QAD Adaptive Applications

User Guide

QAD EQMS Applications: Inspection & SPC

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Inspection & SPC User Guide
Change Summary

The following table summarizes significant differences between this document and previous versions.

Date/Version	Description	Reference	Changed By
JUNE 2019/v2019	Initial version	--	RQT
SEPT 2019/v2019	Updated copyright, styling, links	--	RQT
JAN 2020/v2019	Updated linkage	--	RQT
OCT 2020/v2020.1	Updated versioning	--	RQT
MAR 2021/v2021	Updated linkage	--	RQT
MAY 2021/v2021	Added a section for Commands	p. 119	RQT
JULY 2021/v2021.1	Updated Processes; Updated Inspection Plans; Updated Inspection Events	p. 29, p. 52, p. 58	RQT
FEB 2022/v2022	Updated versioning; Updated Skip Lot Set Up	p. 70	RQT
SEPT 2022/v2022.1	Updated versioning	--	RQT
MAR 2023/v2023	Updated versioning; Updated Inspection Events	p. 58	RQT
MAR 2024/v2024	Updated versioning; Updated Inspection Events	p. 58	RQT
SEPT 2024/v2024.1	Updated versioning	--	RQT
MAR 2025/v2025	Updated versioning; Updated Inspection Event Results; Updated Reports	p. 63, p. 86	RQT
SEPT 2025/v2025.1	Updated versioning; Updated Inspection Events	p. 58	F6J

Chapter 1

Introduction

Overview

The Inspection & SPC (Statistical Process Control) module facilitates real time inspection checks and sampling typically triggered by integration with enterprise systems and based on the control inspection methodologies prescribed by the APQP module. The inspection event failures escalate issues to the NCR & CAPA module, interacting specifically with the Nonconformances, Supplier Corrective Action Reports, and Quality Alerts processes.

Inspection & SPC contains several processes that originate from other module, which allows users to operate locally, rather than jumping across several modules for every inspection. However, due to integrations with other outside processes, users should be familiar with the APQP and NCR & CAPA modules before working with the Inspection & SPC module. The following user guides contain useful and relevant information:

- APQP Libraries
- NCR & CAPA
- Gauge Management

About This Guide

This user guide focuses on:

- Setup required for the Inspection & SPC module
- Security and roles for the Inspection & SPC module
- Instructions for the various Inspection & SPC tasks

Note: This guide does not provide field descriptions for the Inspection & SPC modulefields. Field help is provided in the software.

Inspection & SPC Module Setup Guide

This section describes the processes of the Inspection & SPC module. The list below is arranged by the order in which the processes should be completed, starting with the setup operations and continuing with the main functions.

Setting Up the Inspection & SPC Module

Frequency Event

Use Frequency Events to define the list of events that can be selected for event-based inspections. See "Frequency Event" on page 17.

Sample Sizes

Use Sample Sizes to define a list of standard sample sizes from both a numeric and an alphanumeric value. See "Sample Sizes" on page 17.

Drawing Types

Use Drawing Types to set up the default list of approvers for a type of drawing, such as customer or supplier drawings. See "Drawing Types" on page 18.

Item Types

Use Item Types to distinguish between different items, such as purchased versus manufactured. See"Item Types" on page 20.

Item Groups

Use Item Groups to subdivide product lines. For items that are purchased, item groups might be created for each commodity type. See"Item Groups" on page 22.

Product Lines

Use Product Lines to group items or products with similar characteristics. Marking usually breaks products into product lines to allow consumers to better understand their offerings or capabilities. See "Product Lines" on page 24.

AQL Level

Use AQL Levels to define the list of numerical levels that can be selected on each AQL detail record. See"AQL Level" on page 25.

AQL

Use AQL to define a single table such as ANSI/ASP Z1.4 and Z1.9, and all of the detail records that define that standard. See "AQL" on page 25.

Inspection Types

Use Inspection Types to prompt an operator/inspector with the appropriate characteristics/specifications and sample sizes at the right frequencies for that type of inspection. See "Inspection Types" on page 27.

Inspection Stations

Use Inspection Stations to prompt an operator/inspector with the appropriate characteristics/specifications and sample sizes at the right frequencies for the location of the inspection. See "Inspection Stations" on page 28.

Processes

Use Processes to document specific business or manufacturing processes that make up a process flow. See "Processes" on page 29.

Library Specifications

Use Library Specifications to document the acceptance criteria, including (where appropriate) the tolerances of an attribute or characteristic. See "Library Specifications" on page 37.

Drawings

Use Drawings to control the drawings typically associated with products or items. See"Drawings" on page 40.

Items

Use Items to identify things that you stock in inventory, purchase, manufacture, sell, or service. See"Items" on page 47.

Using The Inspection & SPC Module

Inspection Plan

Use Inspection Plans to link inspection requirements and sampling data together to use as the basis for an inspection event. See "Inspection Plan" on page 52.

Inspection Events

Use Inspection Events to collect data for specific parts and processes during the product realization process. See"Inspection Events" on page 58.

Inspection Event Results

Use Inspection Event Results to review the historical records of an inspection and analyze the data. See "Inspection Event Results" on page 63.

Skip Lot Inspection Rule Table

Use Skip Lot Inspection Rules Table to set up the parameters for a skip lot plan. See "Skip Lot Inspection Rules Table" on page 65.

Skip Lot Setup

Use Skip Lot Setup to configure inspection events for a specific supplier. See "Skip Lot Setup" on page 70.

Getting Started

Before you can begin using the Inspection & SPC module, it is important to understand the basics of how to navigate and use the QMS system. The system is intuitive, but some layouts, features, and best practices require a more thorough understanding. See the User Interface user guide for additional information about the QMS software.

Chapter 2

Setting Up the Inspection & SPC Module

Introduction to Inspections

Inspection is a collection of required tests at various points in the product realization process, including incoming inspections, in process inspections, and finished inspections. Inspection allows for various sample size methodologies, including:

- **AQL and Batch Size.** Acceptable quality limit. Based on AQL tables. See "AQL" on page 25 for more information.
- **Fixed.** Every time you collect with this particular specification, you use a fixed number (i.e. 5 samples, 10 samples, etc.)
- **100% Known Batch Size.** Using an exact batch size number. For example, if you have 1000 pieces, you can collect 1000 data points.
- **Operator Defined.** Manually adding test results to inspection criteria. This sample size is not often utilized.

The Inspection & SPC module links directly to the Manufacturing Document process in the APQP module, specifically with the Process Control Plan (PCP). As your control plan changes, the inspection event stays in sync with engineering changes, such as new drawings and sampling frequency.

You can set a frequency-based auto generation of collection events. For example, if you set the inspection to an hourly rate, then an inspection event is automatically created every hour. The sampling data is pulled from the connected Library Control record.

Inspections are comprised of variable (numerical) and attribute (pass/fail) data. The data type and acceptance criteria are determined by the Library Specifications process in the APQP module. If the item being inspected is an attribute-type, then the Lower/Upper Limit, Target, and Unit of Measure fields in the Inspection Events process would not be visible.

Collection event data can also pull from the Inspection Plan process, which is commonly used for ad hoc inspections. See "Inspection Plan" on page 52.

Interaction with Other Modules

APQP

The Inspection & SPC module is integrated with various modules, but links directly to the Manufacturing Document process in the APQP module, specifically the Process Control Plan (PCP). From the PCP, you can also see the Equipment and Cavities, which are important for detailed inspection data.

If you are working with an injection molder with 10 cavities, you can indicate how many cavities are on the equipment and collect data for each cavity. You can also acknowledge whether a specific cavity is out of operation.

Additionally, inspection events are connected to the Item, Work Order, Inspection Station, and Inspection Type processes to supply and filter the test requirements for the inspection. These processes, which are included in the Inspection & SPC suite, originate from the APQP module.

NCR & CAPA

Non-conformance records are automatically created in the event that the inspection fails. The inspection information, including the problem description, is populated by default.

If an item linked to the inspection event is affected by a quality alert, then a record appears in the read-only Quality Alerts field. Once the quality alert is inactive, it will disappear from view.

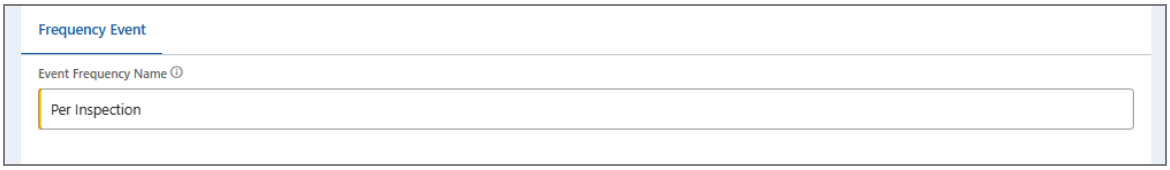
Gauges

Gauge information can be brought in to the inspection results, so you know which gauge was actually used to perform testing. This is particularly useful if that gauge is found to be out of calibration.

Frequency Event

When identifying an inspection's occurrence frequency for a control plan item, there are two options: time-based and event-based. This process is used to define the list of events that can be selected for event-based inspections. Example include per lot, per inspection, and per order.

Fig. 1: Frequency Event process screen



Frequency Event States

This section defines each state available in the workflow for the Frequency Event process. See "State Change Security" on page 95 to learn more about how these states transition.

There are no states available.

Frequency Event Tasks

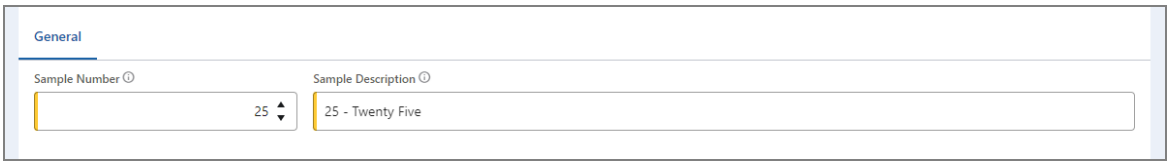
Adding a New Frequency Event

1. Select Frequency Event from the left navigation panel. Then, click the Add Item button in the toolbar.
2. Enter a name for the frequency event.
3. Click Save to save the new record.

Sample Sizes

Sample Sizes is a simple process that allows users to define a list of standard sample sizes – both from a numeric value and an alphanumeric value – that can be used when defining controls for inspection.

Fig. 2: Sample Sizes process screen



Sample Sizes States

This section defines each state available in the workflow for the Sample Sizes process. See "State Change Security" on page 95 to learn more about how these states transition.

There are no states available.

Sample Sizes Tasks

Adding a New Sample Size

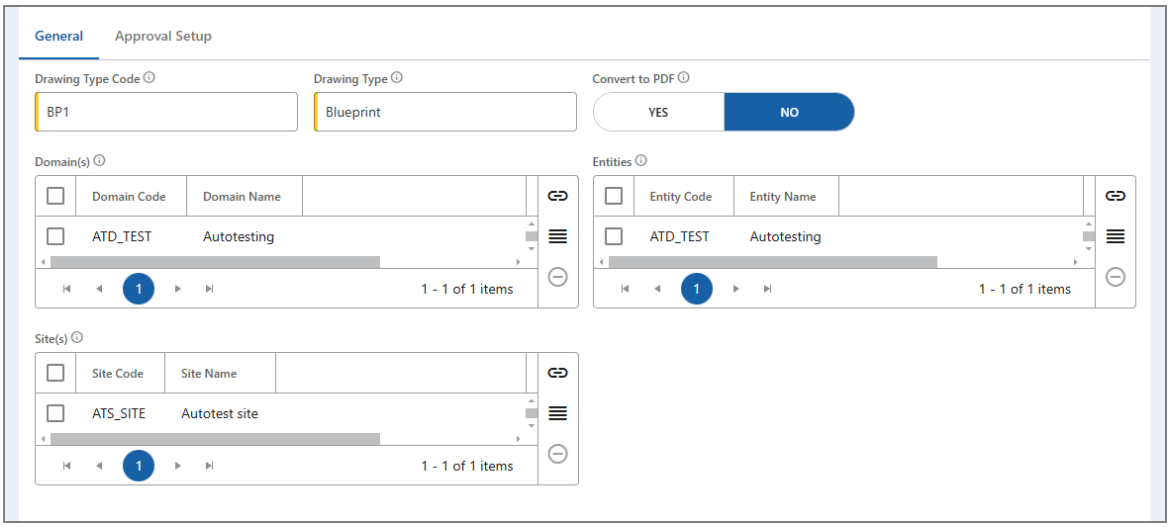
1. Select Sample Sizes from the left navigation panel. Then, click the Add Item button in the toolbar.
2. Select a number value that defines the sample size.
3. Enter a description of the sample size.
4. Click Save to save the new record.

Drawing Types

Drawing types gather similar drawings together and are used to set up the default list of approvers for a type of drawing. Drawing types can be set up by the different types of products being created or even by the different areas of the engineering department. Another example for the use of drawing types is the source of the drawing, such as customer or supplier drawings. See "Drawings" on page 40 to learn more.

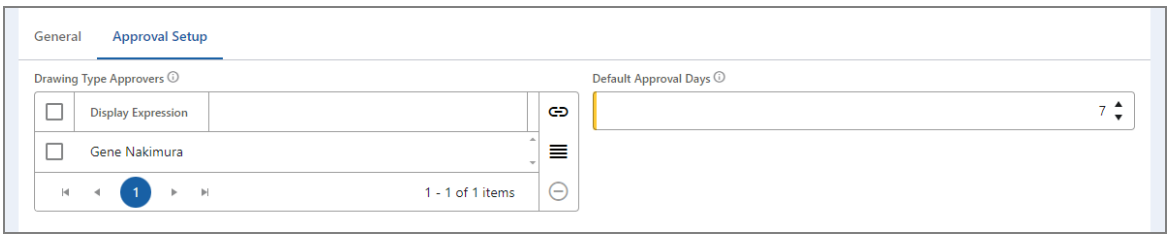
Drawing types can be linked to one or several sites. If any of these sites contain an ITAR (International Traffic in Arms Regulation) requirement, then drawings created from this type can be ITAR restricted. This means only employees who are ITAR compliant can view, access, and interact with the drawing.

Fig. 3: Drawing Types screen, General tab



The General tab contains the basic details of a drawing type. If one of the sites listed in the Sites field are ITAR restricted, then the "ITAR Restricted" check box is automatically selected.

Fig. 4: Drawing Types screen, Approval Setup tab



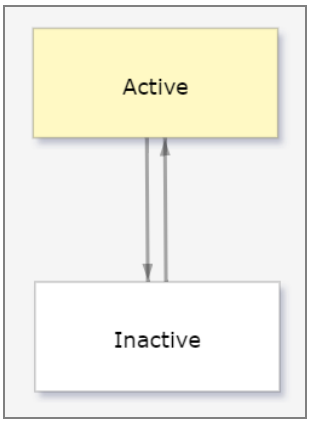
The Approval Setup tab allows you to assign employees as approvers for drawings of this type, as well as set the default number of days for approval.

Drawing Types States

This section defines each state available in the workflow for the Drawing Types process. See "State Change Security" on page 95 to learn more about how these states transition.

Active (Default). A drawing type that is actively used.

Inactive. A drawing type that is no longer in use.



Drawing Type Tasks

Adding a New Drawing Type

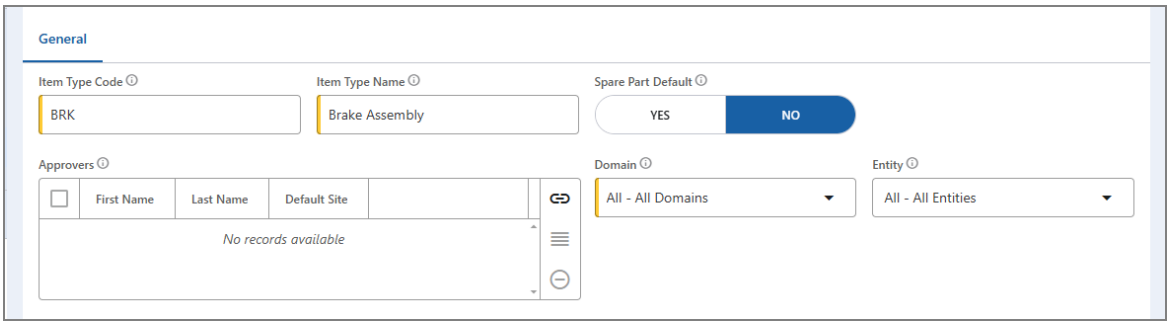
1. Select Drawing Types from the left navigation panel. Then, click the Add Item button in the toolbar.
2. Enter values for the drawing type code and name. Notice how the Display Expression field combines the two values; this is how users will look up this drawing type.
3. Select the domains, entities, and sites linked to this drawing type.
    a. Click the Link button. A new window appears.
    b. Select each item that applies.
    c. Click OK.
4. Navigate to the Approval Setup tab. Use the Link button in the Drawing Type Approvers field to select approvers for this drawing type.
5. Select the default number of days that approvers should have to approve a drawing of this type. This number is just a default and can be changed per drawing.
6. Click Save to save the new record. When selecting the next state, click Active.

