QM in Sales and Distribution (QM-PT-RP-SD)

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QM in Sales and Distribution (QM-PT-RP-SD)

Purpose

The *Quality Management* (QM) component supports *Sales and Distribution* (SD) by processing quality inspections and creating quality certificates for deliveries. A quality inspection for a delivery allows you to check the quality of a material or product before it leaves the manufacturer's or vendor's premises.

Implementation Considerations

The *Quality Management* (QM) component supports your sales and distribution activities:

- With quality inspections for a delivery (based on sales organization, customer, and material)
- With quality certificates for a delivery (with reference to sales organization, customer, and material)
- By managing customer terms of delivery

Integration

If a delivery is created in SD for a product or material, the QM component automatically creates an inspection lot for the delivery items that must be inspected. A delivery item must be inspected if the corresponding control parameters are active in the SD and QM components. The delivery can be released for the goods issue posting, provided a usage decision to accept the goods is made for the inspection lot.

When the system creates quality certificates, it accesses the data in *Sales and Distribution* (for example, customer master and sales order), *Quality Management* (for example, inspection specification and inspection results), and *Materials Management* (for example, batch specification).

Features

- The R/3 System creates an inspection lot when a delivery is created. The system supports quality inspections for inspection lots with the following origins:
  - Delivery with reference to a sales order
  - Delivery without reference to a sales order
  - General delivery (without reference to a customer)
- In the control data, you can specify that the inspection lot must be accepted as a prerequisite for the goods issue and you can also indicate whether the inspection should be carried out during the goods issue or by the ship-to party.
- If the stocks for a material are managed in batches, you can select suitable batches [Ext.] on the basis of batch characteristic values.
- With the help of the where-used list, you can determine which raw material batches were included in which batches of a final product.
- You can identify which batches were dispatched to a customer with which deliveries.

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- You can create customer-specific quality certificates together with the other shipping documents, print them out or transmit them by fax, and archive them in an optical archive using ArchiveLink. If customers have the required authorization, they can also create and retrieve quality certificates over the Internet.

See also:

Batch Determination in Sales and Distribution [Ext.]

Working with Batches in Deliveries [Ext.]

Batch Determination for Deliveries [Ext.]

Batch Data from Deliveries [Ext.]

Display Where-Used List for Batches [Ext.]

Batch Where-Used List [Ext.]

Displaying Information on Batch Determination [Ext.]

Triggering Manual Batch Determination for Deliveries [Ext.]

Batches in Sales & Distribution [Ext.]

Goods Issue for Batches [Ext.]

Batch Determination [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 [Page 16] 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.

Inspection for a Delivery

- 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 [Page 9]

Results Recording [Ext.]

Defects Recording [Ext.]

Inspection Lot Completion [Ext.]

Effect of Delivery Processing on Inspection Lots

When a delivery is created and processed in the SD component, the SD activities in the delivery note also affect the processing of inspection lots in QM. The key events include the following activities:

- **Creating the delivery**

    When a delivery note is created in the SD component for a material that must be inspected, the QM component automatically creates an inspection lot for the material as soon as the plant is identified. The system displays a message indicating that preparations are being made for a quality inspection.

- **Batch split**

    If the material for a delivery is managed in batches, a responsible person in SD user must determine whether the delivery item can be posted in a single batch or in several batches. The batch split function allows you to split a single item into a desired number of smaller batches. If a batch is split and the delivery is saved, QM automatically creates a partial lot for each batch.

- **Changing a delivery item**

    If a delivery item is changed in SD, the inspection lot also reflects these changes:

    - If the quantity of material for the delivery item is changed, the system also changes the actual lot quantity.

    - If the plant number is changed, the system cancels the existing lot and, depending on the control settings in the material master, creates a new lot.

    - If a batch split is cancelled because the delivery item can be processed in a single batch after all, the system cancels the existing lot and creates a new one.

