

Exensys Software Solutions Ltd.		AA/B/CCDD V x.y
White Paper		W. E. F. dd/mm/yy



eXensys – Incoming Quality Inspection

Business Performance Sustained

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Introduction

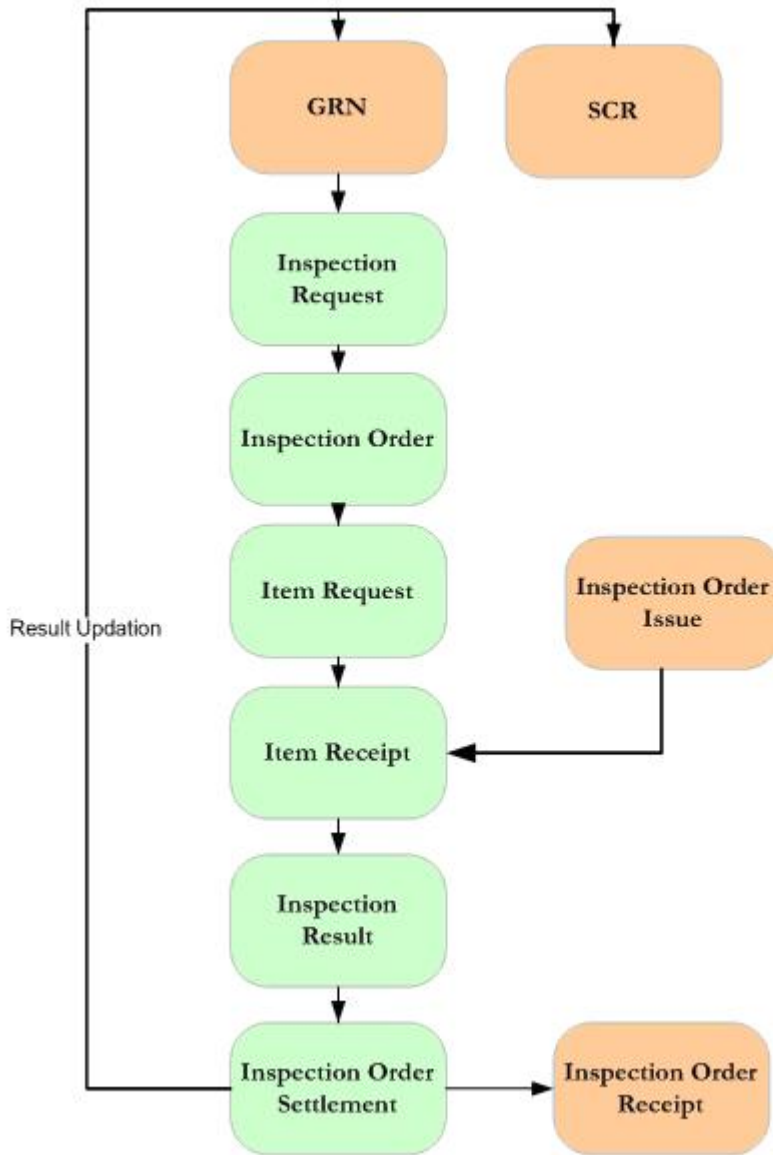
Objective of this document is to furnish a conceptual analysis of Incoming Quality Inspection in the Quality Management. An inspection most generally, an organized examination or formal evaluation exercise. It involves the measurements, tests, and gauges applied to certain characteristics in regard to an object or activity. The results are usually compared to specified requirements and standards for determining whether the item or activity is in line with these targets.

Overview

- Incoming Quality Inspection Process

Incoming quality inspection process starts with the receiving of raw materials or Finished Goods from vendor . If the material is subjected to inspection applicability then the material is inspected at quality department. Materials are received for incoming inspection through Goods Receipt Note and Subcontracting Receipt note. When the items are purchased from vendor, while receiving the Goods , items are subjected to inspection if applicability property is predefined in the purchase data. Similarly while receiving the material from subcontractor after the value addition done on the expected items , items can be subjected to inspection. Characteristics or aspects of the items are inspected in the Inspection Department and the test result is updated for the respective items. Inspection process steps are as below:

1. Inspection Request
2. Inspection Order
3. Item Request
4. Item Receipt
5. Inspection Result
6. Deviation Note
7. Inspection Settlement



- Inventory – Item Master -Purchase Data

Inspection applicability for the item to be defined in Purchase data. Items with inspection applicability property are subjected to inspection at the time receiving the goods .

Sub organization	SO1
Item code	Cable
Base UOM	No.
Inspection	Yes

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- **Inventory - Goods Receipt Note / Subcontracting Receipt**

Incoming items from Vendor and subcontractor is received through Goods Receipt Note and Sub Contracting Receipt Note.

Example:

Let us say cable has been purchased from Vendor V001 and in the Goods Receipt note items are reflected with reference to the Purchase order. Since item is having inspection applicability items are submitted to QC. User can omit the QC check applicability for the item if desired.