    Note: You can toggle between Active and Inactive as needed. When the state is Inactive, the drawing type cannot be used for new records.

Item Types

Item types are the most general grouping level for items. Item types are generally used to distinguish between items that are purchased versus items that are manufactured, although there may be additional item types to help break down a very large item database. Examples of item types include finished good, component, purchased product, spare part, and so on. See "Items" on page 47.

Fig. 5: Item Types process screen



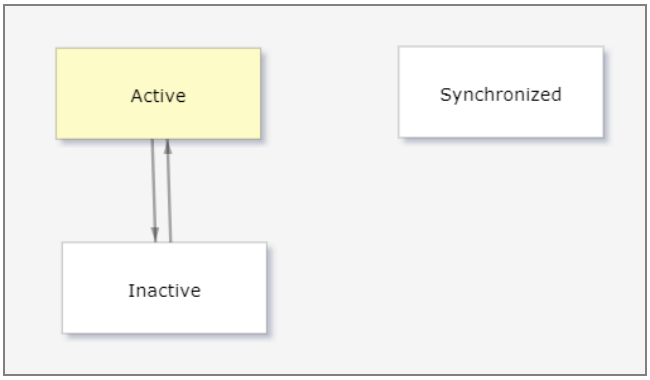
Item Types States

This section defines each state available in the workflow for the Item Types process. See "State Change Security" on page 95 to learn more about how these states transition.

Active (Default). An item type that is actively used.

Inactive. An item type that is no longer in use.

Synchronized. The state is automatically set if the item is created or updated from integration with another system (e.g. ERP). Synchronized fields are read-only.



Item Types Tasks

Adding a New Item Type

1. Select Item Types from the left navigation panel. Then, click the Add Item button in the toolbar.
2. Enter values for the item type code and name.
3. In the Approvers field, click the Link button. A new window appears.
4. Select the check box next to each user that should be a default approver for the item type. Then click OK.
5. If the item type will be used for maintenance spare parts, then set the "Spare Part Default" toggle to YES.
6. Click Save to save the new record. When selecting the next state, click Active.

Note: You can toggle between Active and Inactive as needed. When the state is Inactive, the item type cannot be used for new records.

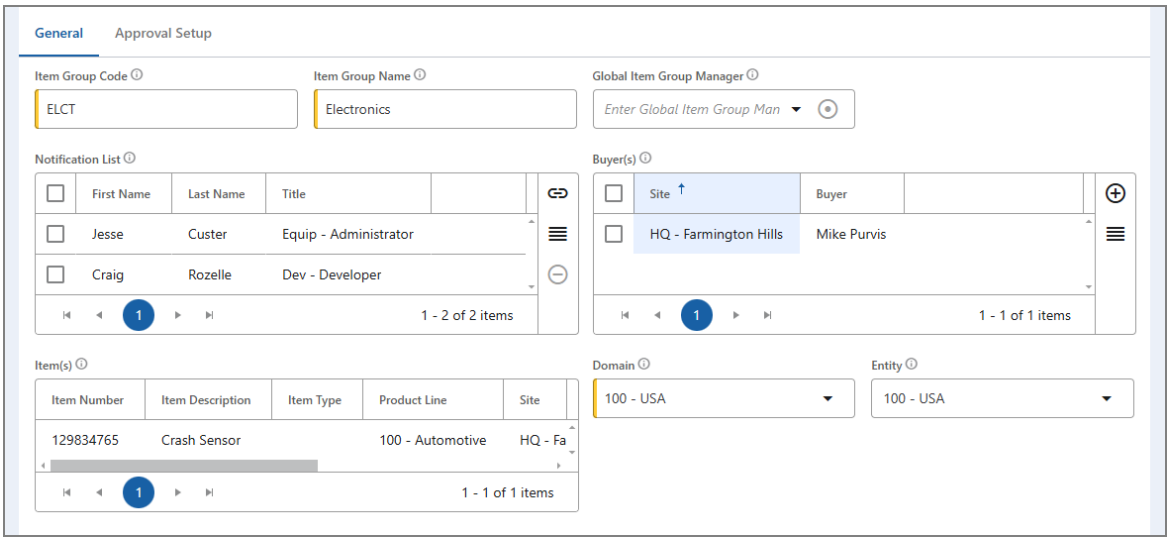
Item Groups

Item groups allow you to subdivide product lines. Items are often grouped based on similar characteristics, such as end user function. For items that are purchased, item groups might be created for each commodity type. Examples include round bar stock, tie rods, plate steel, bearings, and lug nuts.

Item groups are used in the following processes of the Inspection & SPC module:

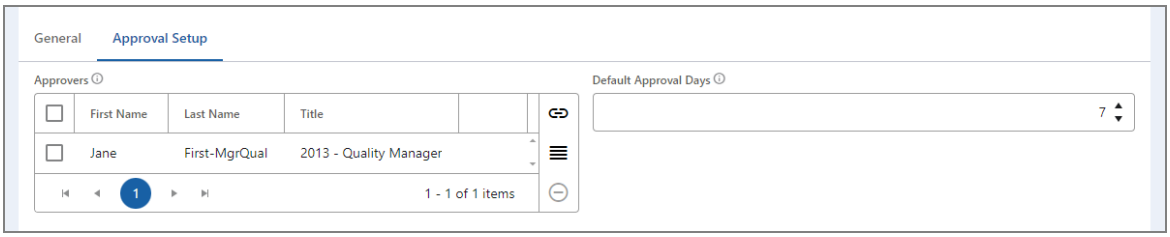
- By Library Specifications to categorize product specifications. See "Library Specifications" on page 37.
- By Items to categorize an item. See "Items" on page 47.

Fig. 6: Item Groups screen, General tab



The General tab is used to define the basic details of an item group.

Fig. 7: Item Groups screen, Approval Setup tab



The Approval Setup tab allows you to assign employees as approvers for items of this group, as well as set the default number of days for approval.

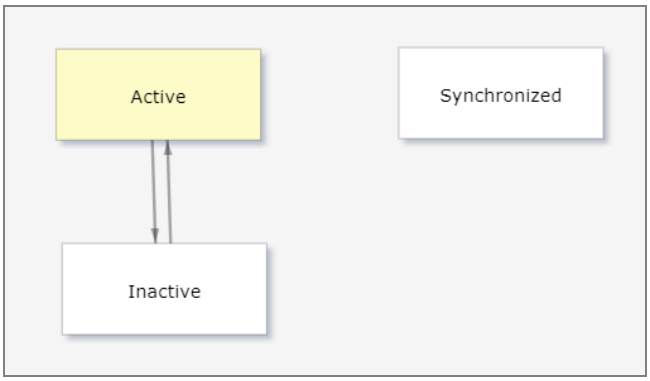
Item Groups States

This section defines each state available in the workflow for the Item Groups process. See "State Change Security" on page 95 to learn more about how these states transition.

Active (Default). An item group that is actively used.

Inactive. An item group that is no longer in use.

Synchronized. The state is automatically set if the item is created or updated from integration with another system (e.g. ERP). Synchronized fields are read-only.



Item Groups Tasks

Adding a New Item Group

1. Select Item Groups from the left navigation panel. Then, click the Add Item button in the toolbar.
2. Enter values for the item group name and code. s
3. In the Notification List field, click the Link button. A new window appears.
4. Select the check box next to each user that should be notified if a nonconformance is found for a safety-related item. Then click OK.
5. In the Buyers field, click the Add New Item button. A new tab opens.
6. Use the Site and Buyer drop-down fields to create a record that identifies the buyer for this item group. Click Save to save the record when finished.
7. Back in the main detail screen, click Save to save the new record. When selecting the next state, click Active.

   Note: You can toggle between Active and Inactive as needed. When the state is Inactive, the item group cannot be used for new records.

Adding Approval Setup to an Item Group

1. In the Item Group record, navigate to the Approval Setup tab.
2. Click the Link button in the Approvers field. A new window opens.
3. Select the check box next to each user that should be a default approver for the item group. Then click OK.

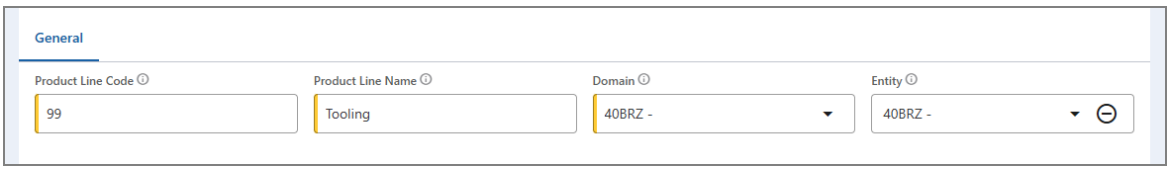
4. Select the default number of days that approvers have to approve manufacturing documents associated with this group.

Product Lines

Product lines are used to group items or products with similar characteristics. Typically, grouping is conducted by similarities of manufacture, use, application, cost analysis, or revenue analysis. Marketing usually breaks products into product lines to allow consumers to better understand their offerings or capabilities.

Product lines are used in the Item process. See "Items" on page 47.

Fig. 8: Product Lines process screen



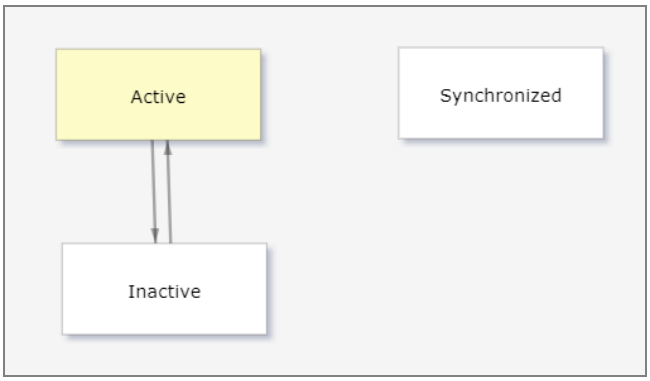
Product Lines States

This section defines each state available in the workflow for the Product Lines process. See "State Change Security" on page 95 to learn more about how these states transition.

Active (Default). A product line that is actively used.

Inactive. A product line that is no longer in use.

Synchronized. The state is automatically set if the item is created or updated from integration with another system (e.g. ERP). Synchronized fields are read-only.



Product Lines Tasks

Adding a New Product Line

1. Select Product Lines from the left navigation panel. Then, click the Add Item ⊞ button in the toolbar.

2. Enter values for the product line code and name.
3. Click Save to save the new record. When selecting the next state, click Active.

   Note: You can toggle between Active and Inactive as needed. When the state is Inactive, the product line cannot be used for new records.

AQL Level

The AQL is the quality level considered to be the "worst tolerable". It represents the maximum number of defective units, beyond which a batch is rejected. See "AQL" below.

AQL levels are typically classified into three levels: critical, major, and minor. The more critical the defect, the smaller the number of acceptable defects within a batch. A minor defect may be as simple as some chipped paint; a major defect can affect its marketability or usability, such as a misspelled logo; a critical defect would render the product unsafe for users or fail mandatory regulations, such as broken glass or leaking fluid.

Fig. 9: AQL Level process screen

AQL Level States

This section defines each state available in the workflow for the AQL Level process. See "State Change Security" on page 95 to learn more about how these states transition.

There are no states available.

AQL Level Tasks

Adding a New AQL Level

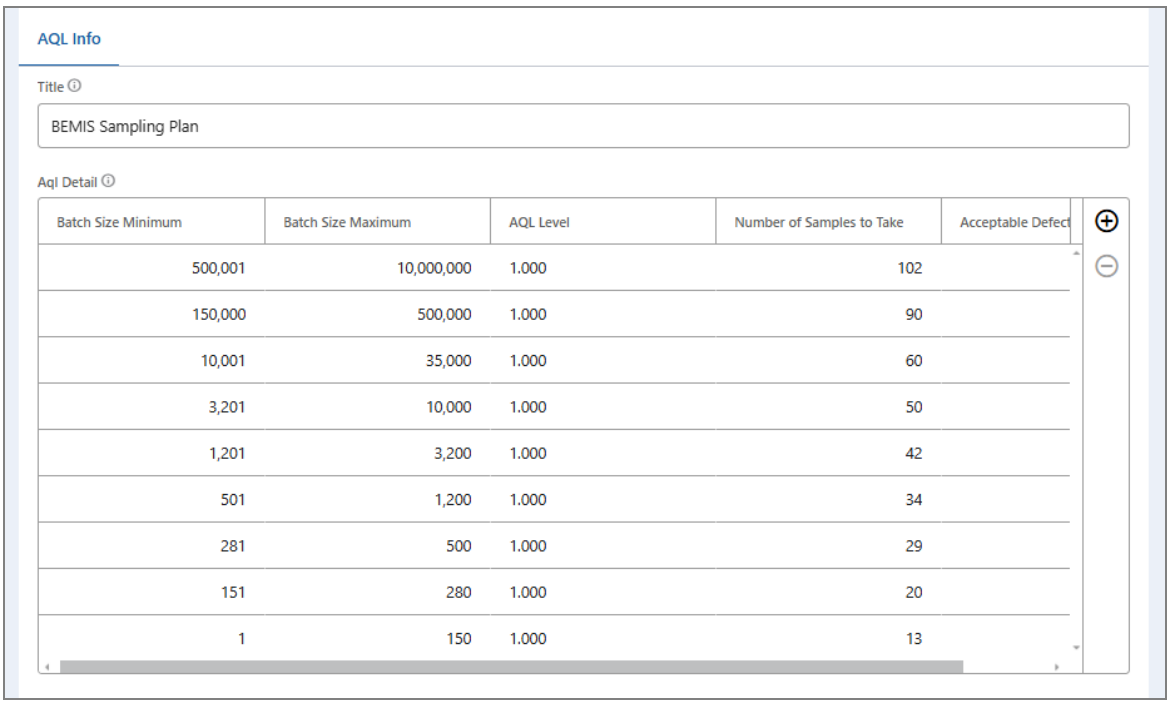
1. Select AQL Level from the left navigation panel. Then, click the Add Item ⊞ button in the toolbar.
2. Enter a quality level name.
3. Enter a quality level number.
4. Click Save to save the new record.

AQL

Acceptable quality limit (AQL) defines the range between accepting and rejecting components of a product during the random sampling process of an inspection. When adding details to an AQL record, you must define the minimum and maximum size of a batch, how many samples should be taken from that batch, the AQL level, and the quantity of defects that is acceptable from those samples. See "AQL Level" above.

AQL tables are used in inspection plans and inspection events to define sampling type and frequency. See "Inspection Plan" on page 52 and "Inspection Events" on page 58.

Fig. 10: AQL process screen



AQL States

This section defines each state available in the workflow for the AQL process. See "State Change Security" on page 95 to learn more about how these states transition.

There are no states available.

AQL Tasks

Adding a New AQL Table

1. Select AQL from the left navigation panel. Then, click the Add Item ⊞ button in the toolbar.
2. Enter a title for the AQL table.
3. In the AQL Detail field, click the Add New Item button. A new row appears.
4. Use the first two number toggle fields to set the batch size minimum and maximum parameters.
5. Select the AQL level.
6. Select the number of samples that should be taken within the batch size parameters to be tested for quality.
7. Select the acceptable defect quantity, which determines how many samples are allowed to be defective before the whole batch is declared rejected.