- **Deleting the delivery item**

    If you delete a delivery item, the system reacts in different ways. This depends on the status of the delivery and the inspection. If the inspection lot or partial lots:

    - Have not been saved, they are not written to the database

    - Have been saved, but sample size has not yet been calculated, the inspection lot or partial lots are cancelled

    - Have been saved, the sample size has been calculated, but a usage decision has not yet been made, the inspection lot or partial lots will be marked for cancellation (this means that you can still record results for the inspection lot or partial lots)

    - Have been saved with a usage decision, the inspection lot or partial lots are cancelled

A goods issue begins with a request for the delivery of goods or services. The request for a delivery can be initiated in one of two ways:

- A customer requests the delivery of goods or services in the form of a purchase order or call-up order based on a pre-arranged delivery plan. In this case, a delivery is created with a reference to a sales order. The sales order may then trigger a production order or the withdrawal of material from the warehouse stock.

Effect of Delivery Processing on Inspection Lots

- The delivery note is created directly in *Sales & Distribution* (SD) without a reference to a sales order.

When the delivery note is created, the QM component creates an inspection lot in the background for the inspection-relevant delivery note items. The control over the goods reverts to QM until the inspection has been completed. The delivery can be released for the goods issue posting if you make a usage decision to accept the inspection lot.
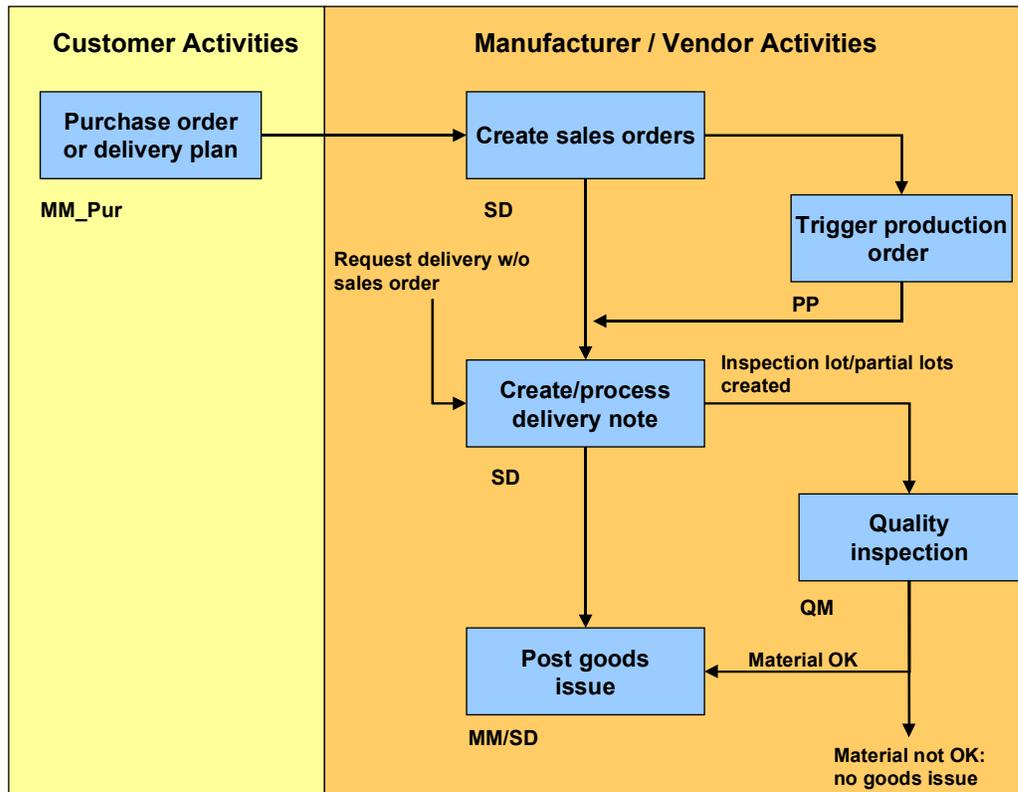
Features of a Quality Inspection for a Delivery

When you process an inspection for a delivery item, the inspection activities in QM are the same as for other types of inspections (for example, goods receipt inspection or production inspection). There are several functions in an inspection for a delivery, however, that are unique:

Inspection control for customer/material combinations

In the QM component, you can maintain default customer specifications for a customer or customer information records for customer/material combinations. These info records contain inspection-related control indicators that you can use to influence a quality inspection for a delivery (see QM control in Sales & Distribution [Page 12]).

Partial Lots

An inspection for a delivery supports the processing of batch materials. You can process a batch for a delivery item in a single inspection lot or in several partial lots. If the person processing the delivery in SD determines that the delivery item cannot be fulfilled with a single batch, the item can be divided into several batches. The QM component then creates a partial lot for each batch automatically.

