials out of goods receipt blocked stock (for example, to unrestricted-use stock) when you make the usage decision.

If QM is not active in your system, materials can still be posted to inspection stock, unrestricted-use stock, or goods receipt blocked stock using the functions of inventory management (IM). You can also post goods out of these stocks using the functions of IM.

You **cannot** use a combination of IM and QM functions to make the stock postings for a material (for example, posting the stock **into** inspection stock using IM functions and posting the stock **out of** inspection stock using QM functions). You must either use the functions of IM exclusively or the functions of QM exclusively.

For related information, see <u>Inspection Lots for Existing Inspection Stock [Page 37]</u>.

Stock Posting Options

Use

When an inspection lot is created automatically for a goods movement, the goods are also usually posted to inspection stock automatically. The creation of an inspection lot and the posting of goods to inspection stock, however, are two completely independent activities. This means that you can:

- Post a quantity of material to inspection stock **without** creating an inspection lot, using the functions of inventory management. This is possible, for example, if:

  - QM is not active in your system

  - No stock-relevant inspection types are active for a material in the inspection settings of the material master

    In both of the above cases, you can activate the indicator to post the goods to inspection stock in the *Quality management* view of the material master. If a stock-relevant inspection type is active in the inspection settings of the material master, you cannot set this indicator in the quality management view. This is because the indicator in the inspection settings controls the posting to inspection stock.

- Create an inspection lot and post the goods directly to unrestricted-use stock. This is possible in the following situations:

  - If a stock-relevant inspection type is active for the material, but the *Post to inspection stock* indicator is not set in the inspection settings of the material master

  - If a **skip-to-stock** occurs because of a skip-lot. In this situation, a material can be posted to unrestricted-use stock immediately for a goods receipt even though a quality inspection is scheduled and the goods are to be posted to inspection stock. A skip-to-stock occurs if none of the characteristics in the inspection lot need to be inspected (skip lot) because of the current quality level.

    For a skip-to-stock to occur, you must have set the indicators for skips allowed and the automatic usage decision for the inspection type in the inspection settings of the material master. Also, the characteristics in the inspection lot must allow a skip (in case of dynamic modification at the characteristic level); this is controlled by the characteristic weight assigned to a characteristic.

Stock-relevant materials can be posted out of inspection stock when the usage decision is made for the inspection lot. The system can post the stocks automatically (depending on the settings for the usage decision code) or you can post the stocks manually.

See also:

Inspection Lot Completion [Ext.]

Inspection Lots for Existing Inspection Stock

Use

In some cases, companies activate QM **after** they have already implemented the *Materials Management* (MM) and *Inventory Management* (MM-IM) components productively. As a result, materials may have been posted to inspection stock using the functions of the inventory management.

In such cases, you can only activate inspection types for stock-relevant materials if you perform one of the following steps:

- Post the goods out of inspection stock manually using the functions of the inventory management (before you try to activate a stock-relevant inspection type).

- Activate the desired stock-relevant inspection type(s) using the function for making mass changes to the inspection settings (see information below).

Features

If you activate a stock-relevant inspection type using the function for making mass changes to inspection settings, the system creates inspection lots in the background for the materials in inspection stock:

- It creates single inspection lots for each material, storage location, and special stock, regardless of the number of goods receipts

   The special stocks include consignment stock, sales order stock, and project stock. No inspection lots are created for subcontracting stock (stock of material provided to vendor).

- It creates a single inspection lot for each batch

- It uses the inspection type specified for inspection stock in Customizing (*Maintain settings at plant level*)

Once the system has created the inspection lot(s), you can post the goods out of inspection stock when you make the usage decision for the lot(s).

Activities

If you activate a stock-relevant inspection type using the function for making mass changes to inspection settings, you must:

- Set the indicator *Activate despite inspection stock*

- Specify the stock-relevant inspection type you want to activate

For more information, see Activating and Deactivating Inspection Types [Ext.].

Batch Management

Use

Materials, such as chemical and pharmaceutical products, require a precise identification of a production lot. If the material is managed in batches, both the batch number and the material number serve to identify the product. The system uses this identification scheme to manage these types of stocks.

When a material in a plant is identified as a batch material, each quantity of the material must be assigned a batch number. Whenever a goods movement takes place, you must specify the:

- Material number

- Batch number

Prerequisites

To be able to manage the batch materials in your system, the *Batch Management* (LO-BM) component must be active in your system.

Features

The batch master record and the batch stock data can be created automatically when a goods receipt for the material is posted in the *Materials Management* (MM) component. You do not have to create this data manually. If the system creates an inspection lot as a result of the goods movement, the batch is automatically recorded in the inspection lot.

See also:

Batch Management [Ext.]

Inspection for a Goods Receipt

Purpose

The system can automatically create an inspection lot when a goods receipt is posted in the system. A goods receipt can be posted internally (for example, from production to the warehouse) or from an external source (for example, from a vendor). When the goods are received, they can be posted to one of several destinations:

- Goods-receipt blocked stock (GR blocked stock)

- Warehouse (for example, to inspection stock, blocked stock or unrestricted-use stock)

- Consumption (for example, to an account assignment object such as a cost center or order)

If a goods receipt is posted to:

- Warehouse stock, the system creates an inspection lot that is stock relevant

> ➡
>
> If you post the goods to inspection stock, you can **only** post the goods out of inspection stock via the usage decision in QM.

- Consumption, the system creates an inspection lot that is **not** stock relevant

- Goods-receipt blocked stock, the system creates an inspection lot that is stock relevant

Prerequisites

The system creates an inspection lot automatically for a goods receipt if the following conditions have been met:

- In Customizing for *Inspection Lot Creation (Inspection for a Goods Movement)* QM is active for the movement type.

- QM is active for the delivered material. This means that in the inspection settings of the material master:

  - An inspection type is active for **inspection lot origins 01** (goods receipt) or **05** (misc. goods movements)

  - The other indicators for the inspection type are set appropriately to meet your requirements for inspection processing (for more information, see Processing Inspection Settings [Ext.])

- If the goods are delivered from an external vendor, the vendor must be released. If the vendor is blocked, you can release the vendor for **this** particular goods receipt in the quality information record.

- If you already performed a source inspection at the vendor site, the system can still create an inspection lot when goods are received from this vendor. For this to occur, an additional inspection for this material/vendor combination must be specified in the quality info record.

Process Flow

1. The system creates an inspection lot automatically when the goods receipt is posted in *Materials Management* (MM).

Inspection for a Goods Receipt

2. If the inspector will record results for inspection characteristics (controlled by the inspection settings in the material master), the system assigns an inspection specification (for example, a task list or material specification) to the inspection lot. If the system cannot find a specification or if more than one inspection specification is assigned to the material, you must assign a specification to the inspection lot manually.

3. If dynamic modification criteria are defined for the inspection lot origin or task list usage, the system checks the existing quality level for the material (and the other criteria, if applicable):

    −   If a quality level is not available, the system creates one.

    −   If the dynamic modification rule specifies that the quality level must be updated when the usage decision is made, the system does not update the quality level now.

    −   If the dynamic modification rule specifies that the quality level must be updated when an inspection lot is created, the system updates the quality level now.

4. The system calculates the sample size.

    If the sample calculation must be triggered manually (controlled by the inspection settings in the material master), you must call up the inspection lot in the change mode and choose the function to trigger the sample calculation manually.

5. If you are going to inspect the goods in the inspection lot using an inspection specification:

    −   The system can print out the inspection instruction and/or sample-drawing instruction automatically when the inspection lot is created

    −   You can print out the inspection instruction and/or sample-drawing instruction manually when you call up the inspection lot in the change mode

Result

You can use the information in the inspection instruction and sample-drawing instruction as a guide to:

•   Draw and prepare the samples at the work centers specified in each operation

•   Inspect the samples and record characteristic results and/or defects

When you have finished recording inspection results and/or defects, you can complete the inspection.

See also:

Results Recording [Ext.]

Defects Recording [Ext.]

Inspection Lot Completion [Ext.]