8. Repeat Steps 4-7 to add as many rows as are necessary.
9. Click Save to save the new record.

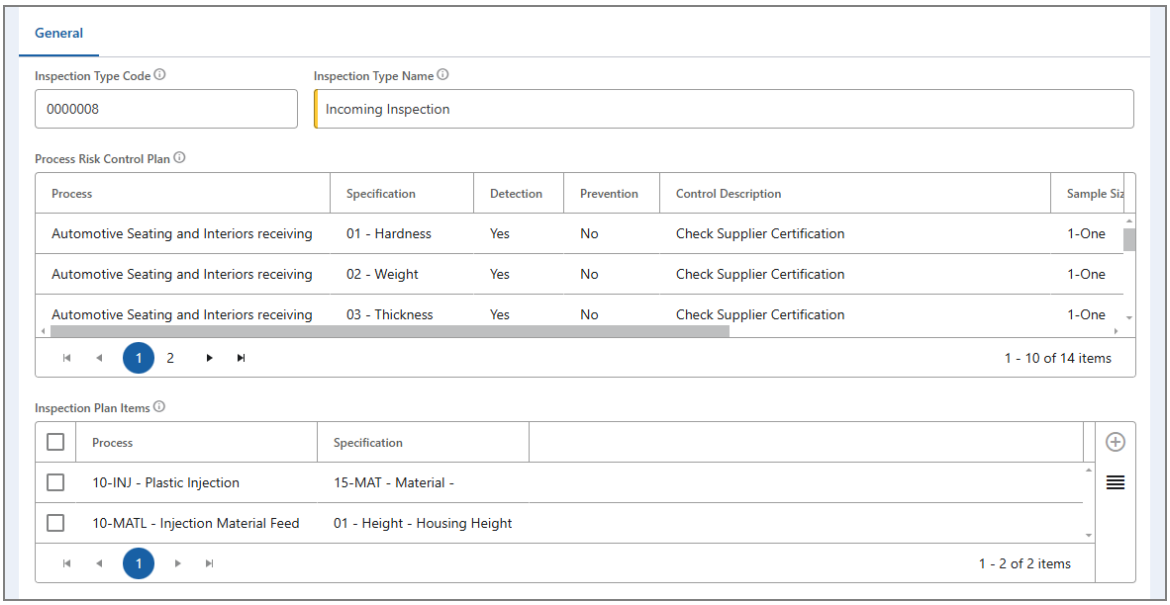
Inspection Types

Inspection types make up a list of possible types of inspections that may be conducted, such as setup, in-process, or FAI (first article inspection). They are used to present an inspector with the appropriate specifications to verify based on the type of inspection they are performing.

The Inspection Plan Items field is a cross-reference field displaying which, if any, inspection plans are connected to the inspection type. See "Inspection Plan" on page 52.

Within the APQP module, inspection types are linked to library controls to default on family template and manufacturing document control plans in order to specify if the control plan item will appear on inspections related to the type of inspection. Any control plans that an inspection type is linked to will appear in the Control Plan cross-reference field. See the APQP Libraries user guide for more information.

Fig. 11: Inspection Types process screen



Inspection Types States

This section defines each state available in the workflow for the Inspection Types process. See "State Change Security" on page 95 to learn more about how these states transition.

There are no states available.

Inspection Types Tasks

Adding a New Inspection Type

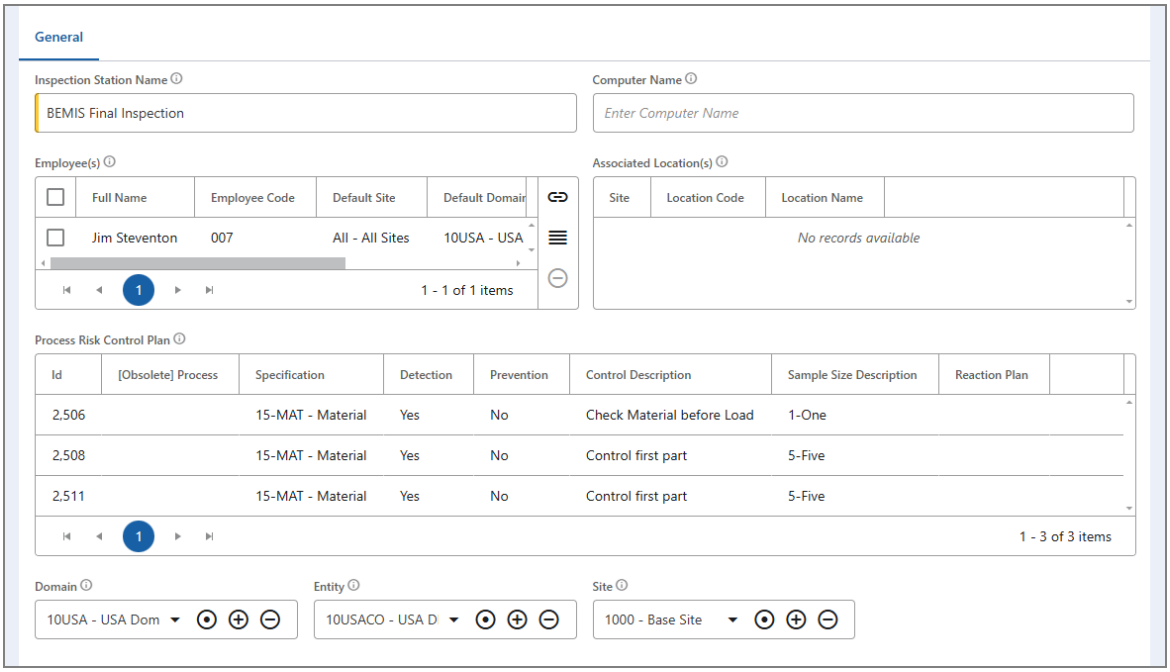
1. Select Inspection Types from the left navigation panel. Then, click the Add Item button in the toolbar.
2. Enter values for the inspection type name and code.
3. Click Save to save the new record.

Inspection Stations

Inspection stations are used to identify locations where inspections take place. Control plan items can be assigned one or more inspection stations and then be used to limit which control plan items show up for an inspection event based on a selected station.

Inspection stations are used to filter SPC collection events for inspection stations.

Fig. 12: Inspection Stations process screen



Inspection Stations States

This section defines each state available in the workflow for the Inspection Stations process. See "State Change Security" on page 95 to learn more about how these states transition.

There are no states available.

Inspection Stations Tasks

Adding a New Inspection Station

1. Select Inspection Stations from the left navigation panel. Then, click the Add Item button in the toolbar.
2. Enter a name for the inspection station and select the appropriate domain and site.
3. Enter the network name of the computer for the station.
4. In the Employees field, click the Link button. A new window appears.
5. Select the check box beside each employee that you want to assign to the station. Then click OK.
6. Click Save to save the new record.

Processes

Use process records to document specific business or manufacturing processes that make up a process flow. Documenting a process provides benefits in several areas, including auditing, product design, product development, product corrective action, and nonconformance.

Process records are the main repository for information on an organization's business and manufacturing processes, and are used by the Auditing, CAPA & NCR, APQP, and Inspection & SPC modules. In the Auditing module, Processes is used to identify which processes have been audited and when, which is important to track given the process-based auditing approach. In the APQP and Inspection & SPC modules, the list of processes serves as a way to standardize the name of processes used on manufacturing-related documentation. The information from a process that has been documented in one module can be re-used in other modules.

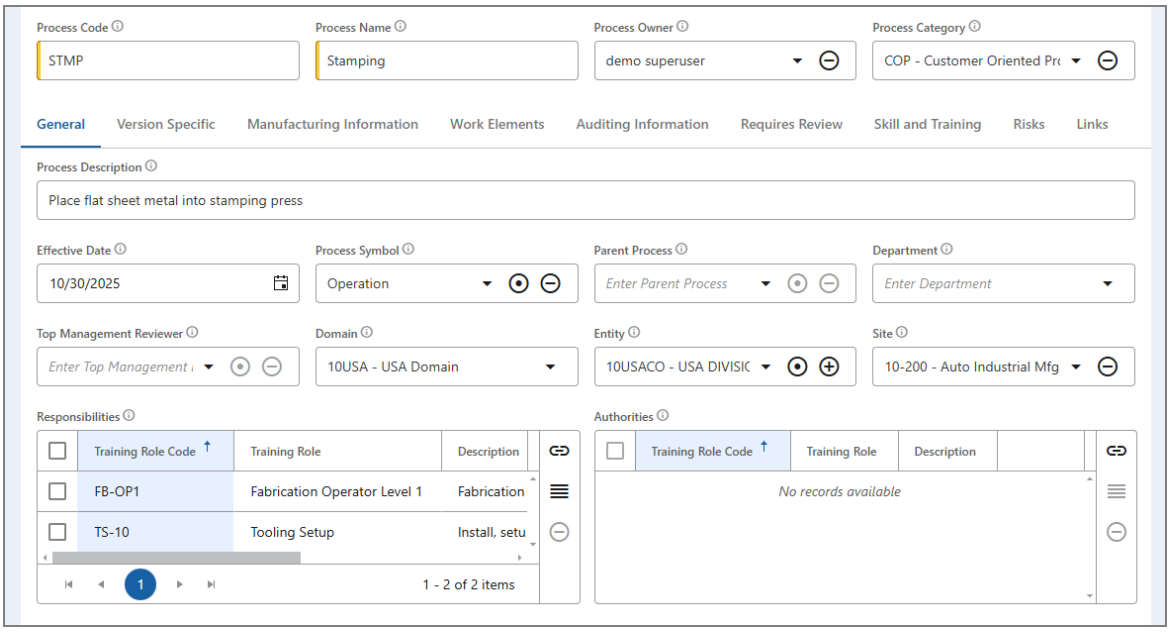
In the Inspection & SPC module, Processes are used in the Library Specifications process in order to link a process specification to a process. See "Library Specifications" on page 37

Generally, processes fall into three categories:

- **Customer-oriented processes.** Core processes to the business such as design and development, order management, and production.
- **Management-oriented processes.** Processes that define areas of management responsibility and, typically, have an indirect impact on the customer such as quality policy and objectives, resource management, and planning.
- **Support-oriented processes.** Processes that enable other processes such as purchasing, finance, and information technology.

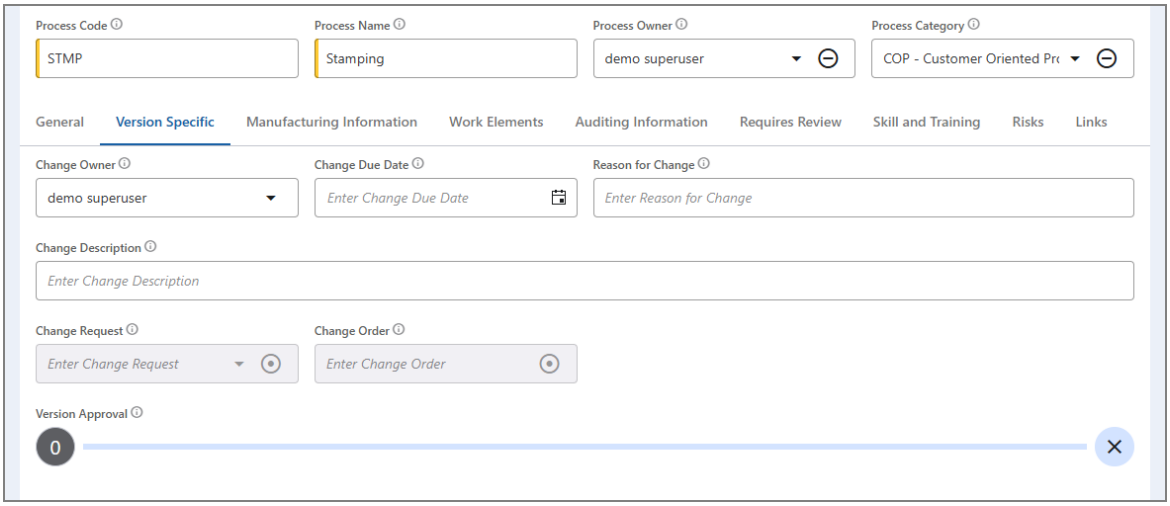
Processes may be linked to a responsible site with an ITAR requirement. If this is true, then a new field appears on the General tab titled ITAR Restricted. Setting this toggle to YES means that only employees who are ITAR compliant can view, access, and interact with the process.

Fig. 13: Processes screen, General tab



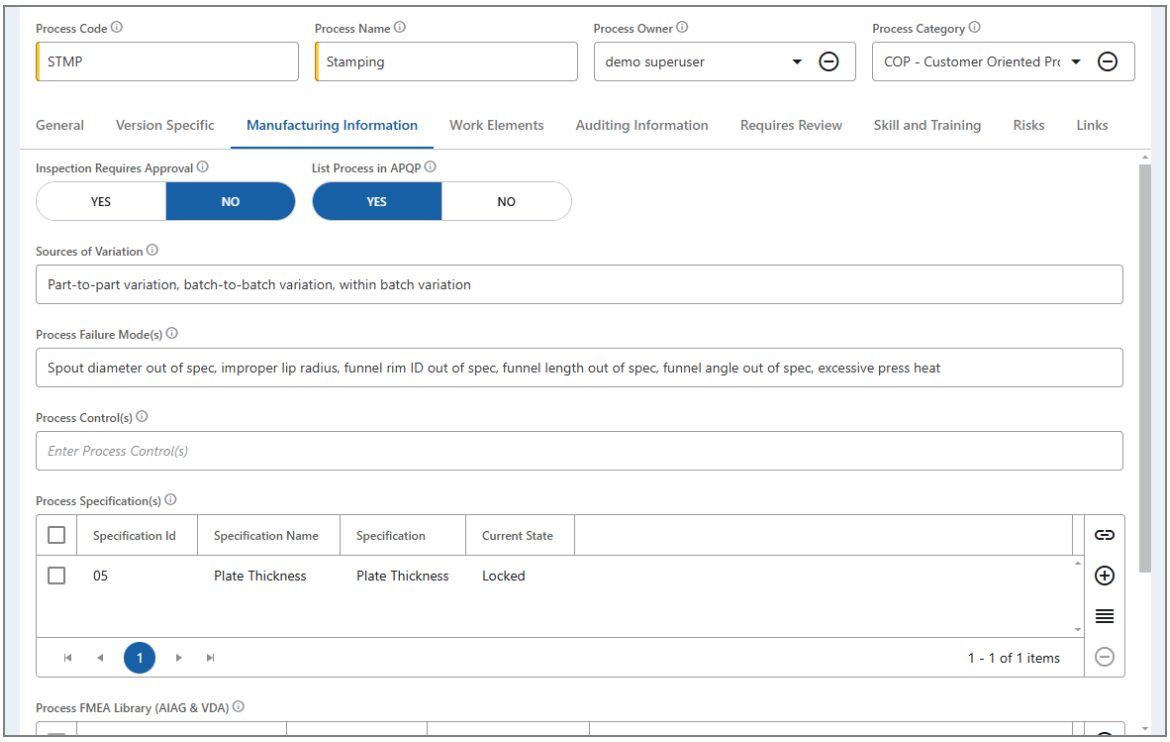
The General tab is used to define the basic details of a process, including the description, parent process, process owner, responsibilities, and more.

Fig. 14: Processes screen, Version Specific tab



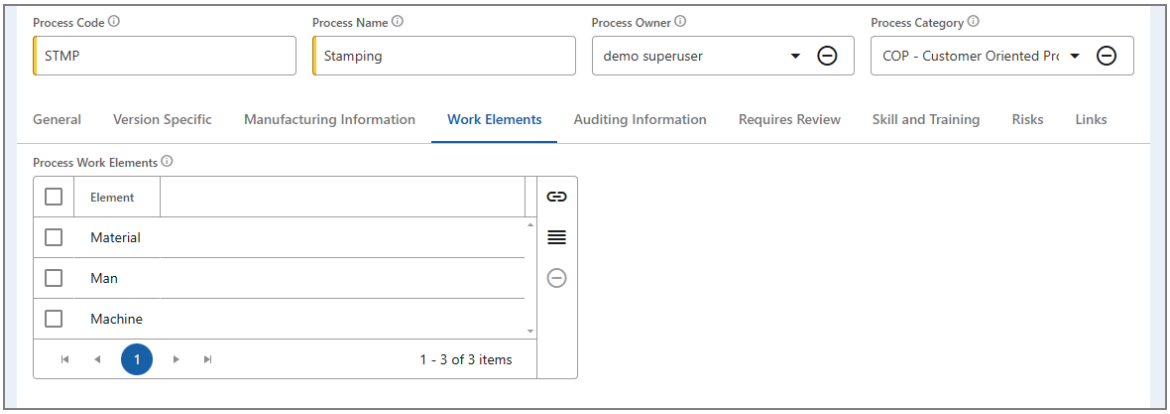
Use the Version Specific tab to give details about a particular version of a process, such as why the process changed.

