

KDD034 - Improvements to Material Inspection Process

Status	Approved
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Issue

This KDD document is intended to identify if all QM Inspection types to be deployed at Syensqo. The issue is that we believe not all inspection types that can be deployed, have been deployed.

These are the processes currently running in Syensqo WP1 and PF1 systems, as identified in the AS-IS analysis:

- Inspection at Purchasing Goods Receipt (01)
- Source Inspection per Purchase Order Item/Schedule Line (0101)
- In Process Production Inspection (03)
- Inspection at Production Goods Receipt (04)
- Inspection at Other Goods Receipt (05)
- Inspection at Customer Returns (06)
- Inspection at Stock Transfer (08)
- Recurring Inspection (09)
- Outbound Inspection (10-11-12)
- Manual non-stock-based inspection (89)

All these inspection types are used in combination with inspection plans.

We identify the opportunity to introduce:

- Inspection for Asset maintenance and calibration (14)
- Sample Inspection (15)
- Usage of Material Specification instead of / in combination with Inspection Plans

Recommendation

It is recommended that ERP Rebuild introduce Inspections for Asset Maintenance and Calibration (type 14) and Samples (type 15), and allow the usage of Material Specification.

Background & Context

The two ECC systems PF1 and WP1 have a very similar QM model, based on custom inspection types which are copies of the original standard types.

Material inspection is largely used in SAP ECC, in some cases in combination with Labware and WEBLIMS, in other cases with a full E2E process in SAP.

The QM Material Inspection is a crucial part of the traceability and Quality Assurance process in Syensqo and involves all steps of the process: Inbound, Production, Outbound, Stock Management, hence, it must be fully part of the proposed SAP QM solution.

Assumptions

- the new ERP system will be S/4HANA version 2023 or higher
- one single instance will exist, instead of the current WP1, PF1 and WPX
- current Labware and WEBLIMS systems remain: they are currently used by several Labs across the company and a subset of them are part of the ITAR segregated environment.
- the ongoing QMS project with Vendor EQT proceeds only for Composite GBU. Interfaces between QMS-ETQ and S4 QM are in scope only for Composite. Specialty Polymers and the other GBUs will investigate the SAP functionalities in the Detailed Design phase.

Constraints

- Each GBU and each single plant must be able to maintain their own inspection plans where required

Impacts

- the simultaneous usage of Inspection Plans and Material Specification needs a centralized coordination between QM department across the plants and GBU for the common materials. A Central Governance is recommended to coordinate the creation and maintenance of the common master data, to be used across the plants.

Business Rules

A decision tree will be designed in Detail Design to identify:

- the inspection types to be activated for each material, and
- whether a material specification or an inspection plan should be created to host the tests required for a new material.

Options considered

Option A: Keep only currently used Inspection Types and do not allow Material Specification

This option is a replica of the current AS-IS solution. It would not be possible to create Inspection Lots for Samples and for Tool Calibration. It would be mandatory to use Inspection Plan for each material/plant to inspect. Different inspection plans for the same material on different plants imply more work to maintain the master data and make harmonization more difficult.

Option B: Add Inspection Types 14 and 15 to the scope and allow Material Specification

This option adds to the current model some further functionalities:

- Inspection Type 15 allows the creation of an Inspection Lot for a Sample, to analyse a small quantity of a product without blocking the whole batch
- Inspection Type 14 allows the creation of an Inspection Lot to check the calibration of a Tool and to perform a new calibration if required
- The Material Specification is a Master Data in S4 that lists all the tests required for the acceptance of a certain product. It is a cross plant object: once defined, it is valid for all plants and applies to all inspection lots created on that material. Introducing Material Specification has the following advantages:
 - the inspection can be standardized across the plants
 - the list of test is created only once and maintained in a single centralized object, no need to replicate it on multiple plants
 - the local specificity can still be managed using Material Specification in combination with Inspection Plans: in this case, the tests in the Material Specification appear at the beginning of the Inspection Lot, then the test identified in the plant specific Inspection Plan follow.

Option B introduces further functionalities and facilitate the harmonization and standardization, as Material Specification is a useful tool to adopt a common set of tests for a material across the organization.

Evaluation

The simple decision matrix lists all considered criteria and the estimated weights and scores for each of the 2 options. The total is the sum of each score multiplied by the weight of the criteria and gives a global evaluation of the options across the different points of view.

Criteria	Weight	Option A Keep only currently used Inspection Types and do not allow Material Specification	Option B Add Inspection Types 14 and 15 to the scope and allow Material Specification
Functionalities	VH	High	Very High
Standardization	VH	Medium	Very High
Reduce Master Data Maintenance	H	Medium	Very High
Reduce Training need	M	Very High	Medium
Reduce Change Management	M	High	Medium
Total		Medium	High

Option B stands out as the preferred one.

Change log

Version	Published	Changed By	Comment
CURRENT (v. 26)	Sept 17, 2024 17:03	NICASTRI-ext, Michele	
v. 25	Sept 06, 2024 17:05	NICASTRI-ext, Michele	
v. 24	Sept 06, 2024 17:02	NICASTRI-ext, Michele	
v. 23	Sept 05, 2024 15:58	NICASTRI-ext, Michele	
v. 22	Sept 05, 2024 13:56	NICASTRI-ext, Michele	
v. 21	Sept 05, 2024 11:41	NICASTRI-ext, Michele	
v. 20	Aug 14, 2024 12:38	WENNINGER-ext, Sascha	
v. 19	Aug 09, 2024 08:04	WENNINGER-ext, Sascha	
v. 18	Aug 08, 2024 13:15	NICASTRI-ext, Michele	
v. 17	Aug 08, 2024 13:11	NICASTRI-ext, Michele	

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Workflow history

Title	Last Updated By	Updated	Status
There are no pages at the moment.			

Workflow history

This view shows the 5 most recent entries. The complete workflow log is available from the 'Document Activity' menu item.

Sept 19, 2024	Actor	Type	Activity	Version
Approved	 FALL-ext, Cheikh	State	changed state to Approved at 4:50 pm	v26
Pending SteerCo Review	 FALL-ext, Cheikh	State	gave <i>Final Approval</i> approval at 4:50 pm	
		State	changed expiry date to '03 Oct, 2024 04:50 pm' at 4:50 pm	
		State	changed state to Pending SteerCo Review at 4:50 pm	v26
Pending Stakeholder Review	 FALL-ext, Cheikh	State	gave <i>Stakeholder Review</i> approval at 4:50 pm	
		State	changed expiry date to '26 Sept, 2024 04:50 pm' at 4:50 pm	
		State	changed state to Pending Stakeholder Review at 4:50 pm	v26
Edited following DA Endorsement	 FALL-ext, Cheikh	State	gave <i>Minor change</i> approval at 4:50 pm	
Sept 17, 2024				

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Edit updated the page at 5:03 pm

State changed state to Edited following DA Endorsement at 3:03 pm v26