Inspection for a Goods Issue

Purpose

The system can automatically create an inspection lot when a goods issue is posted in the system. A goods issue can be posted internally (for example, a material withdrawal from the warehouse) or to an external destination (for example, a goods issue to a customer). In a goods issue, the materials are usually withdrawn from unrestricted-use stock and posted to a cost center, project, customer, or other account assignment object. When the system creates an inspection lot for a goods issue, the inspection lot is not stock relevant.

Prerequisites

The system creates an inspection lot automatically for a goods issue if the following conditions have been met:

- In Customizing for *Inspection Lot Creation (Inspection for a Goods Movement)* QM is active for the movement type.

- QM is active for the material. This means that in the inspection settings of the material master:

  - In Customizing for *Inspection Lot Creation (Inspection for a Goods Movement)* QM is active for the movement type.

  - An inspection type is active for **inspection lot origin 02** (goods issue)

  - The other indicators for the inspection type are set appropriately to meet your requirements for inspection processing (for more information, see Processing Inspection Settings [Ext.])

Process Flow

1. The system creates an inspection lot automatically when the goods issue is posted in *Materials Management* (MM).

4. If the inspector will record results for inspection characteristics (controlled by the inspection settings in the material master), the system assigns an inspection specification (for example, a task list or material specification) to the inspection lot. If the system cannot find a specification or if more than one inspection specification is assigned to the material, you must assign a specification to the inspection lot manually.

5. If dynamic modification criteria are defined for the inspection lot origin or task list usage, the system checks the existing quality level for the material (and the other criteria, if applicable):

   - If a quality level is not available, the system creates one.

   - If the dynamic modification rule specifies that the quality level must be updated when the usage decision is made, the system does not update the quality level now.

   - If the dynamic modification rule specifies that the quality level must be updated when an inspection lot is created, the system updates the quality level now.

5. The system calculates the sample size.

Inspection for a Goods Issue

> If the sample calculation must be triggered manually (controlled by the inspection settings in the material master), you must call up the inspection lot in the change mode and choose the function to trigger the sample calculation manually.

6. If you are going to inspect the goods in the inspection lot using an inspection specification:

   – The system can print out the inspection instruction and/or sample-drawing instruction automatically when the inspection lot is created

   – You can print out the inspection instruction and/or sample-drawing instruction manually when you call up the inspection lot in the change mode

Result

You can use the information in the sample-drawing instruction and inspection instruction as a guide to:

- Draw and prepare the samples at the work centers specified for each operation

- Inspect the goods in the inspection lot

- Record characteristic results and/or defects

When you have finished recording inspection results and/or defects, you can complete the inspection.

Result

When you have finished recording inspection results and/or defects, you can complete the inspection.

See also:

Results Recording [Ext.]

Defects Recording [Ext.]

Inspection Lot Completion [Ext.]

Inspection for a Stock Transfer

Purpose

This process describes how the system creates an inspection lot automatically for a stock transfer. In a stock transfer, a material is moved from:

- One storage location to another within the same plant

- One storage location in a plant to another storage location in a second plant

When a stock transfer is posted for a material for which QM is active, the system creates an inspection lot that is stock relevant. The goods are posted to inspection stock for the duration of the quality inspection.

Prerequisites

The system creates an inspection lot automatically for a stock transfer if the following conditions have been met:

- In Customizing for *Inspection Lot Creation (Inspection for a Goods Movement)* QM is active for the movement type.

- QM is active for the material. This means that in the inspection settings of the material master:

  - An inspection type is active for **inspection lot origin 08** (stock transfer)

  - The indicator to post the goods to inspection stock is set

  - The other indicators for the inspection type are set appropriately to meet your requirements for inspection processing (for more information, see Processing Inspection Settings [Ext.])

Process Flow

1. The system creates an inspection lot automatically when a stock transfer is posted in *Materials Management* (MM).

6. If you intend to record results for inspection characteristics (controlled by the inspection settings in the material master), the system assigns an inspection specification to the inspection lot. If the system cannot find a specification or if more than one inspection specification is assigned to the material, you must assign a specification to the inspection lot manually.

7. If dynamic modification criteria are defined for the inspection lot origin or task list usage in Customizing, the system checks the existing quality level for the material (and the other criteria, if applicable):

   - If a quality level is not available, the system creates one.

   - If the dynamic modification rule specifies that the quality level must be updated when the usage decision is made, the system does not process the quality level now.

   - If the dynamic modification rule specifies that the quality level must be updated when an inspection lot is created, the system updates the quality level now.

6. The system calculates the sample size.

Inspection for a Stock Transfer

> If the sample calculation must be triggered manually (controlled by the inspection settings in the material master), you must call up the inspection lot in the change mode and choose the function to trigger the sample calculation manually.

7. If you are going to inspect the goods in the inspection lot using an inspection specification:

   − The system can print out the inspection instruction and/or sample-drawing instruction automatically when the inspection lot is created

   − You can print out the inspection instruction and/or sample-drawing instruction manually when you call up the inspection lot in the change mode

Result

You can use the information in the sample-drawing instruction and inspection instruction as a guide to:

- Draw and prepare the samples at the work centers specified for each operation

- Inspect the goods in the inspection lot

- Record characteristic results and/or defects

When you have finished recording inspection results and/or defects, you can complete the inspection.

See also:

Results Recording [Ext.]

Defects Recording [Ext.]

Inspection Lot Completion [Ext.]

Inspection for a Customer Return

Purpose

This process describes how the system creates an inspection lot automatically when goods are returned from a customer. When a customer return is received, the goods can be posted to one of several destinations:

- Blocked stock returns (not valuated and not part of unrestricted-use stock)

- Warehouse (for example, to inspection stock, blocked stock or unrestricted-use stock)

These goods are posted to an account assignment object such as a sales order, cost center, or project. If the customer return is posted to inspection stock, the system creates an inspection lot that is not stock relevant.

Prerequisites

The system creates an inspection lot automatically for a customer return if the following conditions have been met:

- In Customizing for *Inspection Lot Creation (Inspection for a Goods Movement)* QM is active for the movement type.

- QM is active for the material. This means that in the inspection settings of the material master:

  - An inspection type is active for **inspection lot origin 06** (customer return)

  - The other indicators for the inspection type are set appropriately to meet your requirements for inspection processing (for more information, see Processing Inspection Settings [Ext.])

Process Flow

1. The system creates an inspection lot automatically when a material is posted to customer return stock.

8. If you intend to record results for inspection characteristics (controlled by the inspection settings in the material master), the system assigns an inspection specification to the inspection lot. If the system cannot find a specification or if more than one inspection specification is assigned to the material, you must assign a specification to the inspection lot manually.

9. If dynamic modification criteria are defined for the inspection lot origin or task list usage in Customizing, the system checks the existing quality level for the material (and the other criteria, if applicable):

   - If a quality level is not available, the system creates one.

   - If the dynamic modification rule specifies that the quality level must be updated when the usage decision is made, the system does not process the quality level now.

   - If the dynamic modification rule specifies that the quality level must be updated when an inspection lot is created, the system updates the quality level now.

7. The system calculates the sample size.

Inspection for a Customer Return

> If the sample calculation must be triggered manually (controlled by the inspection settings in the material master), you must call up the inspection lot in the change mode and choose the function to trigger the sample calculation manually.

8. If you are going to inspect the goods in the inspection lot using an inspection specification:

   – The system can print out the inspection instruction and/or sample-drawing instruction automatically when the inspection lot is created

   – You can print out the inspection instruction and/or sample-drawing instruction manually when you call up the inspection lot in the change mode

Result

You can use the information in the sample-drawing instruction and inspection instruction as a guide to:

- Draw and prepare the samples at the work centers specified for each operation

- Inspect the goods in the inspection lot

- Record characteristic results and/or defects

When you have finished recording inspection results and/or defects, you can complete the inspection.

Result

You can use the information in the sample-drawing instruction and inspection instruction as a guide to:

- Draw and prepare the samples at the work centers specified for each operation

- Inspect the goods in the inspection lot

- Record characteristic results and/or defects

When you have finished recording inspection results and/ or defects, you can complete the inspection.