Fig. 15: Processes screen, Manufacturing Information tab



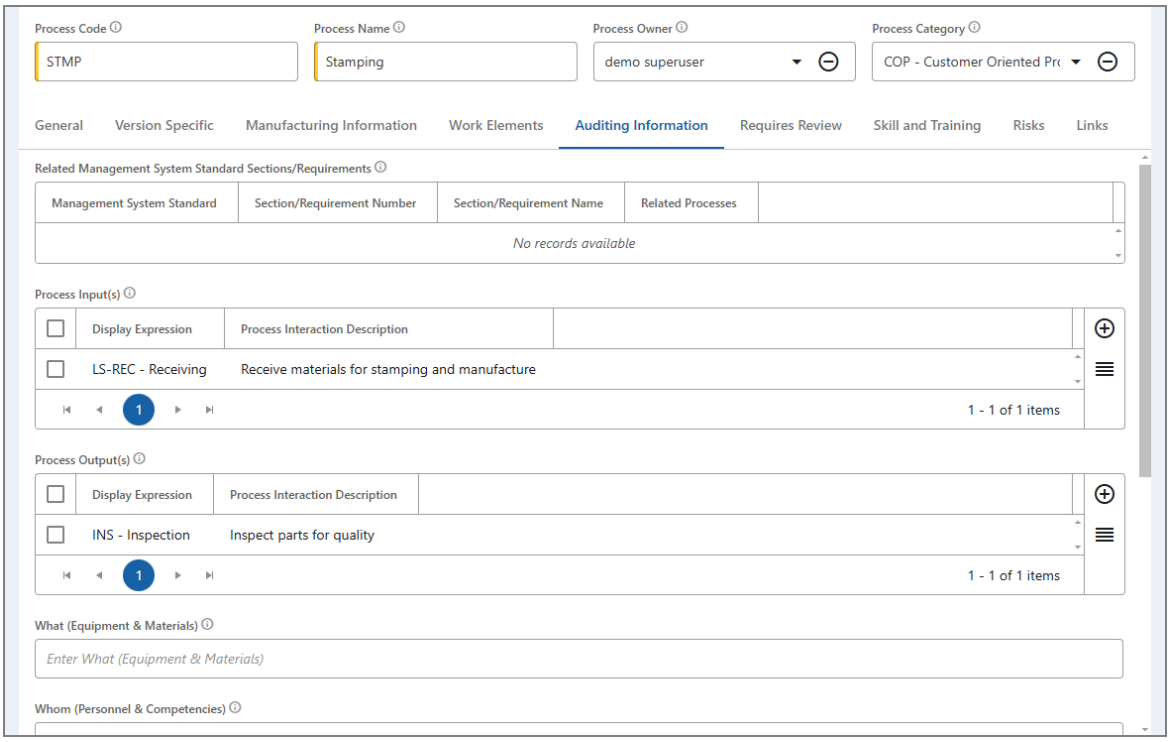
The Manufacturing Information tab supplies further detail about the process, including sources of variation, potential failures and how to control them, process specifications, and more. Use this tab to link the process to process specifications.

Fig. 16: Processes screen, Work Elements tab



The Work Elements tab allows you to link work elements to the process that should be considered when contemplating potential failures and controls. These elements include Man, Machine, Material, Environment, Method, and Measurement.

Fig. 17: Processes screen, Auditing Information tab

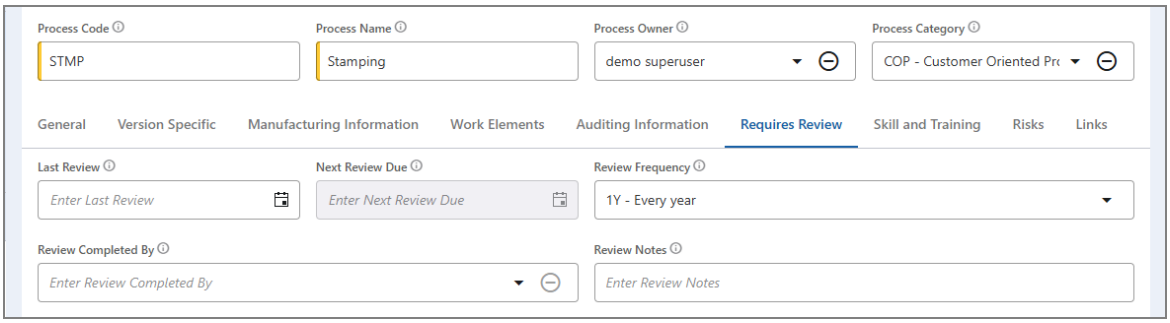


Use the Auditing Information tab to record auditing information for the process, such as:

- **Process Category.** Indicate whether the process is customer-oriented or another type of process.
- **Process Inputs.** These are the processes the manufactured item goes through before it reaches the process currently being defined.
- **Process Output.** The next process that the item moves to after the process currently being defined.
- **Equipment.** The equipment used in this process.

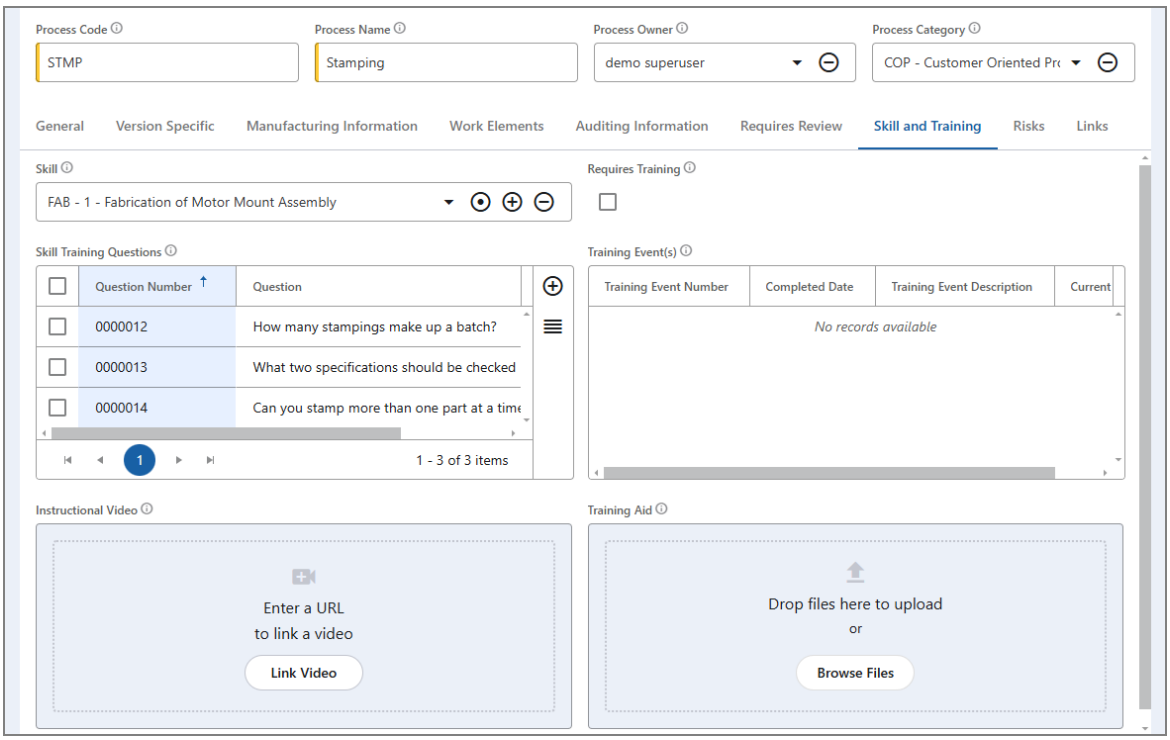
Note that this tab is used more in the Auditing module than it is in the Inspection & SPC module. See the Auditing user guide for information on how to use this tab.

Fig. 18: Processes screen, Requires Review tab



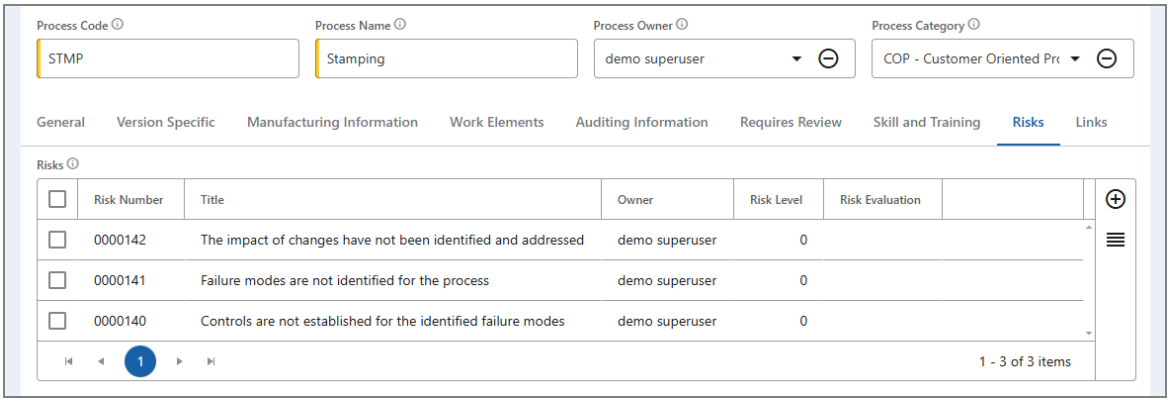
If a process requires review, then the Requires Review tab allows you to supply details regarding the process' last review, review frequency, review notes, and more.

Fig. 19: Processes screen, Skill and Training tab



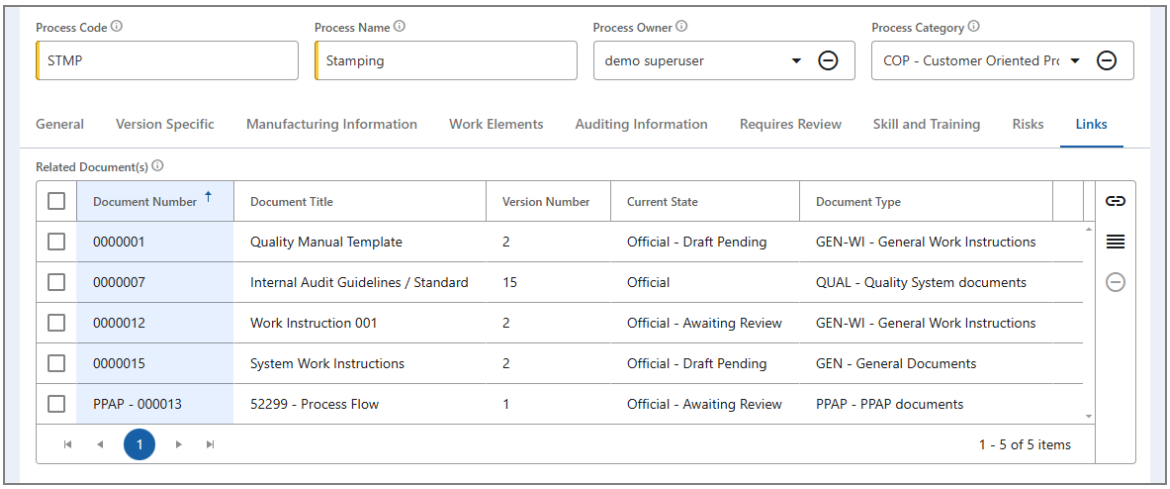
Use the Skill and Training tab to enhance training management for the process. Select or create a skill, create questions that will evaluate a person's knowledge of changes to the process, and optionally upload a video and file to be used as training aids.

Fig. 20: Processes screen, Risk tab



Use the Risks tab to create a list of risks associated with the process. See the Risk Management user guide to learn more about creating risks.

Fig. 21: Processes screen, Links tab



Use the Links tab to link documents that are related to the process.

Processes States

This section defines each state available in the workflow for the Processes process. See "State Change Security" on page 95 to learn more about how these states transition.

Draft (Default). The process is still being drafted and is not yet ready for approval.

Ready for Approval. The process is waiting to be approved.

Awaiting Effective Date. The process is approved but waiting until the effective date to be marked as official.

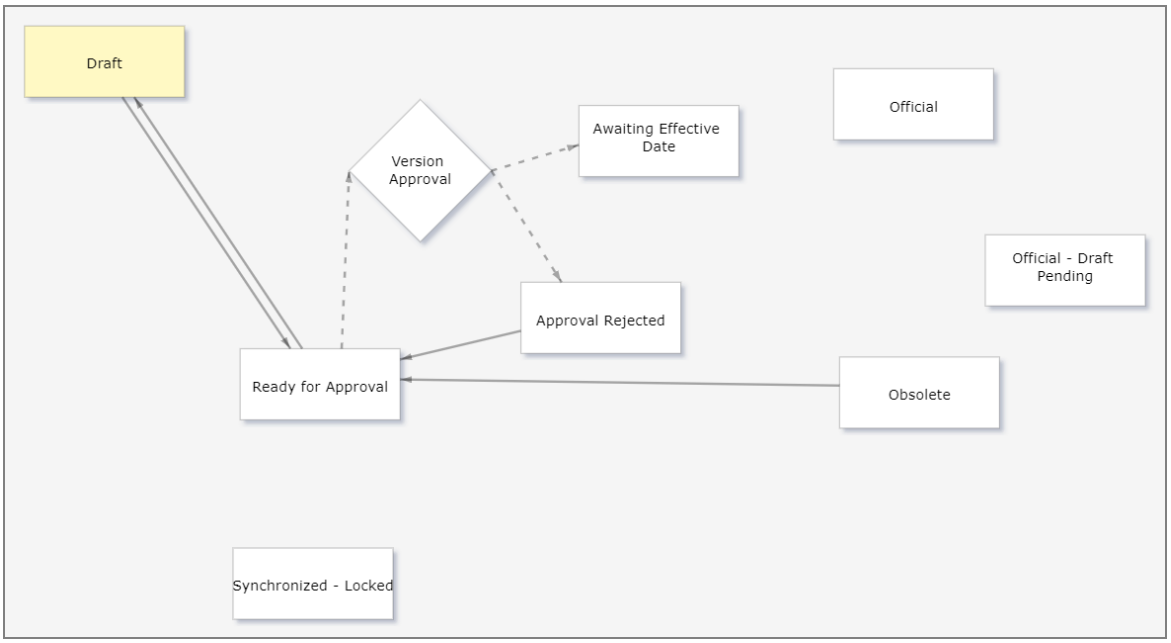
Approval Rejected. The process approval was rejected.

Official. The official version of the process.

Official – Draft Pending. The official version of a process, which also has a new version being drafted.

Obsolete. An obsolete version of the process. This version shall not be used.

Synchronized – Locked. This state is used if the process was created based on an integration to an ERP system.



Processes Tasks

Adding a New Process

1. Select Processes from the left navigation panel. Then, click the Add Item button in the toolbar.
2. If necessary, select whether this process is ITAR restricted.
3. Enter values for the process code, name, category, and description.
4. Select a process owner and top management reviewer.

   Note: The Top Management Reviewer field is filtered based on employee titles where Top Management is selected.

5. Select a parent process and process symbol, if necessary.
6. In the Responsibilities field, click the Link button to select one or more Training Roles who are responsible for this process.
7. Navigate to the Requires review tab. Click the calendar icon in the Last Review field to select the date when this process was last reviewed.
8. Use the Review Frequency drop-down field to determine how often the process should be reviewed, and the Review Completed By drop-down field to declare who completed the last review.
9. Click Save to save the new record. When selecting the next state, click Draft or Ready for Approval as needed.