The partial lots are subordinate to the inspection lot at the delivery item level. The QM component processes each partial lot separately. You must record inspection results and make usage decisions for the partial lots and the inspection lot.

Batch classification

The QM component can automatically transfer the inspection results for the individual lots to the respective batches in order to classify the batches. In SD, a user can select a batch for a goods issue posting on the basis of specific attributes (for example, expiration date, quantity or characteristic value).

Quality certificates

The system can also create a quality certificate for a delivery item automatically. The quality certificate documents the specifications, inspection results or properties of a material or batch.

See also:

LO - Batch Management

QM Control in Sales and Distribution

Use

You need QM control in *Sales & Distribution* so the QM component can automatically create inspection lots when delivery items are created.

Using the function *QM Control in SD* in the screen for *Quality Management in Sales and Distribution*, you can influence the quality inspection by:

- Defining default customer specifications [Page 14]

- Creating and maintaining customer information records [Page 16]

> In SD, you can assign several partner functions to a customer in the customer master (for example, you can identify a customer as a sold-to party, ship-to party, or bill-to party). If you define customer specifications or want to create a customer info record, you must specify the **ship-to party** for the customer number.

Prerequisites

Certain control parameters must be active and various master data records must be maintained in the QM and SD components. The QM component automatically creates an inspection lot for a delivery item if the following conditions have been met:

- Your system administrator has maintained the appropriate Customizing tables in the SD and QM.

- You have maintained the QM inspection data in the material master records for the materials to be inspected.

In addition, you can influence an inspection for a delivery by defining customer specifications [Page 14] and customer info records [Page 16]. To do this, choose *QM Control in SD* in the *Quality Management in Sales and Distribution* screen. You do not have to maintain customer specifications or customer information records for the system to create inspection lots automatically.

Customizing prerequisites in SD

- Maintain delivery type.
- Maintain delivery category.

Customizing prerequisites in QM

- Maintain inspection lot origin.
- Maintain inspection type.
- Assign the delivery type to the inspection lot origin. The system supports the following inspection lot origins:

    – Inspection lot origin 10 (delivery with reference to sales order)

    – Inspection lot origin 11 (delivery without reference to sales order)

    –   Inspection lot origin 12 (general delivery; no customer reference)

- Assign the delivery category and delivery type to the inspection lot origin.

    ➡

    Together, the delivery category and the inspection lot origin specify the inspection type. If necessary, you can use customer enhancement QVDM0003 to have the system select another inspection type to create an inspection lot.

Assignments in the material master

Assign an inspection type to QM inspection data in the material master.

Default Customer Specifications

Use

Once a customer master record has been created for a customer in the SD component, you can define several inspection-related default specifications for the customer. These specifications apply to all materials that are delivered to this customer. The specifications include the following control parameters:

- **Quality inspection**

    You use this parameter to specify whether a quality inspection will take place and when the inspection will occur:

    − Before the goods issue is posted

    − After the goods issue is posted

    − To be performed by the customer (if you choose this option, the QM component will **not** create an inspection lot for the delivery)

- **Delivery category**

    With this parameter, you document the customer's release status (for example, whether the customer has released you for a replacement, model, or production series delivery).

- **Documents**

    With this parameter, you can create a link to quality documents (for example, quality assurance agreements and technical delivery terms) with the help of the document management system.

If a delivery item was created for a material, but a customer information record does not exist for this particular customer/material combination, the system uses the default customer specifications to determine the requirements for the quality inspection. The system also uses default customer specifications as default values when you create customer information records.

You can only define default specifications for a customer if a corresponding customer master record exists in the SD component. For more information about customer specifications, refer to the procedure Defining Customer Specifications [Page 15].

See also:

Customer Info Record [Page 16]

Defining Default Customer Specifications

1. Choose *Logistics* → *Quality management* → *Quality planning* → *Logistics master data* → *Q-info record (SD)* → *Create.*

2. In the initial screen for creating QM control data in SD, enter a customer number and sales organization, and then choose *Control data*.

3. Choose *Goto* → *Customer specifications*. A dialog box for creating the customer specifications appears.

4. Proceed as follows in the dialog box:

    −   Enter the delivery category (if known)

    −   Set the indicator for the quality inspection.