See also:

Results Recording [Ext.]

Defects Recording [Ext.]

Inspection Lot Completion [Ext.]

Early Inspection for a Goods Receipt

Purpose

During an inspection during production, you can also perform an **early inspection for a goods receipt**. This processing variant allows you to:

- Inspect the goods received from production before they are posted to the warehouse stock

- Record and track the completed production quantities in inspection stock

- Post the completed goods out of inspection stock when you make the usage decision for the inspection lot

When the system releases a production order or process order, it can create an inspection lot for a goods receipt from production (inspection lot origin 04), in addition to the inspection lot for a production inspection (inspection lot origin 03). You can then process these inspection lots according to your needs:

- **Inspection lot for a production inspection (lot origin 03)**

    This inspection lot is optional in this process. You use this inspection lot to:

    - Inspect the goods during production (on the basis of the inspection characteristics contained in the routing or recipe)

    - Process inspection points

    - Confirm activities for the order

    You cannot manage material stocks with this inspection lot.

- **Inspection lot for a goods receipt from production (lot origin 04)**

    The system creates this inspection lot when an order is released, but **before** a goods receipt is posted from production. You can use this inspection lot to:

    - Inspect the goods during production using inspection plans and sampling schemes

    - Inspect the **completed** production goods before the stocks are posted to the warehouse stock in a goods receipt

Prerequisites

The following conditions must be met in the inspection settings of the material master:

- An inspection type assigned to **inspection lot origin 04** is active

- The *Control of inspection lot creation* indicator for the inspection type is set so that the system will create an inspection lot for early inspection for goods receipt

This will allow the system to automatically create an inspection lot when a production or process order is released.

Process Flow

1. A process order is released (for example, to produce 1000 liters of paint). When the order is released, the system creates two inspection lots (inspection lot origins 03 and 04).

2. You inspect an initial quantity of 250 liters in the inspection lot with lot origin 03.

Early Inspection for a Goods Receipt

3. You post a partial quantity of 250 liters to the warehouse stock in a goods receipt.

    The system posts this quantity to the previously stock-free inspection lot with lot origin 04. This inspection lot now has an actual stock quantity of 250 liters.

4. You have the following options for processing this inspection lot further:

Case 1	You make a usage decision with an acceptance and post all open stocks.
Case 2	You make a usage decision with a rejection and post all open stocks.
Case 3	You do not make a usage decision; the stock remains in the inspection lot.
Case 4	You do not make a usage decision, but you make a stock posting (for example, 100 liters to unrestricted-use stock).

5. You produce a second partial quantity of 400 liters of paint for this order and post this quantity to warehouse stock. Depending on how you processed the first partial quantity of 250 liters in step 4, the system responds as follows:

Case 1	As a result of the acceptance that was made with the first usage decision, the system posts this and all subsequent partial quantities for the process order to unrestricted-use stock.
Case 2	As a result of the rejection that was made with the first usage decision, the system creates a new inspection lot with lot origin 04 and posts the quantity of 400 liters to this new lot.
Case 3	Since a usage decision was not made for the first partial quantity, the first inspection lot with an actual quantity of 250 liters receives another stock entry of 400 liters. The actual stock quantity of this first inspection lot is now 650 liters.
Case 4	Since a usage decision was not made for the first partial quantity, but 100 liters were nevertheless posted to unrestricted-use stock, the first inspection lot with an actual quantity of 150 liters receives another stock entry of 400 liters. The actual stock quantity of this first inspection lot is now 550 liters.

6. You produce the remaining quantity of the process order and post these partial quantities as described in steps 4 and 5.

> When you process an early inspection for a goods receipt using an inspection lot with lot origin 04, note the following points:
>
> - If a different batch is posted to warehouse stock for the order, the system automatically creates a new inspection lot with lot origin 04 for the processing of this batch.
>
> - If you make a goods receipt posting to a different storage location, the system also creates a new inspection lot with lot origin 04.
>
> - If you cancel an inspection lot (lot origin 04) after you make a usage decision, the system creates a new inspection lot (lot origin 04) with next goods receipt.

Quality Inspection for Handling Units

Use

If you use the *Quality Management* (QM) component, you can perform quality inspections on handling units [Ext.] (HU) in Handling Unit Management [Ext.] at delivery item level. Inspection lots can also be automatically created, if the corresponding delivery item is packed. These inspection lots are then created with reference to the HU and always contain a current reference to the assigned HUs.

The quantities in inspection stock are managed directly using the HU and not using the inspection lot. This means that during goods movements the currently assigned HUs are determined using the inspection lot and can be transferred.

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> Transfer postings are then triggered directly also using the HU. The system also checks whether a posting is allowed from inspection stock. For example, while transfer postings within inspection stock are allowed, deliveries of HUs in inspection stock to customers is not permitted.

Prerequisites

In order to inspect handling units in QM, the following prerequisites must be fulfilled:

- In Customizing for *Handling Unit Management* (*Inventory Management*), the respective movement type is not deactivated for quality inspections. The indicator *QM not active* is **not** set.

- In the (respective) material master record, the corresponding inspection type is created and activated for the respective goods movement, and the indicator *Inspection for HU* must be set.

Features

Inspection Lot Creation

An inspection lot for the HU is automatically created for the following goods movements/events:

| Goods Movement/Event	Inspection Type	Comments
Packing in the inbound delivery	01	You use the field *Inspection for HU* in the *inspection setup* of the material master (Quality Management view) to determine whether the inspection lot is created at goods receipt or when the shipping notification is created.
Packing of finished product	04	

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> In general, a lot is not created at goods receipt in storage locations requiring HUs. During packing, a lot is only created if the indicator *Inspection for HU* is set in the *Inspection setup* of the material master (Quality Management view). As a result:

Quality Inspection for Handling Units

- An inspection lot is never created, if the indicator *Inspection for HU* is not set in the *Inspection setup* of the material master (Quality Management view) for storage locations requiring HUs.

- In general, it is not possible to create the inspection lot at goods receipt in storage locations requiring HUs.

- If the indicator *Inspection for HU* is set, the lot is created during packing, independent of the HU-requirement.

- The inspection lot that is **not** stock-relevant includes all HU items that refer to the same material and batch. The inspection lot always refers to the entire delivery item quantity and if necessary also to several handling units.