Adding Process Manufacturing Information

1. In the Process detail screen, navigate to the Manufacturing Information tab.
2. Select the "List Process in APQP" check box to ensure this process can be selected in other APQP-related processes, such as Library Specifications. If necessary, set the "Inspection Requires Approval" toggle field to YES.

3. Use the Sources of Variation field to describe any known sources of variation that may affect the process.
4. Use the Process Failure Modes field to identify any potential failures that could happen with the process.
5. Use the Process Controls field to identify anything currently being done to help control the potential failures from happening.
6. The Process Specifications field may contain process specifications that are already linked to the process. You can add more by clicking the Add New Item button. See "Library Specifications" on the next page for more information.
7. Navigate to the Work Elements tab. Link one or more process work elements that apply to this process.
    a. Click the Link button.
    b. Select one or more work elements.
    c. Click OK.
8. Click Save to save the record. When selecting the next state, click Draft.

Approving a Process

1. The person responsible for approving a process is automatically notified when it is time for approval through the inbox or optionally from an e-mail notification (clicking the link in that message takes you to the process for approval).
2. Open the inbox, either through the Home Page dashboard or by clicking the Inbox icon in the toolbar.
3. Upon opening the inbox, click the approval item under the Inspection & SPC group to show the action icons. Then click the Open icon. The screen navigates to the process' detail screen.
4. In the detail screen, scroll down to the Version Approval field and click the Approve/Reject button. A small window appears.
5. In the Sign Off window, enter your password and either approve or reject the change. Use the comments field to document any information about your decision. Comments are required for rejection.

    Note: Once all members of the approval process have finished, the process becomes official and ready for use.

Starting a New Version of a Process

The Start New Version command in the Processes process should be used for small-impact changes that do not affect other departments or people, such as fixing a typo or changing a symbol. If the process requires a bigger change, then a change request must be initiated. See "Change Requests" in the Document Control user guide for more information.

Note: Revisions can only be made if the process is in the Official state.

1. Open the detail screen of the process you wish to change. If the process does not already have a change initiated, then click the Commands button and select Start New Version.

Note: If a process already has a change initiated, then contact the Process Owner to see if the changes you want to make can be included in the current change.

2. In the General tab, use the Change Description field to summarize what has changed and set the effective date.
3. Select the "Synchronized" and "Requires Training" check boxes as appropriate. Minor changes may not require additional training.
4. Click Save to save the record. Select Ready for Approval if you are finished with the changes or select Draft to save the process as a draft and continue working.

When this version is approved, it becomes official and all previous versions become obsolete.

It can be helpful to see a historical version of the process. You can quickly access historical versions from any version of the process by clicking More in the toolbar and selecting Versions to expand the Versioning panel. Click one of these versions to switch your detail screen view to the selected version.

Fig. 22: List of versions

Library Specifications

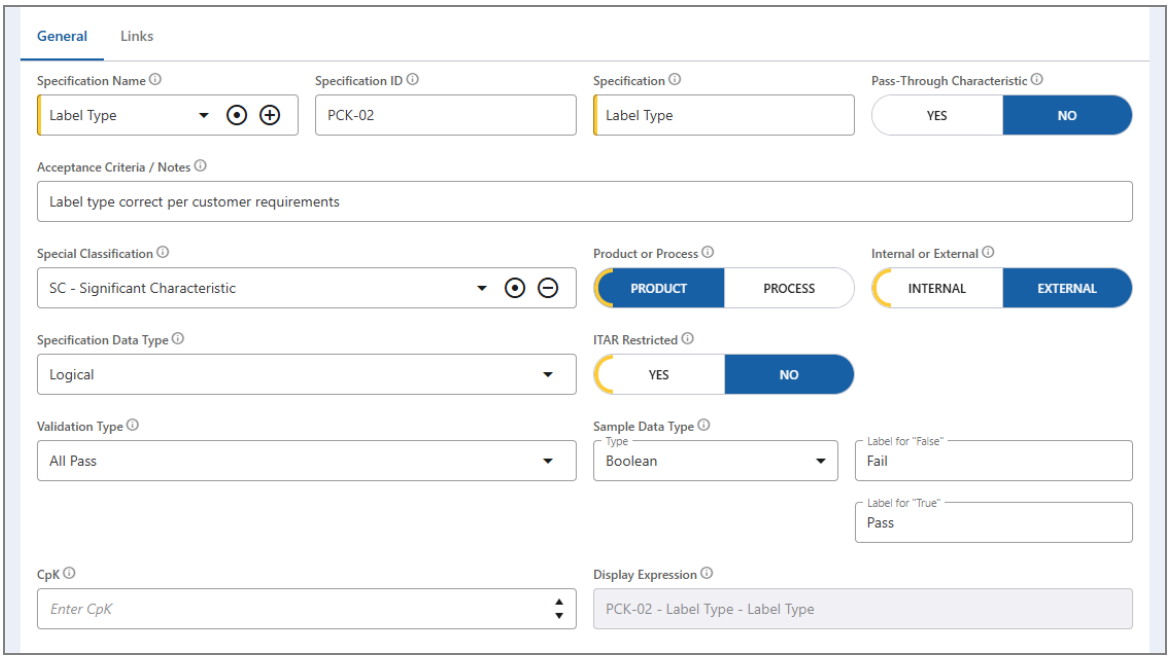
Library specifications document the acceptance criteria of a product or process, including (where appropriate) the tolerances of an attribute or characteristic. Each specification is associated with a specification group and linked to additional data (item, process, drawing, etc.), which defines the applicability of the specification.

Process library specifications are linked to a specific process and can be found on that process' detail screen. See "Processes" on page 29.

Library specifications provide the data type and acceptance criteria for an inspection's variable (numerical) and attribute (pass/fail) data. If the item being inspected is an attribute-type, then the Lower/Upper Limit, Target, and Unit of Measure fields in the Inspection Events process would not be visible. See "Inspection Events" on page 58.

Library specifications contain an ITAR toggle, which allows you to restrict the record so only employees who are ITAR compliant can view, access, and interact with the record.

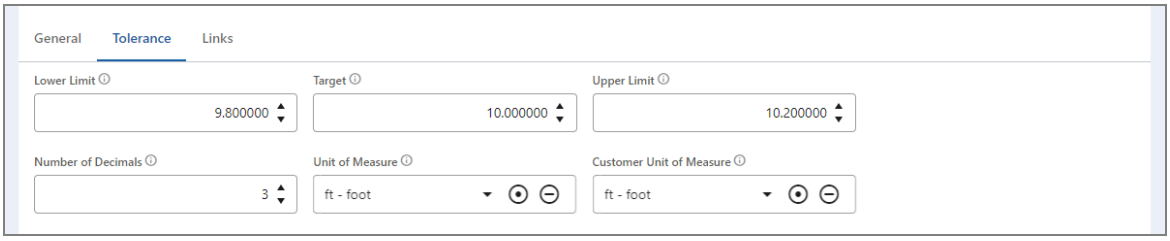
Fig. 23: Library Specifications screen, General tab



The General tab is used to define the basic details of a specification, including whether it is a product or process specification, the specification and sample data types, validation type, and more.

The Validation Type and Sample Data Type fields are dependent on the Specification Data Type field.

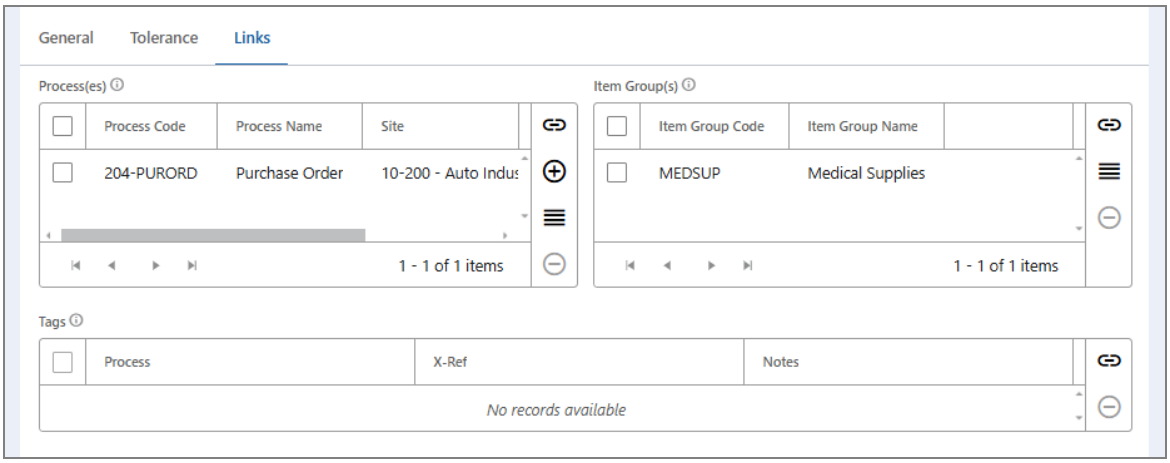
Fig. 24: Library Specifications screen, Tolerance tab



The Tolerance tab changes depending on the Specification Data Type field:

- **Numeric.** Set the numerical target, parameters, and unit of measure (see above).
- **Date.** Specify the date range.
- **Logical.** The Tolerance tab is hidden when Logical is selected.

Fig. 25: Library Specifications screen, Links tab



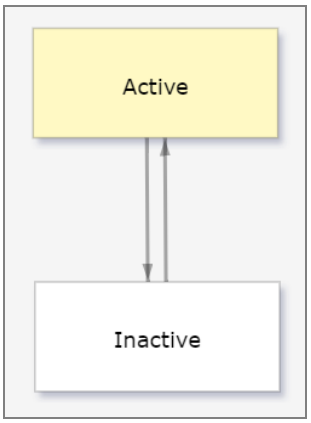
The Links tab contains fields to link the specification to multiple processes or item groups. Generally, the Processes field is only used for process specifications and the Item Groups field is only used for product specifications.

Library Specifications States

This section defines each state available in the workflow for the Library Specifications process. See "State Change Security" on page 95 to learn more about how these states transition.

Active (Default). A library specification that is actively used.

Inactive. A library specification that is no longer in use.



Library Specifications Tasks

Adding a New Library Specification

1. Select Library Specifications from the left navigation panel. Then, click the Plus ⊞ button in the toolbar.

2. Enter values for the specification name and ID. Notice how the Display Expression field combines the two values; this is how users will look up this library specification.
3. If the specification applies to a special class, then select the special classification as required by the customer.
4. Select whether this specification applies to a product or a process, as well as whether it is internal or external.
5. If access to the specification is dependent on the ITAR compliance of the user, then set the ITAR Restricted toggle to YES.

   Note: Setting the specification to internal will prevent it from appearing on related PPAP reports.

6. Select the specification data type:
   a. **Numeric.** Select when using lower/target/upper limit data.
   b. **Logical.** Select when entering acceptance criteria.
   c. **Date.** Select when capturing a date.
7. Select the sample data type:
   a. **Alphanumeric.** Data consists of numbers and letters.
   b. **Boolean.** Used for logical specifications, boolean has two possible values: true and false.
   c. **Number.** Data consists of only numbers.

   Note: If the record is saved prior to the data type selection, the sample data type changes automatically based on what was selected in the Specification Data Type field.

8. Select the type of specification to use when evaluating if an inspection result passes or fails. Select None if you do not want the system to automatically determine a pass or fail result.
9. For the acceptance criteria:
   a. If the specification is not defined by a numerical tolerance, enter a description of the acceptance criteria for the specification.
   b. If the specification is defined by a numerical tolerance, navigate to the Tolerance tab and set the parameters for the acceptance criteria.
10. Navigate to the Links tab. Select the processes or item groups that the library specification belongs to.
11. Click Save to save the new record. When selecting the next state, click Active.

    Note: You can toggle between Active and Inactive as needed. When the state is Inactive, the library specification cannot be used for new records.

Drawings

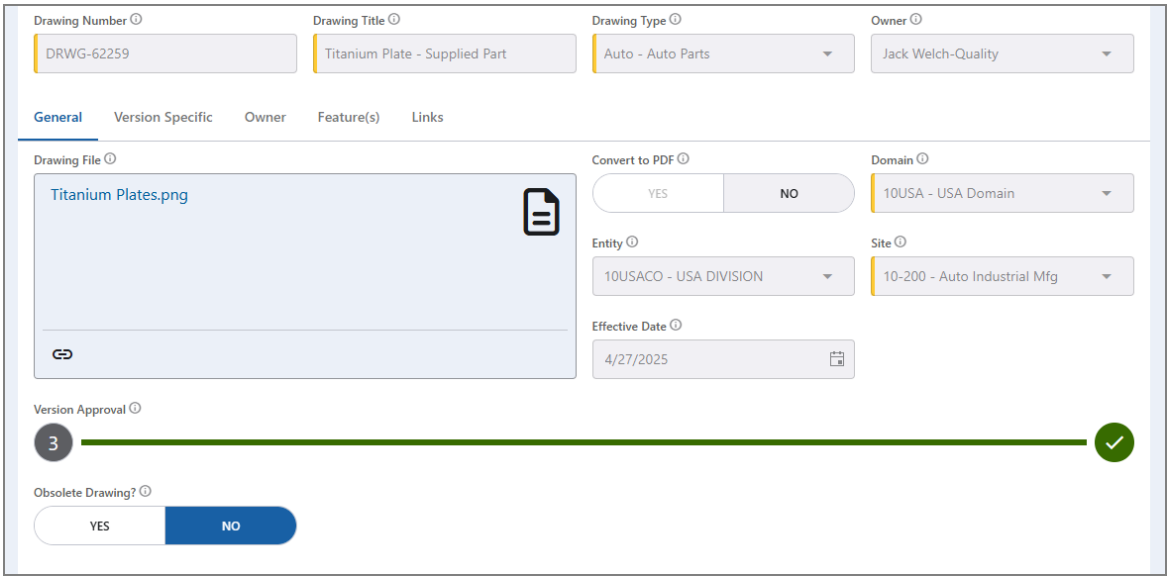
Drawings are used by engineers to control the drawings typically associated with products or items. It is recommended that the drawings are loaded as PDF files to allow approval routing and reference use when creating production documentation. PDF files are recommended because engineering departments typically have their own file management system that integrates into their design environment for managing all of the files that could make up a single CAD drawing.

Drawings differ from documents in that they allow you to define specifications associated with the drawing. These specifications will then be available to "import" into manufacturing documentation so the proper control information can be established when producing the process control plan.

Drawings may be linked to a drawing type with an ITAR requirement. If this is true, then a new field appears on the General tab titled ITAR Restricted. Setting this toggle to YES means that only employees who are ITAR compliant can view, access, and interact with the drawing.

Drawings may be associated with items. See "Items" on page 47.

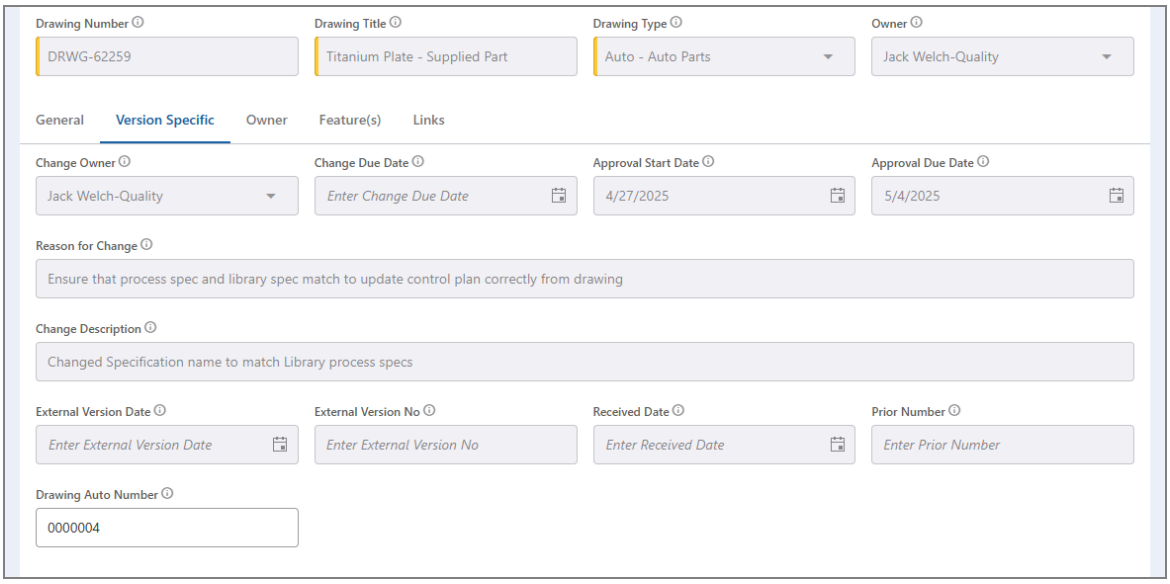
Fig. 26: Drawings screen, General tab



The General tab is used to define the basic details of a drawing, including the drawing title and type. This tab also contains the version approval and the drawing file itself.