Sub organization	SO1
Vendor Code	V001
GRN Code	GRN 001

Item code	Spec.	UOM	INV Received	Accept. Qty.	Quality Applicability	QC Consumed	Rejected Qty.	Stock Type	Received Qty.
Cable		No.	10		<input checked="" type="checkbox"/>				

- **QAC – Master –Test Definition**

The characteristic of the item “cable” is Diameter and the Aspect is Outer diameter which has to be inspected.. In the Test definition for the item it is defined as below:

Sub organization	SO1
Test Definition Code	TC01

Char code	Aspect Code	Spec USL	Spec LSL	Inspection Method	Inspection Type	Sampling Plan	No. of Times	Test Equipment Code
Diameter	O.D	2	1	Quantitative	100%	Single	1	Vernier Caliper

- **QAC – Master – Item -Test Definition**

In the Item –Test definition master, item is mapped to the test definition.

Sub organization	SO1
Test Definition Code	TC01
Item Code	Cable

- **QAC – Inspection Request**

Items received through Goods Receipt Note and Subcontracting Receipt are submitted to qc Inspection. The Inspection Request can be raised either automatically or manually based on the requirement of the organization. An inspection request is required to initiate the inspection order process by the Quality Control department.

Sub organization	SO1
Test Definition Code	TC01
Inspection Request Code	IR001
Item Code	Cable
Quantity	10

- **QAC – Inspection Order**

This process is initiated based on the requirement of items to be inspected. In the Inspection order item is mapped to the test definition. In the inspection Order user can opt QC type as “Online” or “Off line”. If user opts “Online” then there will not be any physical movement of item from Inventory.

Sub organization	SO1
Test Definition Code	TC01
Inspection Order Code	IR001
Item Code	Cable

Char code	Aspect Code	Spec USL	Spec LSL	Inspection order Test Equipment	QC Type	Required Qty
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Diameter	O.D	2	1	No	Off line	10
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- QAC – Inspection Item Request and Receipt

If the user opts QC type as on line then physical movements of item from Inventory will not be there. If the QC type as offline then items will be requested from QC department to Inventory and from the Inventory items will be issued along with the test equipment. The items will be received in the QC from Inventory .

- QAC – Inspection Result

In the inspection Result actual value for the characteristics of the item will be captured.

Char code	Aspect Code	Spec USL	Spec LSL	Act SD	Act. ED	Act. Insp. Time	Result Type	Sample Nos	Random Qty.	Accept. Qty.	Passed Qty.
Diameter	O.D	2	1	12/9/8	12/9/8	30	Actual			(R)	

Sample Nos	Actual Value	Result
1	1	Pass
2	1	Pass
3	3	Fail
4	3	Fail
5	2	Pass
6	1	Pass
7	1	Pass
8	1	Pass
9	1	Pass
10	1	Pass

Characteristic wise Result – Fail

- QAC – Deviation Note

At the time of saving Inspection Result a message will be shown to the user "Do you want to generate Deviation Note". If the user says 'Yes' then generate Deviation Note will be automatically populated.. User can able to modify sample Numbers.

Sample Nos	Actual Value	Result
1	1	Pass

2	1	Pass
3	3	Pass Under Deviation
4	3	Pass Under Deviation
5	2	Pass
6	1	Pass
7	1	Pass
8	1	Pass
9	1	Pass
10	1	Pass

Characteristic wise Result – Pass

Only the sample result and the Reason button attributes will be able to edit. In deviation note based on the result , accepted and Rejected Qty. will be updated automatically in case of Inspection Type is Acceptance. If the inspection type is 100 % then user has to enter the accepted and rejected qty. In case of online then user can enter the scrap qty.

- **QAC – Inspection settlement**

Inspection order settlement is the process of returning the items to the inventory after the completion of the Quality Control process.

- **Inventory - Goods Receipt Note / Subcontracting Receipt**

In the Goods Receipt Note /subcontracting receipt the result will be automatically updated. Accepted quantity , QC consumed quantity and rejected quantity will be automatically updated based on the inspection result. Items then can be stored in different stock types as desired in locations and bins .

Sub organization	SO1
Vendor Code	V001
GRN Code	GRN 001

Item code	Spec.	UOM	INV Received	Accept. Qty.	Quality Applicability	QC Consumed	Rejected Qty.	Stock Type	Received Qty.
Cable		No.	10	10	<input checked="" type="checkbox"/>				10

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Benefits

- Incoming inspection of materials can be done stringently.
- Rejected quantity and consumed qty of the items are automatically updated from Inspection cycle.
- Process capability Index can be generated to ascertain the quality of incoming material in terms of consistency.
- Deviation Note gives the Top management to track deviations in the process for stringent quality measures.

Conclusion

- eXensys Quality management is designed to provide real ,measurable benefit to the manufacturing effort in the form of increased process repeatability , reduced variation ,increased production throughput and reduced defects.
- eXensys Quality management interconnects engineering , Quality and manufacturing eXensys provides an automatic , paperless and real time checksheets , inspection data collection and SPC.

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