Inspection Processing at Goods Receipt with Handling Unit Management
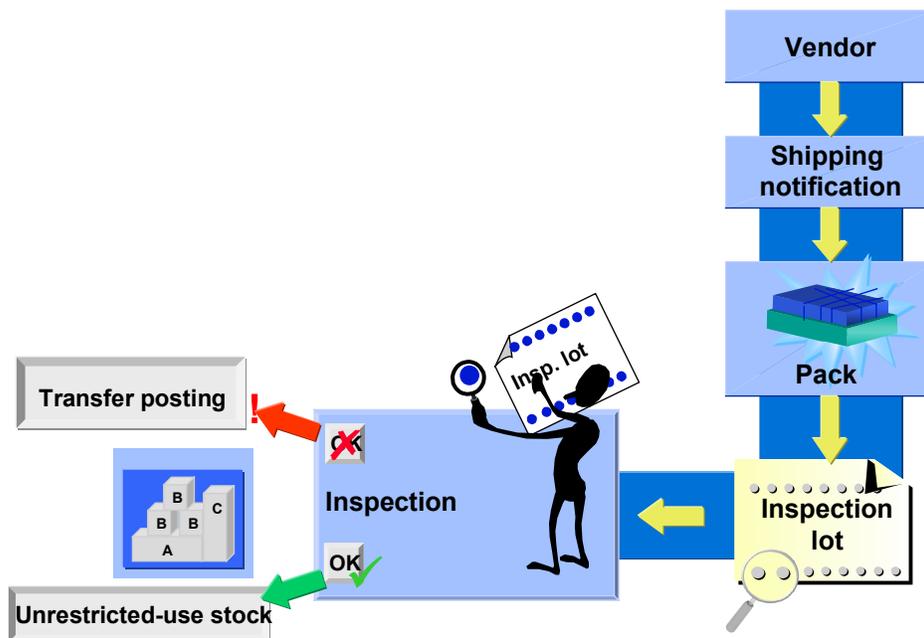
Inspection Lot Reference to Handling Unit
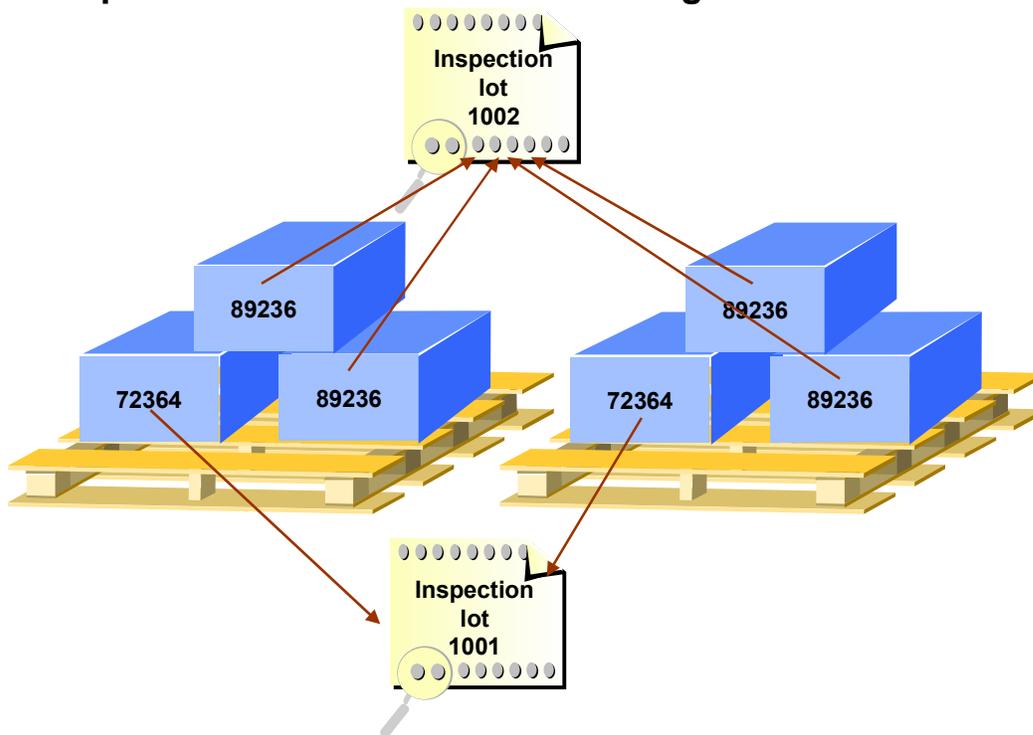
Movement Control for Handling Unit

If an inspection lot is assigned to a HU, the inspection lot controls the allowed movements for the HU. The following criteria are important for deciding whether postings are allowed:

- Status "Inspection lot in inspection/usage decision made"

- Usage decision code

- Quality score

> You define whether a particular movement is allowed in Customizing for *Handling Unit Management*.
>
> The indicator *Post to insp. stock.* in the material master controls whether there is a posting to inspection stock. This stock is managed using the handling unit.

Sample Calculation

Here it is important whether the respective result is assigned to a HU. If you do not use sample management, there is a reference between the inspection lot and all HUs, however you can no longer trace which result belongs to which HU.

The following options are available for sample calculation:

- On the basis of the total quantity of the same HU items (same material and same batch)

Quality Inspection for Handling Units

The unit of measure is specified in the inspection plan in the corresponding characteristics.

- On the basis of individual HU items

For this you require the QM component Sample Management [Ext.]. In the sample-drawing procedure [Ext.], the indicator *Physical-sample drawing by number of containers* must be set. The sample-drawing items are used for which the lot container corresponds to the lot container in the inspection lot. If there is no sample-drawing item with the lot container of the inspection lot, the system uses sample-drawing items without a lot container. The base unit of measure for the HU is used as the lot container. The indicator *Confirmation requirement* must also be set in the sample-drawing item. This means that for physical samples with inspection lots in HU management, the physical sample must also be assigned to the HU when the physical-sample drawing is confirmed.

Handling Unit and Inspection Lot with Physical Samples

PS = Primary sample
RS = Reserve sample
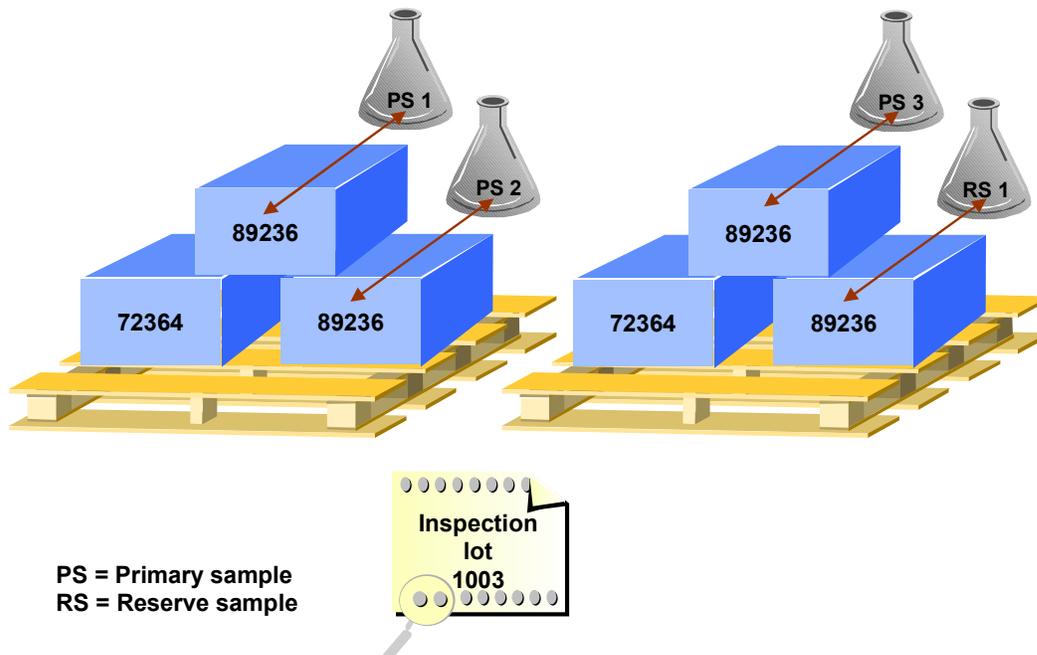
Results Recording

During results recording for a **single HU item**, use the *Sample Management* component and record results for a physical sample. You can then use the physical sample to assign the results to the HU.

Usage Decision

Since the stock is managed using the HU, the system must dynamically determine which quantities of a material are in the HU and its location when you make the usage decision.

Moreover, the system checks which postings are allowed when HUs or Warehouse Management are used. For example, you cannot trigger a return posting to the vendor, if the goods receipt has not yet been posted. Corresponding information is displayed in a list for each line of the HU.

You can then specify for each handling unit where the stock is posted. The total quantity of a HU item is always posted. If you also want to post partial quantities, you must pack/unpack the corresponding HU either before or after the usage decision is made to update the stock correspondingly.

See also:

Handling Unit Management [Ext.]

Recurring Inspections for Batch Materials

Purpose

The system can automatically create inspection lots at predefined intervals for selected batch materials. You can plan such inspections by having the system monitor the date for a **recurring inspection**. Recurring inspections are triggered by a report that you can execute manually or that the system can execute automatically (provided it has been planned as a background job). When recurring inspections are triggered automatically, the background job executes the report, which in turn selects the batches and creates the inspection lots according to your processing parameters.