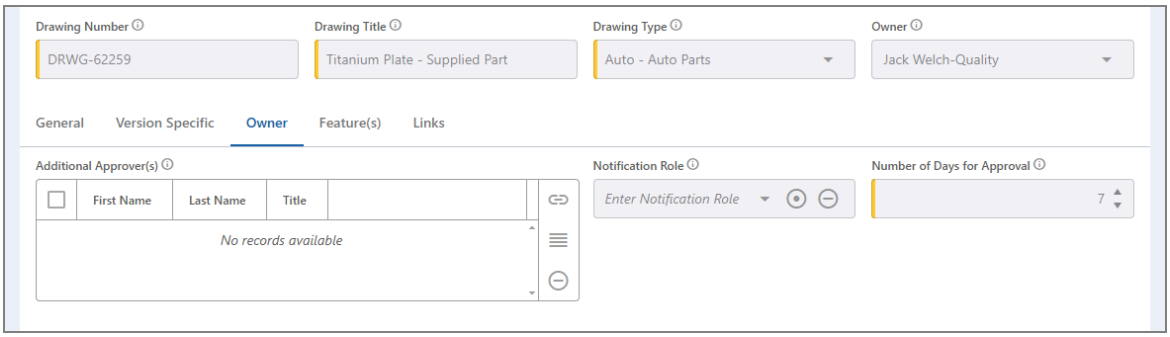
This tab indicates whether the drawing is ITAR restricted, meaning that only employees who are ITAR compliant can view, access, and interact with the drawing.

Fig. 27: Drawings screen, Version Specific tab



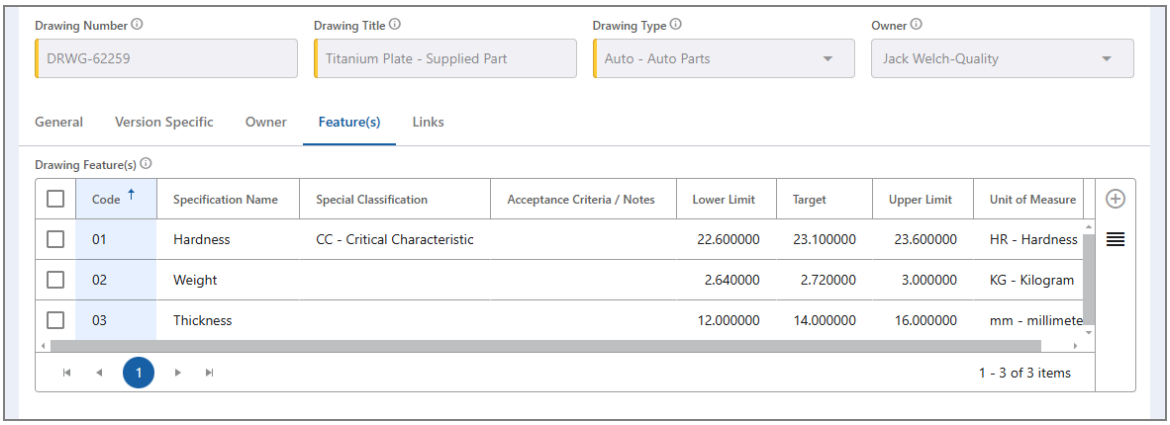
The Version Specific tab allows you to document specific changes made to the drawing. If a change request is submitted for the drawing, then the change information is included in this tab. See "Change Requests" in the Document Control user guide for more information.

Fig. 28: Drawings screen, Owner tab



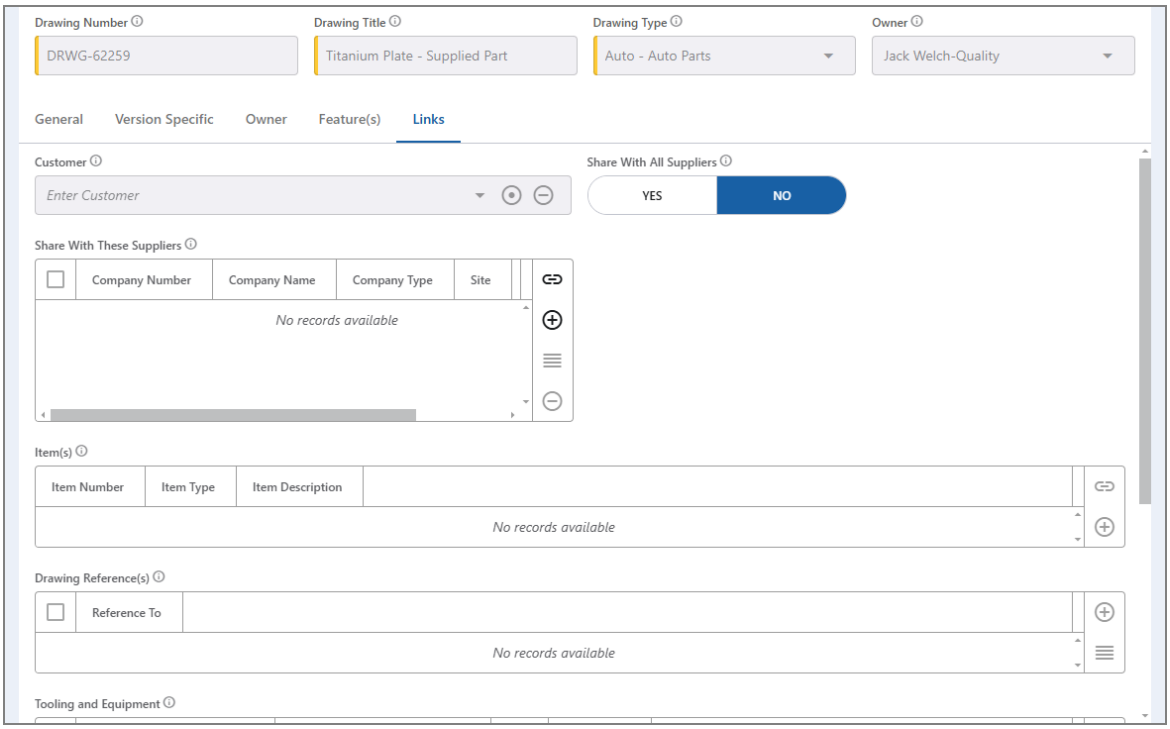
The Owner tab contains approver information, such as additional approvers, number of days for approval, and a list of people to notify when the drawing becomes official.

Fig. 29: Drawings screen, Features tab



Use the Features tab to document any specifications or characteristics defined on the drawing, such as measurements or quality characteristics.

Fig. 30: Drawings screen, Links tab



In the Links tab, associate relevant items, equipment, and other drawings with the selected drawing. Additionally, select which suppliers can view the drawing.

Drawings States

This section defines each state available in the workflow for the Drawings process. See "State Change Security" on page 1 to learn more about how these states transition.

Draft (Default). The drawing is still being drafted and not yet ready for approval.

Awaiting Approval. The drawing is waiting to be approved.

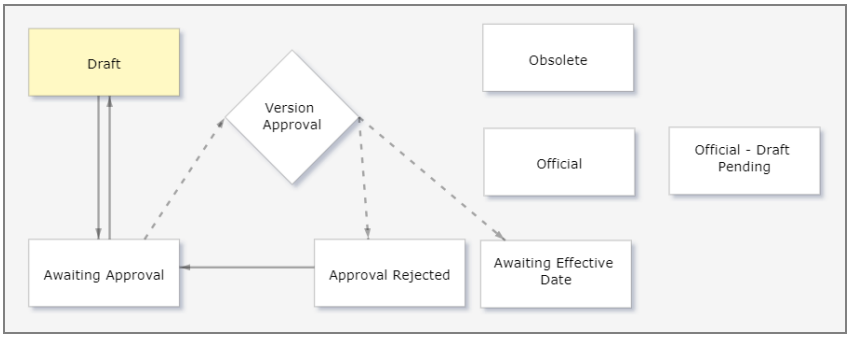
Awaiting Effective Date. The drawing is approved but waiting until the effective date to be marked as official

Approval Rejected. The drawing approval was rejected.

Official. The official version of the drawing.

Official – Draft Pending. The official version of a drawing, which also has a new version being drafted.

Obsolete. An obsolete version of the drawing. This version shall not be used.



Drawings Tasks

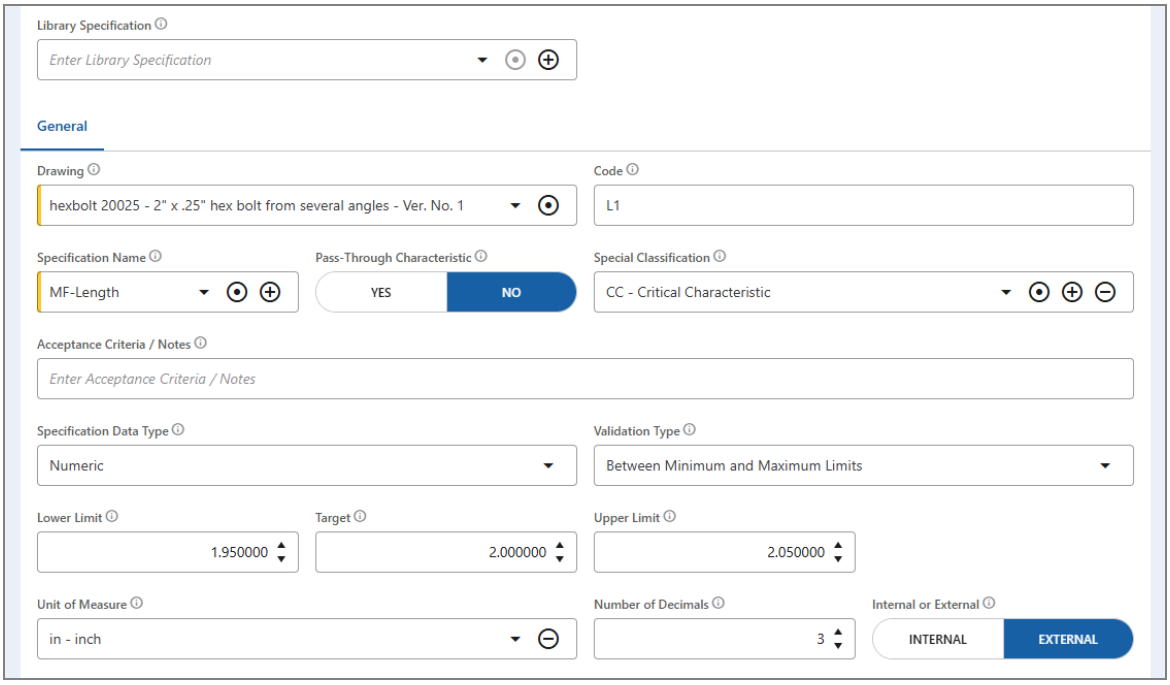
Adding a New Drawing

1. Select Drawings from the left navigation panel. Then, click the Add New button in the toolbar.
2. Enter values for the drawing number and title. Then drag and drop or select a file to upload the drawing file in the Drawing File field.
3. Select a drawing type, which also determines the level 1 approvers for the drawing.
4. Select whether the drawing is ITAR restricted. If the drawing type is ITAR restricted, then the drawing is also restricted by default.
5. Navigate to the Owner tab. Click the Link button to select any additional approvers for the drawing. If applicable, select a notification role, which defines a list of people to notify when the drawing becomes official.
6. Navigate to the Features tab. Use the Drawing Features tab to document any specifications or characteristics defined on the drawing. See "Adding a Drawing Feature" on the next page to learn more about this process.
7. Navigate to the Links tab. Select the relevant customer, items, equipment, and other drawings.
8. In the "Share With These Suppliers" field, select or add suppliers to allow them to view the drawing with the appropriate security. If you want to allow all suppliers to view the drawing, then select the "Share With All Suppliers" check box. See the Supplier Quality user guide for more information.
9. Click Save to save the new record. When selecting the next state, click Awaiting Approval.

Note: If you want to make the drawing become official at a future date instead of allowing it to become official immediately upon approval, then select a date in the Effective Date field, located in the Version Specific tab.

Adding a Drawing Feature

Fig. 31: Drawing Features screen



1. In the Drawing record, navigate to the Features tab. In the Drawing Features field, click the Add New Item ⊕ button.
2. Select a specification name and special classification.
3. Select a specification data type, then a validation type. If the specification data type is not numerical:
    a. Use the Acceptance Criteria/Notes field to describe the acceptance criteria in detail.
    b. The following fields are hidden:
        - Lower Limit
        - Target
        - Upper Limit
        - Unit of Measure
        - Number of Decimals
4. If the specification data type is numerical, then use the Lower Limit, Target, and Upper Limit fields to describe the range of acceptable measurement for the drawing feature.
5. Select the unit of measure and number of decimals for the lower, target, and upper tolerance values.
6. Determine if the drawing feature is internal or external. Setting this field to Internal will prevent the feature from showing on related PPAP reports.
7. Click Save to save the record.

Approving a Drawing

1. The person responsible for approving a drawing is automatically notified when it is time for approval through the inbox or optionally from an e-mail notification (clicking the link in that message takes you to the drawing for approval).
2. Open the inbox, either through the Home Page dashboard or by clicking the Inbox icon in the toolbar.
3. Upon opening the inbox, click the approval item under the Inspection & SPC group to show the action icons. Then click the Open icon. The screen navigates to the drawing's detail screen.
4. In the detail screen, scroll down to the Version Approval field and click the Approve/Reject button. A small window appears.
5. In the Sign Off window, enter your password and either approve or reject the change. Use the comments field to document any information about your decision. Comments are required for rejection.

   Note: Once all members of the approval process have finished, the drawing becomes official and ready for use.

Starting a New Version of a Drawing

The Start New Version command in the Drawings process should be used for small-impact changes that do not affect other departments or people, such as fixing a typo or adding a tag. If the drawing requires a bigger change, then a change request must be initiated. See "Change Requests" in the Document Control user guide for more information.

Note: Revisions can only be made if the Drawing is in the Official state.

1. Open the detail screen of the drawing you wish to change. If the drawing does not already have a change initiated, then click the Actions button and select Start New Version.

   Note: If a drawing already has a change initiated, then contact the Owner to see if the changes you want to make can be included in the current change.

2. In the Version Specific tab, use the Change Description field to summarize what has changed and set the effective date.
3. Click Save to save the record. Select Awaiting Approval if you are finished with the changes or select Draft to save the drawing as a draft and continue working.

When this version is approved, it becomes official and all previous versions become obsolete.

It can be helpful to see a historical version of the drawing. You can quickly access historical versions from any version of the drawing by clicking More in the toolbar and selecting Versions to expand the Versioning panel. Click one of these versions to switch your detail screen view to the selected version.