    −   Choose *Documents* if you want to link the customer specifications to a quality document (for example, a quality assurance agreement or technical delivery terms). A dialog box appears in which you can link the customer specifications to a document. Use the possible entries help to select the desired document and then choose *Continue*. The dialog box for creating the customer specifications reappears.

5. Choose *Continue* to return to the screen for creating the QM control data in SD.

6. Save the customer specifications.

    To change the default customer specifications, repeat the above procedure and change the data as necessary.

Customer Info Record

Definition

The customer info record defines the inspection requirements for a specific customer/material combination (per sales organization). You can use the customer info-record to override the default customer specifications.

Use

When a delivery is created in SD, the system first checks the inspection settings [Ext.] in the material master to determine if the material should be inspected. If so, the system checks whether a customer info record exists for the customer/material combination, to determine if any special inspection requirements apply. If a customer info record does not exist, the system uses the default customer specifications. In the customer info record, you can:

- Specify the material for the customer/material combination

- Enter an additional short text for the customer info record

- Create a long text as additional documentation

- Change the default customer specifications (quality inspection, delivery category, or documents)

You normally create a customer info record after you have maintained the inspection settings in the material master and the customer data in the customer master.

Structure

The customer info record consists of information retrieved from the customer master and material master records.

```
┌─────────────────────────────────┐
│          SD                     │
│    Customer Master              │
├─────────────────────────────────┤
│  Customer:  12345               │
│  Sales organization:  0001      │
│                                 │
└─────────────────────────────────┘
        ┌──────────────────────────────────────┐
        │              MM                      │
        │         Material Master              │
        ├──────────────────────────────────────┤
        │   Material:  AB112                   │
        │   Material short text:  AA Batterie  │
        │                                      │
        └──────────────────────────────────────┘

        ┌──────────────────────────────────┐
        │              QM                   │
        │     Customer Info Record          │
        ├──────────────────────────────────┤
        │  Customer:  12345                 │
        │  Sales organization:  0001        │
        │  Material:  AB112                 │
        │  Material short text:  AA Battery │
        │                                   │
        │  Delivery category:               │
        │  Quality inspection:              │
        │      Before delivery      ◉       │
        │      After delivery       ○       │
        │      By customer          ○       │
        └──────────────────────────────────┘
```
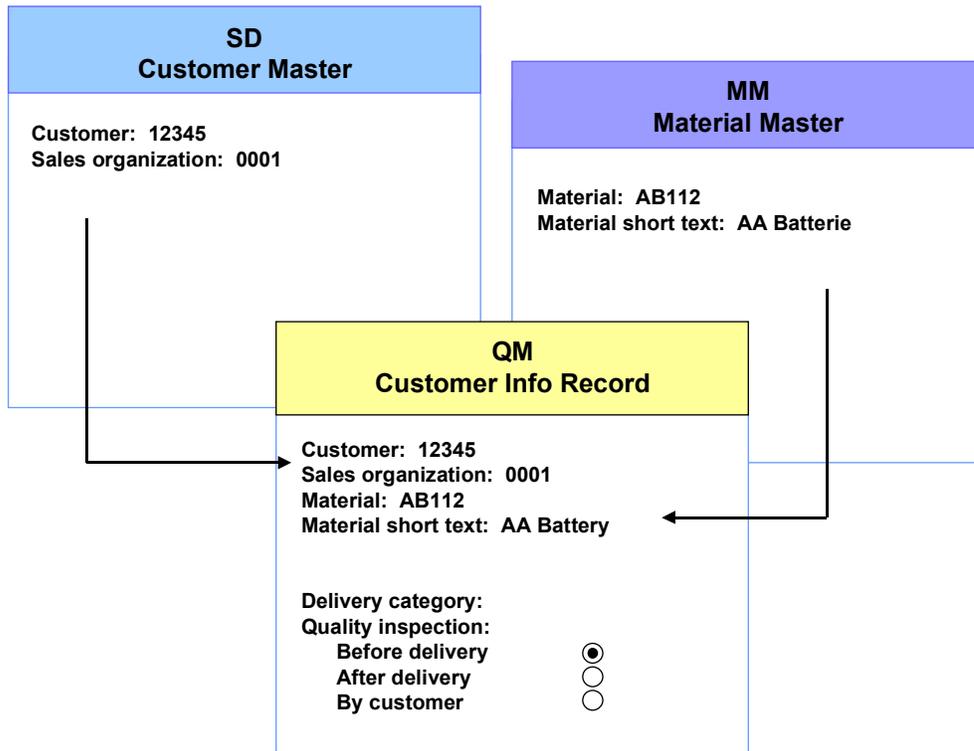
See also:

Process Customer Info Records [Page 18]

Process Customer Info Records

Creating a new customer info record

1. Choose *Logistics → Quality management → Quality planning → Logistics master data → Q-info record (SD) → Create.*

2. In the initial screen for creating QM control data in SD, enter a customer number and sales organization, and then choose *Control data*.