Prerequisites

The system creates inspection lots automatically for recurring inspections if the following conditions have been met:

- Each material to be inspected is defined as a batch material in the material master

- An inspection interval is specified in the *Quality Management* view of the material master

- An inspection type is active for **inspection lot origin 09** in the inspection settings of the material master

- The inspection settings in the material master specify an inspection using a task list or material specification (if you want to record results for inspection characteristics)

- A *Next inspection date* is specified for the batch in the batch master

- If you intend to trigger a recurring inspection manually, you have defined your parameters for the recurring inspection in the corresponding report

- If you want the system to trigger a recurring inspection automatically, you have:

    − Defined your parameters in the report program for a recurring inspection

    − Saved the report as a variant

    − Planned the variant as a background job

Process Flow

1. A recurring inspection is triggered:

    − Automatically by the system via a background job

    − Manually by the user

2. The system selects the batches that meet the selection criteria.

3. The system processes the selected batches on the basis of your parameter settings in the report as follows:

If you set the indicator	What you should know

Only lot creation	The system creates inspection lots for the selected batches when the next inspection date is within the opening period.

In a second run, the stocks are posted to inspection stock or the batches are blocked when the next inspection date is reached. This two-step process permits you to keep the stocks available as long as possible, while allowing you to begin the inspection. |
To insp. stock at lot creation	The system creates inspection lots for the selected batches when the next inspection date is within the opening period. When the inspection lots are created, it posts the batch stock to inspection stock. If an inspection lot already exists, the stocks are also posted to inspection stock and the inspection lot is updated accordingly.
Block batch at lot creation	The system creates inspection lots for the selected batches and blocks the batches by changing their status to "restricted." If the batch status management function is not active, the stock is posted to blocked stock.
To insp. stock at inspection date	The system posts the batch stock to inspection stock when the next inspection date is reached. If an inspection lot already exists, the system updates the existing inspection lot. If a lot does not exist, the system creates one.
Block batch at inspection date	The system blocks the batch when the next inspection date is reached. If the batch status management function is not active in your plant, the stock is posted to blocked stock.

10. When the system creates the inspection lots, it also carries out the following activities:

   a. It assigns an inspection specification to the inspection lot.

   b. It creates or updates the quality level for the material (if applicable).

   c. It calculates the sample size.

   d. It prints out the inspection instruction and/or sampling-drawing instruction

   ➡️

   Steps 4a through 4d above are standard activities in the inspection lot creation process. These steps are described in more detail in <u>Inspection for a Goods Receipt [Page 39]</u> (see steps 2 through 5).

Result

When you complete the inspection with the usage decision for an inspection lot, the system updates the next inspection date in the batch master. The system determines the new inspection date by adding the value of the inspection interval specified in the material master to the current date.

See also:

<u>Triggering Inspections for Batch Materials [Ext.]</u>

<u>Job Planning [Ext.]</u>

Recurring Inspections for Batch Materials

[Results Recording [Ext.]](#)

[Defects Recording [Ext.]](#)

[Inspection Lot Completion [Ext.]](#)

Inspections Triggered by the Release of Orders

Overview

The QM component is integrated with several other key application components in the logistics supply chain (for example, *Materials Management*, *Production Planning*, and *Sales & Distribution*). As a result of this integration, certain activities in one component can influence or trigger events in another component.

The release of orders is an example of such an activity. When certain order types are released for processing, QM can automatically create inspection lots in preparation for the quality inspections. The order types that can trigger quality inspections include:

- **Production orders and process orders**

  Production orders are typically used for the production of goods in the discrete manufacturing applications, while process orders are usually created for the production of goods in the process industry. When these orders are released, they can trigger:

  – Inspections During Production [Page 58]

  – Early Inspections for Goods Receipts [Page 47]

- **Maintenance orders**

  The release of maintenance orders in the *Plant Maintenance* (PM) component can trigger calibration inspections [Page 61] for equipment or functional locations.

Inspections During Production

Purpose

The system can automatically create an inspection lot for an inspection during production. There are several processing features that distinguish an inspection during production from other types of inspections:

- An inspection during production is triggered by the release of a production order or process order. An order can be released automatically by the system or manually by the user.

- In contrast to other types of inspections, the inspection specification (for example, routing or master recipe) to be used for the inspection is defined in the production order or process order. QM does not control the selection of the inspection specification.

- In inspections during production, you can use inspection points to inspect the goods at regular intervals. These intervals can be based on time, quantity, or other production-related events. An inspection point summarizes the inspection results for a specific quantity of material (or other object) in an operation.

- If you confirm that the goods in an inspection lot are different in quality, you can sort the goods by quality and maintain them in separate partial lots [Page 8]. This is a useful feature when you process batch materials for an order (for example, if your raw materials are changed during the course of an order).

- An inspection lot for an inspection during production is not stock relevant. Therefore, you cannot make stock postings for the goods in the inspection lot. However, if you assign quantities of materials to batches, partial lots, or inspection points, the system proposes these quantities when you post the goods receipt for the order.

    If you want to record and track material stocks for an inspection during production, see Early Inspection for a Goods Receipt [Page 47] for related information.

Prerequisites

The system creates an inspection lot automatically for an inspection during production if the following conditions have been met:

- A production order or process order exists for the material

- QM is active for the material to be inspected. This means that in the inspection settings of the material master:

    − An inspection type is active for **inspection lot origin 03** (inspection during production)

    − The other indicators for the inspection type are set appropriately to meet your requirements for inspection processing (for more information, see Processing Inspection Settings [Ext.])

    ⇨

    If you intend to use an inspection type other the standard SAP inspection type 03, you must specify this inspection type in Customizing for the order type. You must also assign this inspection type to inspection lot origin 03.

    −

- If you intend to record inspection results, inspection characteristics have been created or assigned to one or more operations in a routing or master recipe.

Process Flow

2. The system creates an inspection lot automatically when a production order or process order is released in the PP or PP-PI components.

➡️

> If an order is not released immediately after being created, you can create an inspection lot manually for the order (using the QM function for creating an inspection lot manually or the PP function for changing a production or process order). If you do this, the system will not create a second inspection lot when the order is released at a later time.

2. The system copies the operations and inspection characteristics contained in the order into the inspection lot.

➡️

> If existing operations are deleted from an order or new operations are added to an order (for example, from a reference operation set) before it is released, the corresponding inspection characteristics are also deleted or added.

11. If dynamic modification criteria are defined for the task list and inspection lot origin, the system checks the existing quality level for the material (and the other criteria, if applicable):

   − If a quality level is not available, the system creates one.

   − If the dynamic modification rule specifies that the quality level must be updated when the usage decision is made, the system does not update the quality level now.

   − If the dynamic modification rule specifies that the quality level must be updated when an inspection lot is created, the system updates the quality level now.

8. The system calculates the sample size.

   If the sample calculation must be triggered manually (controlled by the inspection settings in the material master), you must call up the inspection lot in the change mode and choose the function to trigger the sample calculation manually.

9. If you are going to inspect the goods in the inspection lot using an inspection specification:

   − The system can print out the inspection instruction and/or sample-drawing instruction automatically when the inspection lot is created

   − You can print out the inspection instruction and/or sample-drawing instruction manually when you call up the inspection lot in the change mode

Result

You can use the information in the sample-drawing instruction and inspection instruction as a guide to:

- Draw and prepare the samples at the work centers specified for each operation

- Inspect the goods for the various operations

- Record inspection results and/or defects for inspection points

Inspections During Production

When the above activities have been completed for an inspection during production:

- You can confirm activities for the order

- The system can complete the inspection automatically by making an automatic usage decision

See also:

Results Recording [Ext.]

Defects Recording [Ext.]

Inspection Lot Completion [Ext.]

Calibration Inspection

Purpose

The system can automatically create an inspection lot for a calibration inspection when a maintenance order is released. In a calibration inspection, you can inspect one or more pieces of test equipment to check the equipments' operation, accuracy and suitability for use. You cannot create an inspection lot manually for a calibration inspection.

Prerequisites

The planning steps for the calibration inspection [Ext.] have been completed.

Process Flow

3. A maintenance order is created:

    –   Automatically by the system on the basis of a scheduled maintenance plan

    –   Manually by the user

2. When the maintenance order is released (automatically by the system or manually by the user), the system automatically creates an inspection lot.

    The system can automatically schedule a maintenance plan, release the maintenance order and create an inspection lot in a single step, provided this has been configured accordingly.