Fig. 32: List of Versions

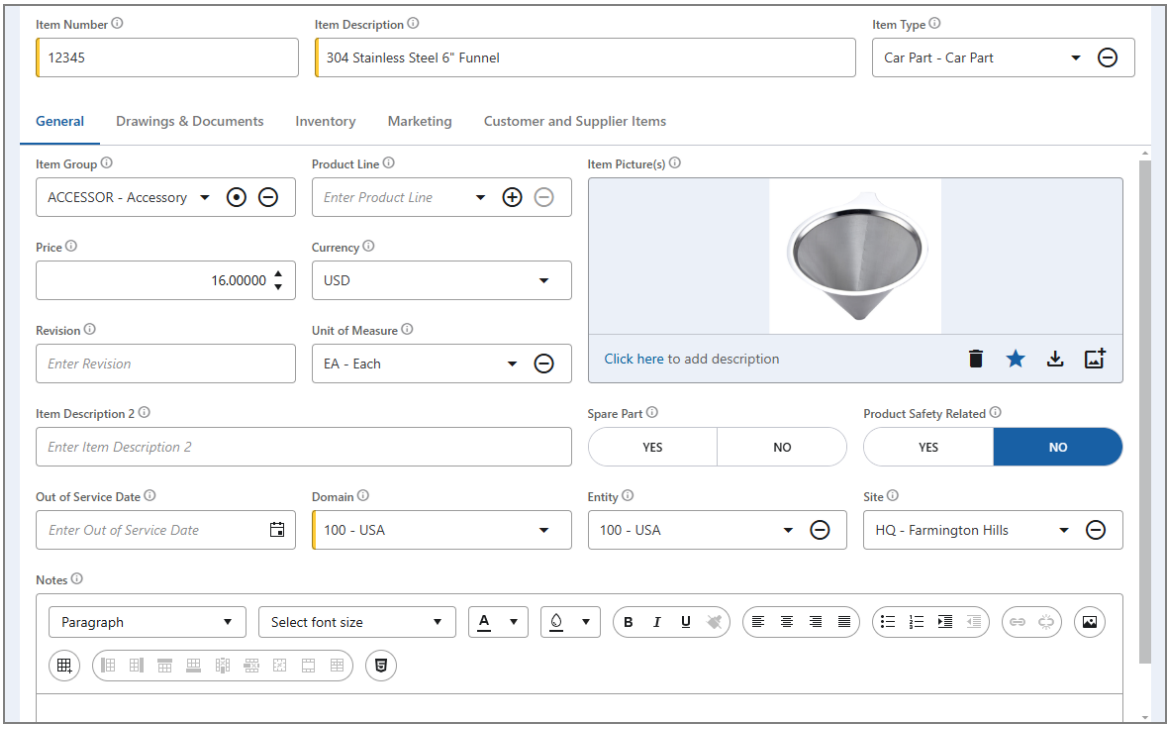
Items

Items identify things that you stock in inventory, purchase, manufacture, sell, or service. Items can identify raw materials, purchased or manufactured intermediates, finished items, packaging materials, planning items, configured products, service kits, and repair parts used in service activities.

Items are linked to the following processes of the Inspection & SPC module:

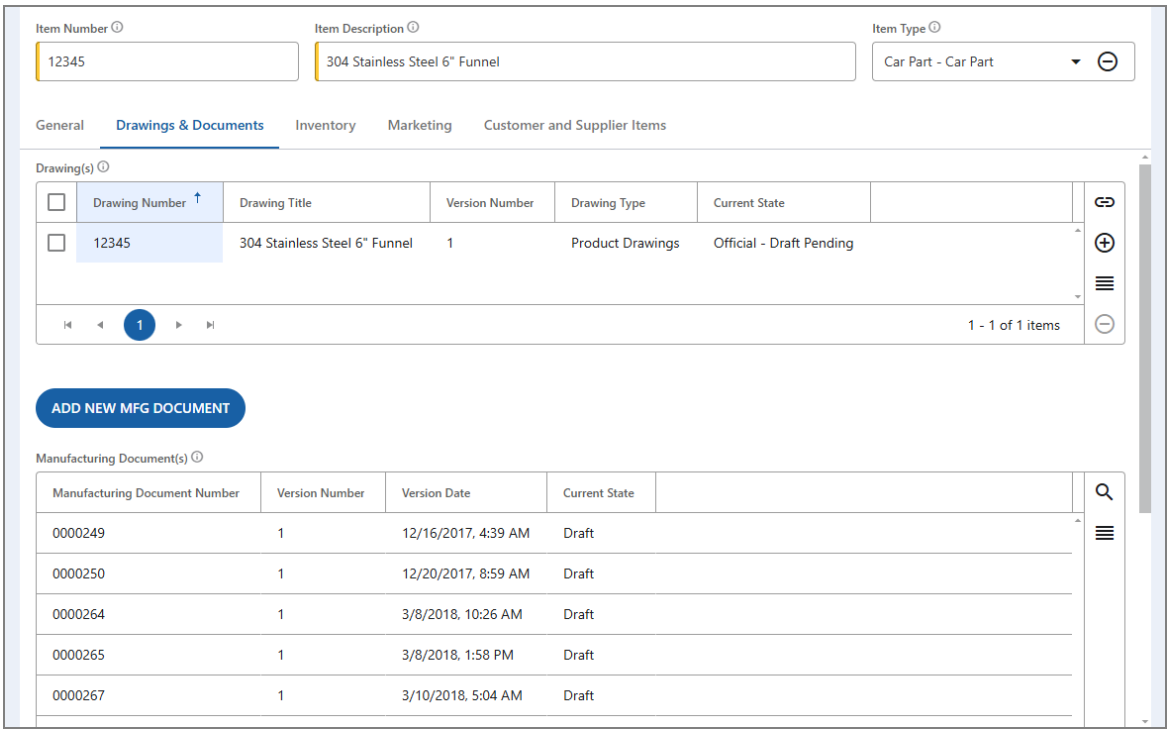
- "Drawings" on page 40.
- "Library Specifications" on page 37.
- "Inspection Plan" on page 52
- "Inspection Events" on page 58

Fig. 33: Items screen, General tab



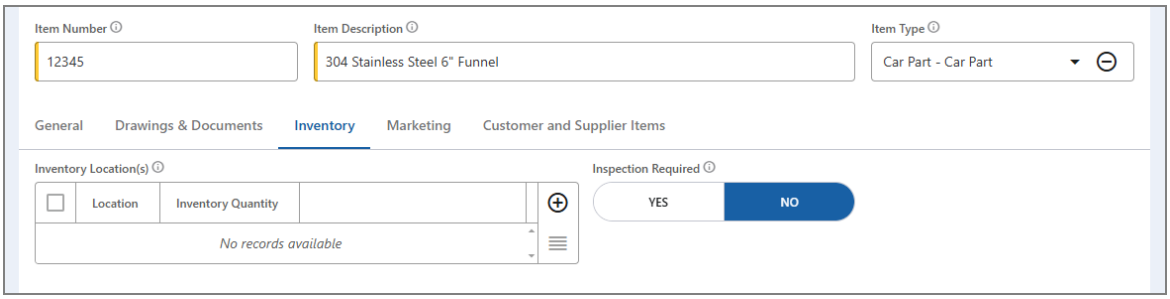
The General tab is used to define the basic details of an item, including the item type and group, unit of measure, picture, price, and more.

Fig. 34: Items screen, Drawings & Documents tab



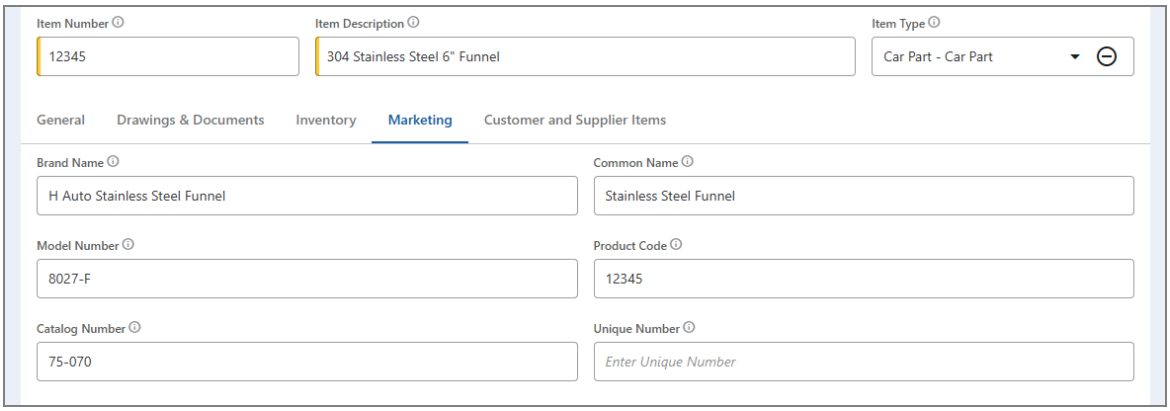
The Drawings & Documents tab allows you to link related drawings and documents to the item, or create a new manufacturing document that applies to the item.

Fig. 35: Items screen, Inventory tab



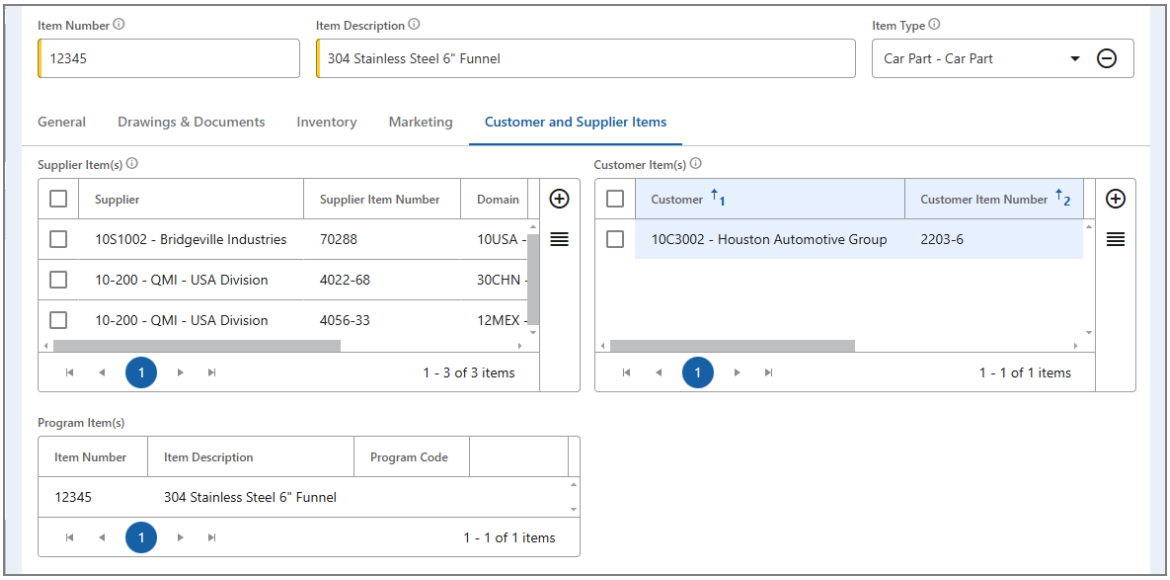
The Inventory tab shows the running inventory level for the item. It is linked to an integration with ERP that updates the current inventory and location of the inventory.

Fig. 36: Items screen, Marketing tab



The Marketing tab is completed by customers when submitting a complaint. It records the item's brand name, model number, catalog number, and more.

Fig. 37: Items screen, Customer and Supplier Items tab



If any customer or supplier items are associated with this item, then they are recorded in the Customer and Supplier item tab. The Add New Item ⊕ button in each field allows you to select the appropriate information without having to re-enter all of the item's information.

Items States

This section defines each state available in the workflow for the Items process. See "State Change Security" on page 1 to learn more about how these states transition.

Active (Default). An item that is actively used.

Synchronized. The state is automatically set if the item is created or updated from integration to another system (e.g. EPR system). Synchronized fields are read-only.

Items Tasks

Adding a New Item

1. Select Items from the left navigation panel. Then, click the Add Item button in the toolbar.
2. Enter values for the item number and description. Notice how the Display Expression field combines the two values; this is how users will look up this item.
3. Select the product line, item type, item group, and unit of measure for the item.
4. Click Browse in the Item Picture field to upload a picture of the item.
5. Enter the item's price and a secondary description. If the item is product safety-related, then select the "Product Safety Related" check box to enable increased notifications.
6. Navigate to the Drawings tab. Use the Add New Item buttons in the Drawings and Manufacturing Documents fields to add the associated records.

   Note: The Drawings field allows you to link a currently existing drawing, but the Manufacturing Documents field requires that you create a new manufacturing document. See "Manufacturing Documents" in the APQP Libraries user guide for more information.

7. Click Save to save the new record.

Chapter 3

Using the Inspection & SPC Module

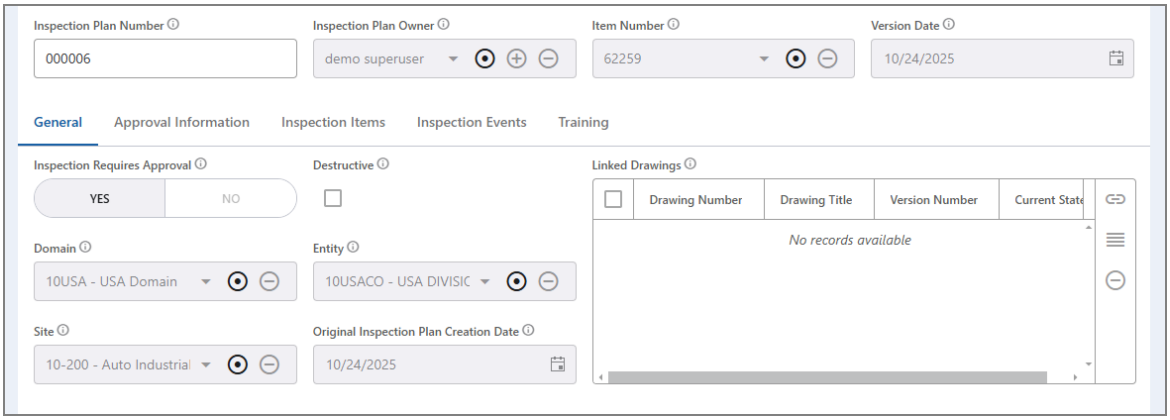
Inspection Plan

The Inspection Plan process is used to compile information together as the basis for an inspection event. This process is similar to conducting an inspection event from a control plan, but is utilized for simplified, ad hoc events. By linking an item and a drawing to the inspection plan, users can import inspection requirements and sampling data, and then build an inspection event directly from the plan. See "Inspection Events" on page 58.

Note that inspections are linked to control plans to ensure that the APQP process is being maintained; however, in the event that an ad hoc inspection event is required (such as during testing of field failures), the Inspection Plan process provides an alternate way to create inspection events. See the APQP Libraries user guide for more information.

Inspection plans may be linked to a site with an ITAR requirement. If this is true, then a new field appears on the General tab titled ITAR Restricted. Setting this toggle to YES means that only employees who are ITAR compliant can view, access, and interact with the inspection plan and related items.

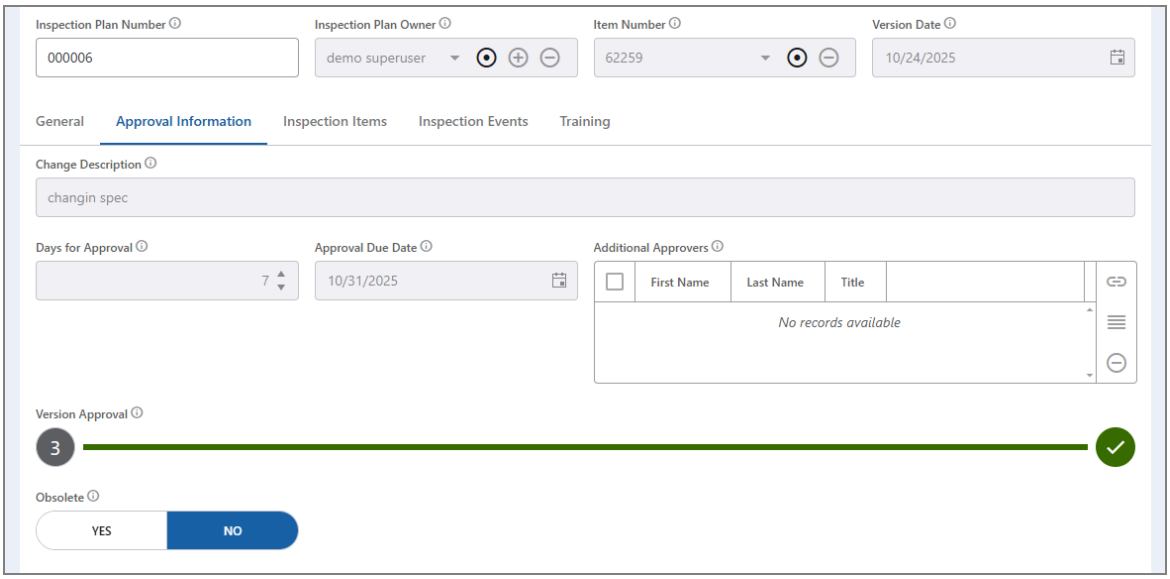
Fig. 38: Inspection Plan screen, General tab



The General tab is used to define the basic details of an inspection plan, including the inspection plan owner, item number, linked drawings, and the "Inspection Requires Approval" toggle. Note that the Item Number field determines the Linked Drawings selection.