3. Choose *New info record*. A dialog box for creating the QM control data in SD appears.

4. Proceed as follows in the dialog box:

   − Enter a material.

   − Enter the delivery category.

   − Enter a short text for additional information (optional).

   − Set the indicator for the quality inspection.

   − Choose *Documents* if you want to link the customer info record to a quality document (for example, a quality assurance agreement or technical delivery terms). A dialog box appears in which you can link the customer info record to a document. Use the possible entries help to select the desired document and then choose *Continue*. The dialog box for creating QM control data in SD reappears.

5. Choose *Continue* to return to the screen for creating the QM control data in SD.

6. Save the customer info record.

   If you want to define a new material for an existing customer, call up the info record for the customer using the *Create* function. When the record is displayed, choose *Edit → New info record* and then enter the information listed in step 5 above.

Displaying or changing a customer info record

To display or delete a customer info record, perform the procedure described above. Instead of the change or display function, however, choose the create function.

Deleting a customer info record

1. Choose *Logistics → Quality management → Quality planning → Logistics master data → Q-info record (SD) → Change.*

2. In the initial screen for creating QM control data in SD, enter a customer number and sales organization, and then choose *Control data*.

3. Select the desired material and choose *Info record details*. A dialog box for changing the QM control data in SD appears.

4. Set the indicator for the deletion flag. Depending on the other system settings, the data record will be deleted during the next reorganization run.

Processing and Completing Quality Inspections

Purpose

After the system has created the inspection lot(s) for the goods issue and you have inspected the goods, you can:

- Record inspection results

- Make the usage decision

After you have recorded inspection results and made the usage decision (and the inspection lot has been accepted), the goods issue can be posted in SD.

Process Flow

Record inspection results

You can record inspection results for inspection lots or partial lots using the following functions for quality inspections:

- *Results → For delivery in SD*

- *Worklist → Results recording*

If you want to record results for a single inspection lot, use the function *Results → For delivery in SD*. If you want to record results for several inspection lots or partial lots, use the *Worklist* function. You can use the *Worklist* function to simplify the repetitive steps involved in recording inspection results and making usage decisions.

Making a usage decision

You can make a usage decision for:

- Partial Lots

- Inspection lots

Making the usage decision for partial lots

You can make a usage decision for individual partial lots or for several selected partial lots collectively. You cannot make a usage decision for a partial lot if:

- The status of the partial lot does not allow the inspection to be completed, a usage decision to be made, or the usage decision to be changed

- Samples are currently being processed for the partial lot

If you decide to make a usage decision for the entire inspection lot instead of for a partial lot, the usage decision also applies to the partial lots. You cannot define follow-up actions for partial lots.

Making a usage decision for a series of inspection lots

You cannot make a usage decision for an inspection lot if a batch split for a delivery item is incomplete (see Incomplete Batch Split [Page 22]).

Posting the goods issue

The goods issue is posted in the SD component. If the customer info record specifies that the quality inspection must occur before the goods issue, the goods issue can only be posted after the inspection lot has been accepted. The goods issue cannot be posted if:

- An inspection lot or a partial lot has been rejected

- A usage decision has not been made yet for an inspection lot or partial lot

If the customer info-record specifies that the quality inspection may occur after the goods issue, the goods issue can be posted at any time.

Incomplete Batch Split

Assume, for example, that a delivery note item is to consist of 100 units of a material. You want to process these 100 units in three batches. Up to now, you have created and assigned the following partial items to the delivery item:

- 1st batch: 35 units

- 2nd batch: 40 units

The third batch, consisting of the remaining 25 units, has not been assigned to the delivery item yet because the material is still in production. In this case, you cannot make a usage decision for the inspection lot because the batch split is incomplete.