3. The system copies the following data into the inspection lot:

    –   The list of equipment to be inspected

    –   The maintenance operations and inspection characteristics contained in the maintenance task list

9. The system determines how many measurements must be made for each inspection characteristic.

10. If you are going to inspect the goods in the inspection lot using an inspection specification:

    –   The system can print out the inspection instruction and/or sample-drawing instruction automatically when the inspection lot is created

    –   You can print out the inspection instruction and/or sample-drawing instruction manually when you call up the inspection lot in the change mode

Result

You can use the information in the sample-drawing instruction and inspection instruction to:

*   Identify and inspect the test equipment to be calibrated

*   Record inspection results and/or defects for inspection characteristics

Once you have recorded inspection results:

Calibration Inspection

- You specify whether each piece of equipment is accepted or rejected (inspection point valuation)

- You complete the inspection with a usage decision. The system can make a usage decision automatically for the inspection lot or you can make the usage decision manually.

- The system can execute automatic follow-up actions

See also:

Results Recording [Ext.]

Defects Recording [Ext.]

Inspection Lot Completion [Ext.]

Inspections for Repetitive Manufacturing

Purpose

Repetitive manufacturing environments are characterized by the high-volume, long-term production of goods. These goods or materials are produced on the basis of production versions that describe how the product must be manufactured.

The QM component supports inspections for repetitive manufacturing by allowing you to create inspection lots for production versions. Since the repetitive manufacturing process can run over an extended period of time, you can create several inspection lots for a production version. However, you can only process one inspection lot at a time.

Prerequisites

You can if the following conditions have been met:

- A production version exists for the material to be inspected.

    When you create an inspection lot for a production version, the system checks the "valid to" date against the factory calendar and it calculates the inspection lot end date on the basis of this date. Therefore, make sure you specify an end date that is contained in the factory calendar.

- QM is active for the material to be inspected. This means that in the inspection settings of the material master:

    − An inspection type is active for **inspection lot origin 13** (repetitive manufacturing)

    − The other indicators for the inspection type are set appropriately to meet your requirements for inspection processing (for more information, see Processing Inspection Settings [Ext.])

- If you intend to record inspection results:

    − Inspection characteristics have been created or referenced in one or more operations of a rate routing

    − The rate routing is specified in the production version

- A usage decision has been made for a previously existing inspection lot for the production version or the previously existing inspection lot was cancelled.

- A previously existing inspection lot is not blocked (for example, if you blocked an inspection lot after you made the usage decision for the lot).

Process Flow

1. You select a production version and create an inspection lot for the production version.

3. If the inspector has to record results for inspection characteristics (controlled by the inspection settings in the material master), the system automatically assigns a rate routing to the inspection lot.

Inspections for Repetitive Manufacturing

> If the system cannot find a routing or if more than one routing is assigned to the material, you must assign the routing to the inspection lot manually.

12. If dynamic modification criteria are defined for the routing and inspection lot origin, the system checks the existing quality level for the material (and the other criteria, if applicable):

   – If a quality level is not available, the system creates one.

   – If the dynamic modification rule specifies that the quality level must be updated when the usage decision is made, the system does not update the quality level now.

   – If the dynamic modification rule specifies that the quality level must be updated when an inspection lot is created, the system updates the quality level now.

10. The system calculates the sample size.

> If the sample calculation must be triggered manually (controlled by the inspection settings in the material master), you must call up the inspection lot in the change mode and choose the function trigger the sample calculation manually.

11. If you are going to inspect the goods in the inspection lot using a routing:

   – The system can print out the inspection instruction and/or sample-drawing instruction automatically when the inspection lot is created

   – You can print out the inspection instruction and/or sample-drawing instruction manually when you call up the inspection lot in the change mode

Result

You can use the information in the sample-drawing instruction and inspection instruction as a guide to:

• Draw and prepare the samples at the work centers specified for each operation

• Inspect the goods for the various operations

• Record inspection results and/or defects for inspection points

When the above activities have been completed for an inspection, you can complete the inspection by making the usage decision for the inspection lot.

See also:

Results Recording [Ext.]

Defects Recording [Ext.]

Inspection Lot Completion [Ext.]

Creating Inspection Lots for Production Versions

1. Choose *Logistics → Quality management → Quality inspection → Worklist → Inspection lot creation → Inspection lots for repetitive manufacturing*.

   The initial screen for inspection lot processing appears.

2. Set the appropriate indicator for the selection of the production version(s).

3. Enter the data for the plant, material, and production version, if known.

4. Choose *Execute* to start the program.

   The system displays the production version(s) that meet your selection criteria.

5. You have the following processing options, depending on the results of your selection:

Function	Pushbutton / Menu path	What you should know
Creating inspection lot(s) for a production version	Choose *Create inspection lot.*	You can only create inspection lots for the production versions for which no open inspection lots currently exist.
		If an inspection lot already exists for a production version, you must first complete the current inspection lot before you can create a new one.
		You can select several production versions simultaneously and create individual inspection lots for each of the selected versions.
Displaying a current inspection lot for a production version	Choose *Display current inspection lot.*	The system branches to the transaction for displaying the usage decision for the inspection lot.
Displaying previously existing inspection lots for a production version	Expand the node for a material to display the production versions for the material. Choose *Overview inspection lots.*	If more than one inspection lot exists for the production version, the system displays a dialog box listing all previously existing inspection lots.
		You can choose an inspection lot from the list to display the usage decision for the lot.
		If only one inspection lot exists for the production version, the system branches directly to the usage decision for the inspection lot.

Inspection of Physical Samples

Use

The *Sample Management* (QM-IM-SM) component in QM supports the inspection processes in your company with functions for drawing, inspecting, and managing physical samples in quality inspections.

Integration

The *Sample Management* (QM-IM-SM) component enhances the QM components for inspection lot creation, results recording, and inspection completion. The process flow for a quality inspection with physical samples does not differ from a normal goods receipt inspection or inspection during production.

Prerequisites

The following conditions must be met, depending on the how you intend to process physical samples:

- **Automatic creation of physical samples upon inspection lot creation**

    The system can create physical samples automatically when an inspection lot is created if you have:

    – Planned the physical samples in a <u>sample-drawing procedure [Ext.]</u>

    – Assigned the sample-drawing procedure to the task list to be used in the inspection

    – Assigned a physical-sample type to the inspection type

- **Manual creation of physical samples**

    You can create physical samples manually at any time.

- **Manual creation of inspection lots for existing physical samples**

    You can create an inspection lot manually for an existing physical sample, if an inspection type is active for **inspection lot origin 15** (physical samples) in the inspection settings of the material master.

Features

You have the following options for processing physical samples in the system:

- The system can create **planned** physical samples automatically when an inspection lot is created (for example, for goods receipt inspections or inspections during production).

- In addition to automatically created physical samples, you can:

    – Create **unplanned** physical samples manually and assign them to an existing physical-sample drawing and inspection lot

    – Create a new physical-sample drawing with physical samples and assign it to an existing inspection lot

- You can create inspection lots manually to inspect already existing physical samples

In addition to the above options, you can also create physical samples as follows:

- When you record results for an inspection lot, you can create and inspect a physical sample for a selected operation in a single step. The system displays the data for the last physical-sample drawing as proposed values which can change if necessary.

- When you create a new physical-sample drawing for an inspection lot, you can also create additional physical samples and prepare results recording for these physical samples for one or all operations in a single step.

See also:

Sample Management [Ext.]

Results Recording [Ext.]

Inspection Lot Completion [Ext.]

Inspection for a Delivery

Use

The system can create an inspection lot automatically if a delivery is created in the *Sales & Distribution* (SD) component for a inspection-relevant material. You can create a delivery in the system as follows:

- With reference to a sales order (inspection lot origin 10)

- Without reference to a sales order (inspection lot origin 11)

- As a general delivery (inspection lot origin 12)

An inspection lot for a delivery is not stock relevant because the goods to be delivered correspond to a consumption posting.

> Using customer info records [Ext.] for a customer/material combination, you can specify whether or not an inspection lot is created before or after the goods are shipped, or whether the quality inspection will be carried out by the customer.

