[TEST CASE] Inspections using Multiple Specification

Purpose

Multiple Specification (abbr. MS) stands for different inspection specifications for a single inspection characteristic. These specifications may include customer-specific requirements, requirements specified by pharmacopoeia (e.g. USP) or authorities, country-specific legal requirements, or internal company requirements. Such specifications, for example, may consist of different tolerances or characteristic attributes (for qualitative characteristics). When deciding on how to use a batch, this information is used to determine the suitability/admissibility of the product.

In general, multiple specifications can be used to determine the suitability of a batch based on special specifications. The overall valuation of a batch for each object identifies, whether or not the batch can be delivered to a specific customer or used under certain conditions.

For more information, check out the online help:
Inspections Using Multiple Specifications

Business process example

I’m producing power adapters which are sold to different countries, like Germany, Japan, China etc. But each country has different requirements on the voltage. I can make use of multiple specification in this scenario. Define the voltage as a product characteristic and set different specifications for each country. Then I can know which country the batch is suitable for after inspection.

Setting up a test example

Customizing

1. Client setting
   Path: QCC0 > Quality Management -> Basic Settings -> Maintain Settings at Client Level
   Flag: "Multiple Specs" (TQSS-MS_FLAG)
   Attention: Activation of multiple specifications cannot be reversed. The warning message QS420 would be issued if you set this indicator. Please read the long text of message QS420 to know more about the restrictions.

   ![Change View "QM Client Settings": Details]

2. MS object types (Optional)
   Path: QCC0 >Quality Management -> Quality Planning -> Inspection Planning -> General Multiple Specifications -> Define object types for multiple specifications
   Explanation: The following three object types are delivered in the standard system:
If you want to create your own object type, make sure you enter two class characteristic (one for "ok" and one for "not ok") plus a field name for EWB. To create characteristics, use t-code CT04 and the char LOBM_COUNTRY_OK and LOBM_COUNTRY_NOK as example.

3. MS objects:
   **Path**: QCC0 -> Quality Management -> Quality Planning -> Inspection Planning -> General -> Multiple Specifications -> Define Objects for Multiple Specifications

4. Inspection types (Optional)
   **Path**: QCC0 -> Quality Management -> Quality Inspection -> Inspection Lot Creation -> Maintain Inspection Types
   **Field**: Recording view
   **Explanation**: You might like to select recording view "Multiple Specifications". If you do so you will be shown the multiple specifications data immediately on entering results recording. If you choose a different recording view multiple specifications data will be available in results recording, too; however multiple specifications will then not be the first thing you see when entering results recording.

**Path**: QCC0 -> Quality Management -> Quality Inspection -> Inspection Lot Creation -> Define Default Values for Inspection Type

**Flag**: "Multiple Specs"

**Explanation**: Note that this flag only affects the default setting of the MS flag in the inspection setup of the material master. If you do not set this flag in the default values of the inspection type you can still set the MS flag in the material master itself.
Master data

1. **CL01**: Create a batch class MS\_BATCH which includes the "ok" and the "not ok" class characteristics for MS object type COUNTRY

   ![Batch Class MS\_BATCH](image)

2. **MM01**: Create a material NG\_QM\_BATCH
   - Activate the indicator "Batch management" in the view “Sales: general/plant”

   ![Material NG\_QM\_BATCH](image)

   - In the “Classification tab” enter the batch class MS\_BATCH

   ![Classification](image)

   - Activate the inspection type 01 in QM view and make sure the indicator "Multiple Specification" is set.

   ![Inspection Type 01](image)
3. **MSC1N**: Create a batch with class MS_BATCH.

4. **QDV1**: Create a sampling procedure
5. **CWBQM**: Create an inspection plan for the material NG_QM_BATCH
- Enter details like “usage”, “status”, “lot size” on the tab “Headers general”.
- In order to enable multiple specifications for the inspection plan go to the “Quality management” tab. Scroll to the right until the “Multiple Specs” column appears. Mark the check box for your inspection plan.

- If you’d like to use samples, enter inspection point and sample drawing procedure on the “Quality management” tab.

- In order to take up multiple specifications objects into the inspection plan you need to create material-task list assignments, one for each multiple specifications object. To this end, mark your inspection plan by marking the whole line and go to the menu Task Lists -> Material Task List Assignments or click the light button under column Material. Create material task-list assignments by entering the material, the MS object and the MS object type in the corresponding fields. Note that depending on the MS object type you need to enter the MS object in the field MS object, customer or search field.
5. Make sure there is a ‘pure’ material-task list assignment, i.e. one that only contains the material but not an MS object (otherwise you will not be able to create an inspection lot since the inspection plan cannot be found).

- In order to create operations go ahead as usual. Mark the task list header and choose Task Lists->Operations in the menu. Enter operation ID and control key (e.g. QM01). Save.
- In order to assign characteristics to the operations proceed as usual: Mark an operation and choose Task Lists->Inspection Characteristics in the menu. Enter the inspection characteristics' short texts on the Inspection chars general tab.

- Create multiple specification data for the characteristic. Mark an inspection characteristic and choose Task Lists->Dependent Characteristic Specifications in the menu. On the tab “Dependent characteristics specs general” you declare the MS objects for which you like to maintain individual quantitative or qualitative specifications.
Inspection lot processing

1. **QA01**: Create an inspection lot. Enter a batch here in order to make use of batch classification with respect to multiple specifications.
2. **QE11**: Record results for the inspection lot. An additional tab “Multiple Specification” is available.

   - Enter a result for the characteristic. Valuate and close the char. Data is transferred to the tab “Multiple Specification” automatically.

   - You can click the button "Change hierarchy display" to change the view.

3. **QA11**: Make usage decision for the inspection lot.
   - Enter UD code and save.
- If you go to the tab "Multiple specifications" you can get a valuation proposal for the individual MS objects by clicking the "Propose valuation" button. The valuation is proposed in a worst case approach by accumulating all valuations for all samples (if available) and all characteristics. That is, if one of the characteristics (for any of the samples) is rejected or not valuated, the MS object will be rejected. You can manually change the valuation via the buttons "Accept selection" and "Reject selection". However, you need not use the "Propose valuation button" first. You may valuate all objects manually via the Accept selection" and "Reject selection" buttons. However you need not access the "Multiple specifications" tab explicitly. If you simply save your decision code the MS objects will be valuated in the background. The worst case principle as described above is applied. If some MS object ends up being rejected you will be directed to the "Multiple specifications" tab before you will be allowed to leave the transaction. That is, rejections are not saved in the background without you getting chance to check and possible change them.

- Check MSC3N. The valuations of the MS objects are transferred to the batch. That is, the characteristics of the batch class (like LOBM_COUNTRY_OK etc) are filled with the MS objects involved in the inspection lot.
BADIs which can be used with multiple specification:

**BADI QM_MS_OBJECT_NAME:**
It allows changing the descriptive name of the individual multiple specifications which is displayed in the ALV Tree on the MS tab.

**BADI QM_VALUATE_MS:**
You can use this BAdI to change the valuation of multiple specification objects in the usage decision transaction. That is, you use this BAdI to define a different, customer-specific logic at object level for the valuation of multiple specifications.

See a sample code in the following note:

941077 - Multiple specification: Subsequently including standard specifications

**BADI QM_QCERT_MS:**
You can use this Business Add-In (BADI) to change how certificates containing specifications from multiple specifications are output.
You can, for example, change the order of the relevant objects for the determination of multiple specifications. You can also suppress characteristics when creating certificates.