Prerequisites

The system automatically creates an inspection lot for a delivery if:

- You have made all required settings in Customizing [Ext.] for *Inspection Lot Creation* (*Inspection in SD*)

- QM is active for the movement type in Customizing [Ext.] for *Inspection Lot Creation* (*Define inspections for goods movements*)

- QM is active for the material to be delivered This means that in the inspection settings of the material master:

  − An inspection type is active for **inspection lot origin 10, 11, or 12**

  − The remaining control indicators for the inspection type are set to meet your requirements for inspection processing

Process Flow

1. The system creates an inspection lot automatically when a delivery is created in the *Sales & Distribution* (SD) component for a inspection-relevant material.

2. If the inspector will record results for inspection characteristics (controlled by the inspection settings in the material master), the system assigns an inspection specification (for example, a task list or material specification) to the inspection lot. If the system cannot find an inspection specification or if more than one inspection specification is assigned to the material, you must assign a specification to the inspection lot manually.

3. If dynamic modification criteria are defined for the inspection lot origin or task list usage, the system checks the existing quality level for the material (and the other criteria, if applicable).

   − If a quality level is not available, the system creates one.

- If the dynamic modification rule specifies that the quality level must be updated when the usage decision is made, the system does **not** update the quality level now.

- If the dynamic modification rule specifies that the quality level must be updated when an inspection lot is created, the system updates the quality level now.

4. The system calculates the sample size.

    If the sample calculation must be triggered manually (controlled by the inspection settings in the material master), you must call up the inspection lot in the change mode and choose the function to trigger the sample calculation manually.

5. If you are going to inspect the goods in an inspection lot using an inspection specification, you or the system can print out the inspection instruction or sample-drawing instruction.

Result

You can use the information in the inspection instruction and sample-drawing instruction to:

- Draw and prepare the samples at the work centers specified in each operation

- Inspect the samples and record characteristic results and/or defects

When you have finished recording inspection results and/or defects, you can complete the inspection.

See also:

Effect of Delivery Processing on Inspection Lots [Ext.]

Results Recording [Ext.]

Defects Recording [Ext.]

Inspection Lot Completion [Ext.]

Inspection Lot Processing

Use

The table below provides a brief overview of the functions you can use to process inspection lots. Appropriate cross references are included for the more extensive tasks or for those for which additional information is available.

Prerequisites

The inspection lot processing functions can be linked to various authorizations that are checked by the system whenever you try to process an inspection lot. The following types authorizations are relevant to inspection lot processing:

- **Material authorizations**

    The material authorization for QM is stored in the material master. For more information, see Creating and Changing QM-Specific Data for a Material [Ext.].

- **Inspection type authorizations**

    This authorization controls which inspection type the user can access in order to create an inspection lot. The inspection type authorization is plant-specific.

    No authorization checks are executed in QM when an inspection lot is created automatically.

Features

Function	Pushbutton / Menu path	What you should know
Accessing the initial screen for the inspection lot processing functions	*Logistics → Quality management → Quality inspection → Inspection lot processing → Inspection lot*	–
Creating an inspection lot manually	–	See Creating an Inspection Lot Manually [Page 72]
Changing an inspection lot	Choose *Change*	Enter the number of the inspection lot you want to change and then choose *Enter*.
Displaying an inspection lot	Choose *Display*	Enter the number of the inspection lot you want to display and then choose *Enter*.
Creating a new batch in an inspection lot	–	See Batch Creation in Inspection Lots [Page 73]

Cancelling an inspection lot	Call up an inspection lot in the change mode and choose *Inspection lot → Functions → Cancel lot*.	See Cancellation of an Inspection Lot [Page 75]
Blocking/unblocking an inspection lot	Call up an inspection lot in the change mode and choose *Inspection lot → Functions → Block lot*. To unblock an inspection lot, choose *Inspection lot → Functions → Unblock lot*.	When you block an inspection lot, you cannot process the lot further. You must unblock the lot if you want to perform any additional operations.
Transferring stock in an inspection lot	–	See Stock Transfers [Page 76]
Making corrections to inspection lot quantities	–	See Corrections to Inspection Lot Quantities [Page 77]
Creating a QM order	Call up an inspection lot in the create or change mode and choose *Goto → Insp. lot acc. assgnmt*.	See QM Order Creation [Page 83]
Resetting the sample calculation	–	See Resetting the Sample Calculation [Page 74]
Printing inspection instruction/sample-drawing instruction	–	See Printout of Instructions [Page 29]
Approving a task list	Call up an inspection lot in the create or change mode and choose *Inspection lot → Functions → Give approval*	If the task lists in your company must be approved before they can be used, you should make sure that only approved task lists are assigned to an inspection lot. If the system selects a task list that has not yet been approved, you can use this function to approve the task list (provided you have the necessary material authorization).

Creating an Inspection Lot Manually

Use

You can use this procedure to create inspection lots manually for all inspection lot origins except the following:

- 10 − Delivery to customer with sales order

- 11 − Delivery to customer without sales order

- 12 − General delivery

- 13 − Repetitive manufacturing

- 14 − Plant maintenance

When you create an inspection lot manually, you cannot reference an original document (for example, a goods receipt document, an order, or a delivery note).

Procedure

1. Choose *Logistics → Quality management → Quality inspection → Inspection lot processing → Inspection lot → Create*.

2. Enter the material, plant, and inspection lot origin and then choose *Enter*.

   For inspection lot origins 03 (inspection during production) and 04 (goods receipt from production), do not specify a material.

   The initial screen for creating an inspection lot appears.

3. Enter the required data on the *Origin* tab.

4. Choose *Enter* (or save the inspection lot) to have the system assign an inspection specification to the inspection lot automatically. If system cannot assign a specification automatically:

   a. Choose the *Insp. specifications* tab

   b. Manually assign a specification to the inspection lot by choosing *Edit → Choose plan/spec*.

5. If the system does not calculate the sample size automatically, you can trigger the sample calculation manually or you can enter a sample size directly.

   To trigger the sample calculation manually:

   a. Choose the *Sample* tab

   b. Choose *Smpl.* to trigger the automatic calculation of the sample size manually

6. Save the inspection lot.

Batch Creation in Inspection Lots

Use

When you create an inspection lot manually, you can also create and assign a new batch to the inspection lot. When you create a new batch, you can assign the batch an external number or the system can assign an internal number, depending on your settings in Customizing. If the batch status management is active for your plant, the system sets the initial status for the new batch (for example, *restricted* or *unrestricted*) based on the setting for the material type in Customizing.

Prerequisites

The following settings are active in Customizing for *Logistics - General* (*Batch Management*):

- An external or internal number assignment is specified for newly created batches (see *Batch Number Assignment*)

- An initial status is defined for newly created batches (see *Specify batch level and activate status management*)

Activities

When you create an inspection lot manually, you specify the number for the new batch or, in case of an internal number assignment, the system assigns the number automatically.

When you save the inspection lot, the system creates the new batch.

Resetting the Sample Calculation

Use

In some cases, you may want to reset or cancel the sample calculation for an inspection lot (for example, because you want to use a different inspection plan to inspect the goods). As you can only reset the sample calculation under certain conditions, the system first checks whether the status of the inspection lot will allow you to execute this function.

Prerequisites

You can only reset the sample calculation for an inspection lot if you have not:

- Marked the inspection lot for cancellation

- Recorded inspection results for the inspection lot

- Recorded defects for the inspection lot

- Made a usage decision for the inspection lot

Features

When you reset a sample calculation, the system:

- Displays information about the activities that have been processed for the inspection lot (for example, sample-drawing instruction was printed, inspection scope for the inspection lot was dynamically modified, physical samples were created, and so on)

- Sets the inspection lot status that existed before the sample size was calculated

Activities

You choose *Logistics → Quality management → Quality inspection → Inspection lot processing → Inspection lot → Reset sample*.

You then call up the desired inspection lot and save the data to reset the sample calculation.

Cancellation of an Inspection Lot

Use

Under certain circumstances, you can cancel inspection lots that are **not stock relevant**. When you cancel an inspection lot, the system:

- Sets a corresponding status for the inspection lot

- Does not include the inspection lot in:

  - QM Information System or other evaluations

  - Worklists

You cannot cancel **stock-relevant** inspection lots using this function. These inspection lots can only be cancelled via the original material documents.

> If the usage decision has been made for an inspection lot, you can cancel the inspection lot regardless of whether the lot is stock relevant or not.

Prerequisites

You can only cancel inspection lots that are not stock relevant if they do not reference a:

- Delivery (with or without reference to a sales order)

- Production order

- Process order

- Maintenance order

- Production version

You can only cancel or delete inspection lots that reference the above objects via the order or delivery.

Activities

You call up an inspection lot in the change mode and choose *Inspection lot → Functions → Cancel lot*.

> You can also cancel an inspection lot using the transaction for changing the usage decision.

Stock Transfers

Use

This function allows you to transfer the material stock in an inspection lot from one physical location to another, while the goods are still managed in inspection stock. You can transfer the actual lot quantity to another storage location or another plant (for example, if you want to complete the inspection at another location).

Integration

When you transfer the stock for an inspection lot, the system creates a new material document in the *Materials Management* (MM) component to record the stock transfer. The inspection lot record contains all information relating to the original and new material documents, allowing you to track the stock movements.

Prerequisites

You can only make a stock transfer for a material in an inspection lot if:

- The inspection lot has the status created or released

- No usage decision has been made for the inspection lot

- If the inspection lot quantity is not in goods-receipt blocked stock

Features

When you make a stock transfer for a material in an inspection lot, you can specify:

- The new storage location and plant where you want to transfer the goods

- A reason for making the stock transfer

- The create date for the material document

- The posting date for the stock transfer

- A text for the material document header

Activities

You choose *Logistics → Quality management → Quality inspection → Inspection lot processing → Inspection lot → Lot quantity → Transfer stock*.

You call up the desired inspection lot, enter the required data for the stock transfer on the corresponding tab page and then save the data.

Corrections to Inspection Lot Quantities

Use

This function allows you to make a correction to the **actual** quantity of materials in an inspection lot. For example, if you determine that the quantity of materials in an inspection lot is less or greater than the original quantity posted for a goods receipt, you can change the inspection lot quantity accordingly.

Integration

When you make a correction to the actual quantity of a stock-relevant inspection lot, the system makes a posting in the *Materials Management* (MM) component and creates a new material document to record the changes. If the inspection lot is not stock relevant, the system records the changes for informational purpose only (that is, no stock posting takes place).

Features

You can correct the inspection lot quantities:

- For all inspection lots whose current processing status does not prohibit a correction.

- For all inspection lots origins except the following:

    - 03 − Inspection during production
    - 07 − Audit inspection
    - 10 − Delivery to customer (with sales order)
    - 11 − Delivery to customer (w/o sales order)
    - 12 − General delivery
    - 13 − Repetitive manufacturing
    - 14 − Plant maintenance

- For all stock-relevant inspection lots

    If an inspection lot was created for a goods receipt that referenced a purchase order item with an account assignment, the inspection lot is **not** stock relevant. However, you can still make a stock posting using the function for correcting the inspection lot quantity.

You cannot correct the lot quantity for materials in an inspection lot if serial numbers are maintained for the material and the serial number profile requires a serial number assignment.

When you correct the actual quantity for a stock-relevant inspection lot, you can also:

- Specify a reason for making the correction

- Specify whether the corrected quantity for the purchase order item is still within tolerance to qualify as a final delivery

- Specify the date you created the material document

Corrections to Inspection Lot Quantities

- Specify the date you posted the correction

    ➡️

    If necessary, you can specify a posting date in a prior period.

- Include a text for the material document header

Activities

You choose *Logistics → Quality management → Quality inspection → Inspection lot processing → Inspection lot → Lot quantity → Correct*.

You then call up the desired inspection lot, correct the inspection lot quantity on the corresponding tab page and then save the data.

Status Management for Inspection Lots

Use

The system manages the status of an inspection lot. Whenever you execute a function that changes the processing status of the inspection lot, the system changes the status accordingly. On the basis of this system status, you can determine which activities:

- Have been carried out for the inspection lot

- Can still be carried out for the inspection lot

A one-to-one relationship does not exist between the inspection lot status and the activities that need to be carried out. The activities that can be carried out for an inspection lot depend on the settings for the inspection type in the material master (*Inspection data*).

> If you want to inspect a material without an inspection plan, then a plan does not have to be assigned to the inspection lot. Furthermore, you do not have to record inspection results for the lot.

The inspection lot statuses listed below are predefined for the QM component in the standard system. You cannot change these statuses.

Features

The following table contains the most important system statuses for an inspection lot.

Status	Meaning
CRTD	Created
REL	Released
ICNC	Inspection completion w/o confirmation
PREQ	Plan/specification required
PASG	Plan/specification assigned
CHCR	Characteristics must be created
LTIN	Long-term inspection
CCTD	Inspection characteristics created
CALC	Sample calculated
SKIP	Skip lot
PRSI	Sample drawing instruction printed
PRII	Inspection instruction printed
INSP	Inspection active
RREC	Results confirmed
LKD	Inspection lot locked

Status Management for Inspection Lots

DEF	Defects were recorded
ICST	Short-term inspection completed
ICCO	Inspection close completed
UD	Usage decision made
SPRQ	Stock posting required
SPST	Stock posting started
SPCO	Stock posting completed
STUP	Statistics updated
QLCH	Quality level changed
QLUP	Quality level updated
IRCH	Quality info-record changed
IRUP	Quality info-record updated
MCAN	Lot marked for cancellation
LTCA	Lot cancelled
BREQ	Batch assignment required
BASG	Batch assigned
CTCM	Certificate confirmation missing
CROK	Certificate receipt confirmed
BRRQ	Batch record required
MSUB	Marked for subsystem
SUB	Lot transmitted to subsystem
CLQM	Classification transferred (short-term inspection characteristics)
CLAS	Transfer completed to classification (short-term and long-term charac.)
APG	Approval granted
APGS	Single approval granted
APNG	Approval not granted
APIP	Based on approved inspection plan
LOLK	Lot locked for batch record
RO	Repairs processing
ARBL	Lot blocked for archiving
ARCH	Lot archived
RE03	Lot detail data deleted
RE02	Lot sample data deleted

RE01	Characteristics and operations deleted

You cannot change system statuses. However, you can define additional user statuses and assign them to the inspection type in the status profile; see Customizing for *Quality Management* (*Status Management*).

If documentation is required for the material, a change history is maintained for each status.

Update of Order Changes in Inspection Lots

Use

When an inspection lot (inspection lot origin 03) is created with reference to a production or process order, the system copies the order information into the inspection lot. If the information in the order is changed after an inspection lot has been created, the system can also update certain data in the inspection lot:

- If the scheduled start or end date in the order is changed, the system updates the inspection start or end date accordingly.

- If the quantity of the order is changed, the system updates the actual inspection lot quantity to match the quantity specified in the order. If inspection specifications have not yet been assigned to the inspection lot, the system also updates the inspection lot quantity.

- If the batch is changed in the order, the system updates the new batch and storage location in the inspection lot.

Prerequisites

The system can only change information in an existing inspection lot if a usage decision has not been made for the inspection lot. In the case of batch materials, the system can only change a batch in an inspection lot if inspection results or defects have not yet been recorded.

QM Order Creation

Use

If you want to record appraisal costs for an inspection, you can create a QM order when you create or change an inspection lot.

Prerequisites

To be able to create a QM order in an inspection lot, the following conditions must be met:

- No existing QM order or other cost accounting object (for example, a production order for an inspection during production) is assigned to the current inspection lot

- The indicator *Individual QM order* is set for the inspection type in the inspection settings of the material master

Features

When you create a QM order, the system copies any existing organizational data into the order. You can also specify an order type, a settlement rule and other related data.

Activities

When you create or change an inspection lot, choose *Goto → Insp. lot acc. assgnmt*. The system displays a dialog box in which you can enter the necessary data. The system creates the QM order when you save the inspection lot.