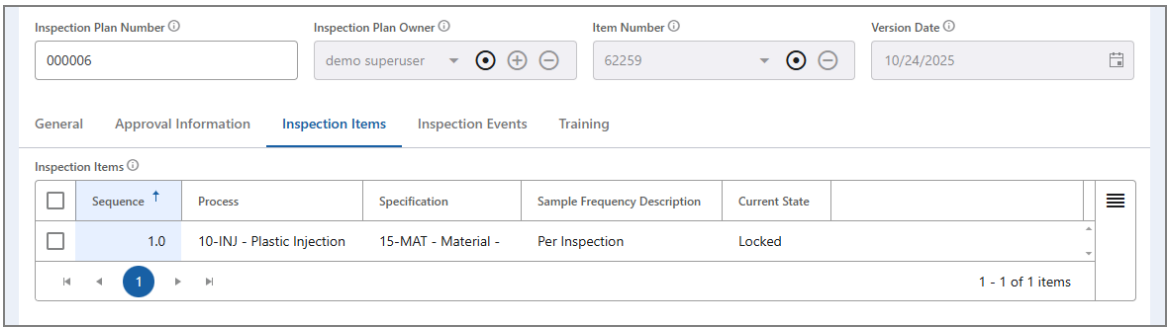
This tab indicates whether the record is ITAR restricted, meaning that only employees who are ITAR compliant can view, access, and interact with the record.

Fig. 39: Inspection Plan screen, Approval Information tab



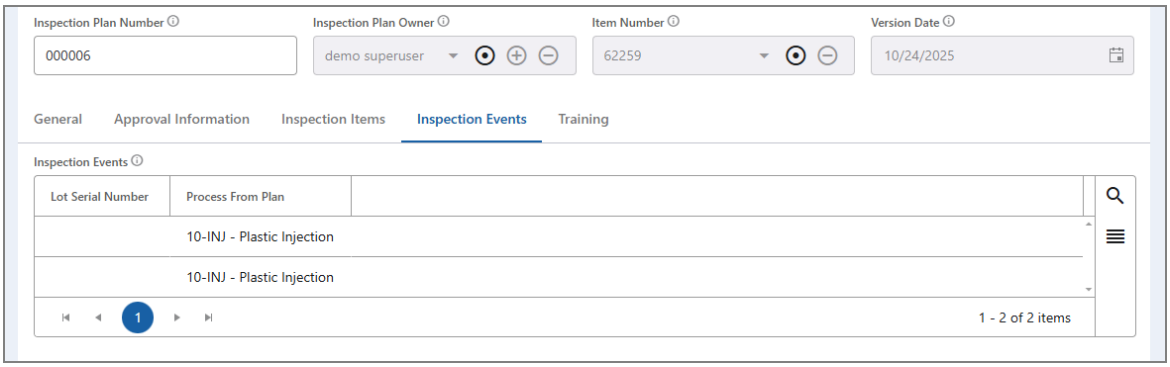
The Approval Information tab includes the inspection plan's approval information, change description, and obsoletion toggle.

Fig. 40: Inspection Plan screen, Inspection Items tab



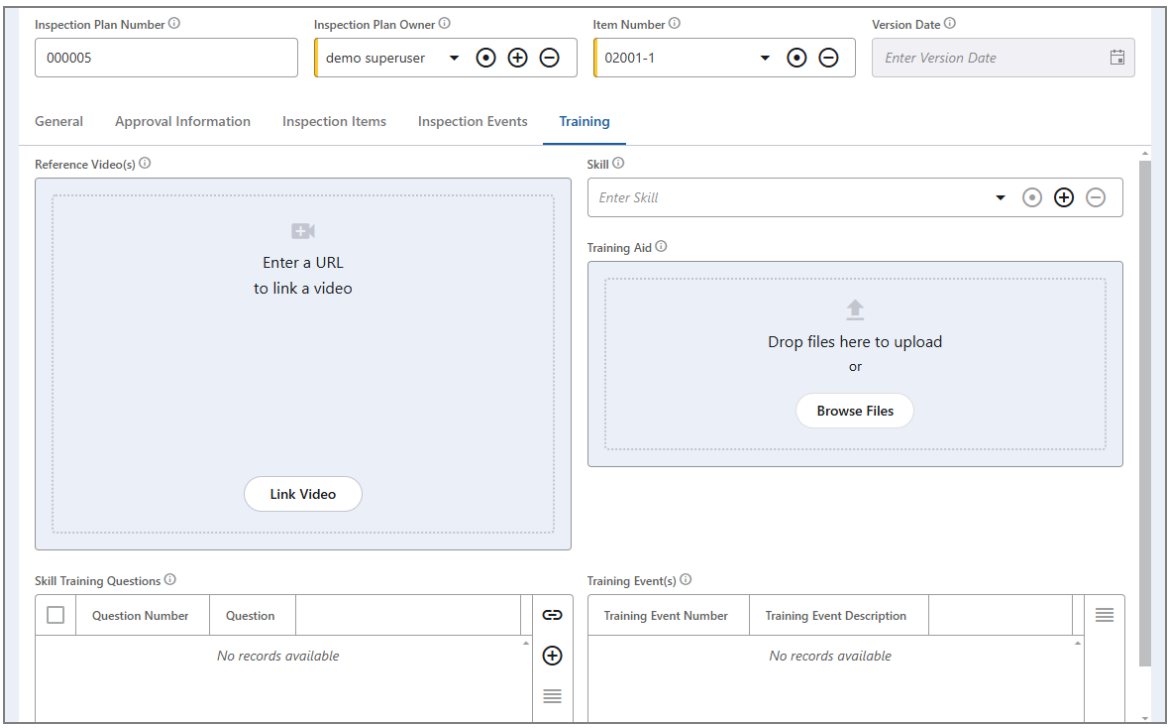
Use the Inspection Items tab to add and refine drawing features, which are imported from the Linked Drawings field via the Command button. The sampling technique and frequency information for each feature is logged in the Inspection Items field.

Fig. 41: Inspection Plan screen, Inspection Events tab



The Inspection Events tab keeps a record of all inspection events created from the inspection plan. This tab automatically populates with a new item each time the "Create an Inspection Event" command is executed.

Fig. 42: Inspection Plan screen, Training tab



Use the Training tab if you want to add skill and training information to the inspection plan. Note that the Training Events field automatically populates with training events linked to the Item Number field.

See the Training Management user guide to learn more about training and skills.

Inspection Plan States

This section defines each state available in the workflow for the Inspection Plan process. See "State Change Security" on page 1 to learn more about how these states transition.

Draft. The inspection plan is still being drafted and is not yet ready for approval.

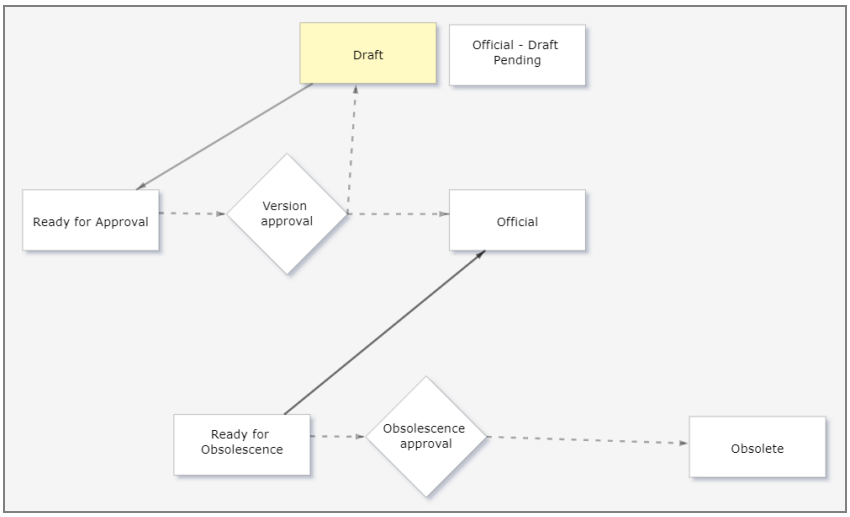
Ready for Approval. The inspection is waiting to be approved.

Official. The official version of the inspection plan.

Official – Draft Pending. The official version of the inspection plan, which also has a new version being drafted.

Ready for Obsolescence. The inspection plan is ready to be obsoleted, pending approval.

Obsolete. An obsolete version of the inspection plan. This version shall not be used.



Inspection Plan Tasks

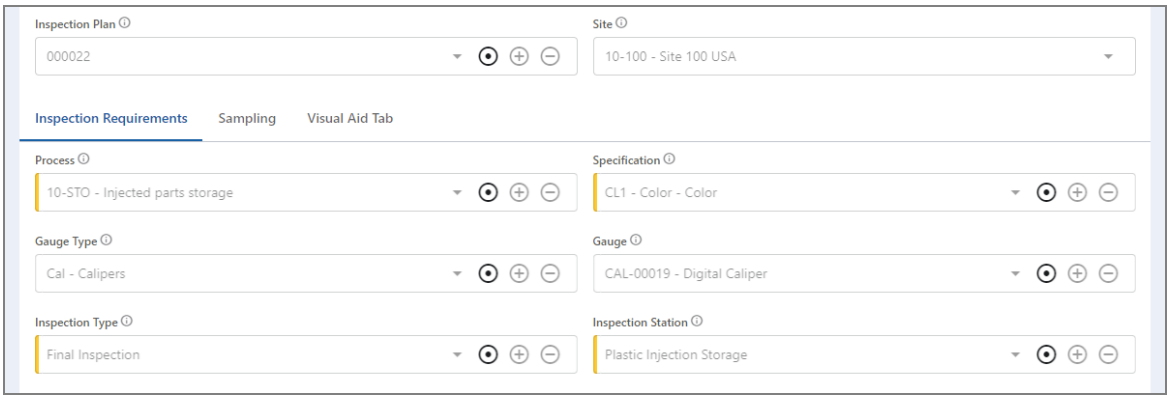
Adding a New Inspection Plan

1. Select Inspection Plan from the left navigation panel. Then, click the Add Item button in the toolbar.
2. Select an item number and determine whether the inspection requires approval.
3. Link a drawing to the inspection plan. This field is filtered from the Item Number field.
    a. Click the Link button. A new window appears.
    b. Select all items that apply.
    c. Click Save.
4. Navigate to the Approval Information tab. Enter a change description and the number of days for approval.
5. If desired, click the Link button in the Additional Approvers field to add approvers.
6. To add training to the inspection event, navigate to the Training tab. Select a skill.
7. Drag and drop or upload a training aid.
8. Click the Link or Add New Item button to add skill training questions.
    - See the Training Management user guide for more information about skills and how they are used in training.
9. Click Save to save the new record. When selecting the next state, click Draft.

Adding Drawing Features to an Inspection Plan

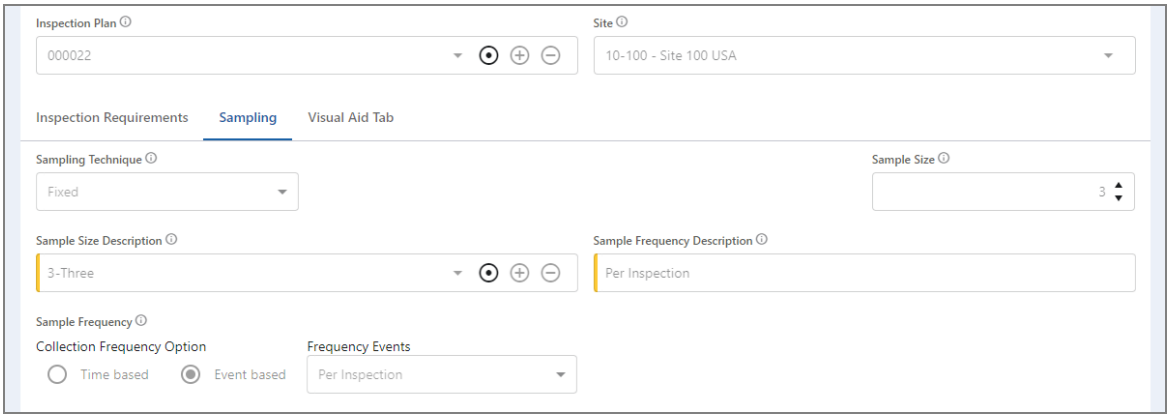
1. In the Inspection Plan record, click the Actions button and select "Import Drawing Features". All drawing features import from the linked drawings. A new record is created for each feature.
2. Navigate to the Inspection Items tab. Double-click a feature from the list; a new screen opens.

Fig. 43: Inspection Plan Items screen, Inspection Requirements tab



3. In the new screen, select a process, inspection type, and inspection station. You can also add a gauge and gauge type.

Fig. 44: Inspection Plan Items screen, Sampling tab



4. Navigate to the Sampling tab. This tab is used to specify the technique and frequency for sampling product and process components.

   Select a sampling technique. The Sampling Technique field has four choices: Fixed, 100% Known Sample Size, AQL and Batch Size, and Manual. See "Introduction to Inspections" on page 16 for more information on these techniques.

5. If you chose the Fixed sampling technique, then select or create a sample size description. If you chose the AQL and Batch Size sampling technique, then select or create an AQL table and AQL number.
6. Set up the sampling frequency:
   - **Time based.** Enter the number of hours in between inspections.
   - **Event based.** Select the event that requires inspection.
7. Navigate to the Visual Aid tab. In this tab, you can click Browse to select one or more visual aids, as well as a reference video.

   Note: When a visual aid is added to the record, a new required field appears for description of the visual aid.

8. Click Save to save the record.
9. Back in the main detail screen, click Save. When selecting the next state, click Ready for Approval.

   Note: The record cannot be made Official until all inspection items are completed.

Approving an Inspection Plan

1. The person responsible for approving an inspection plan is automatically notified when it is time for approval through the inbox or optionally from an e-mail notification (clicking the link in that message takes you to the document for approval).
2. Open the inbox, either through the Home Page dashboard or by clicking the Inbox icon in the toolbar.
3. Upon opening the inbox, click the approval item under the Inspection & SPC group to show the inbox action icons. Then click the Open icon. The screen navigates to the inspection plan's detail screen.
4. In the detail screen, navigate to the Approval Information tab, scroll down to the Version Approval field, and click the Approve/Reject button. A small window appears.
5. In the Sign Off window, enter your password and either approve or reject the change. Use the comments field to document any information about your decision. Comments are required for rejection.

   Note: Once all members of the approval process have finished, the inspection plan becomes official and ready for use.

Starting a New Version of an Inspection Plan

If a change is made to the drawing that is linked to the inspection plan, a new version of the inspection plan record must be created. This task is preceded by an inbox action item notifying the Inspection Plan Owner that the record requires review due to a drawing change. The previous version of the inspection plan is already obsolete by this point.

1. In the Inspection Plan detail screen, click the Actions button and select "Start New Version". The screen refreshes to a new version. The General tab and the Training tab remain the same.
2. Navigate to the Approval Information tab. Enter a change description of why a new inspection plan was created.
3. Save the record. When selecting the next state, choose Draft.
4. The Inspection Items tab must be rebuilt. See "Adding Drawing Features to an Inspection Plan" on page 55.

Obsoleting an Inspection Plan

An inspection plan can only be obsoleted if there are no open inspection events; these will appear in their own field in the Approval Information tab. If there are open events, the state will remain in Official. Once the items are closed, the state automatically moves to Ready for Obsolescence.

Note: You can still initiate an obsolescence, and once the events are closed, the record will automatically move forward.

1. Open the Official inspection plan to be obsoleted.
2. In the Approval Information tab, click the Obsolete toggle.
3. Enter a reason for the obsoletion.
4. Save the record. The state moves to Ready for Obsolescence.
5. Follow the instructions in "Approving an Inspection Plan" on the previous page to approve the decision and move the inspection plan to Obsolete.

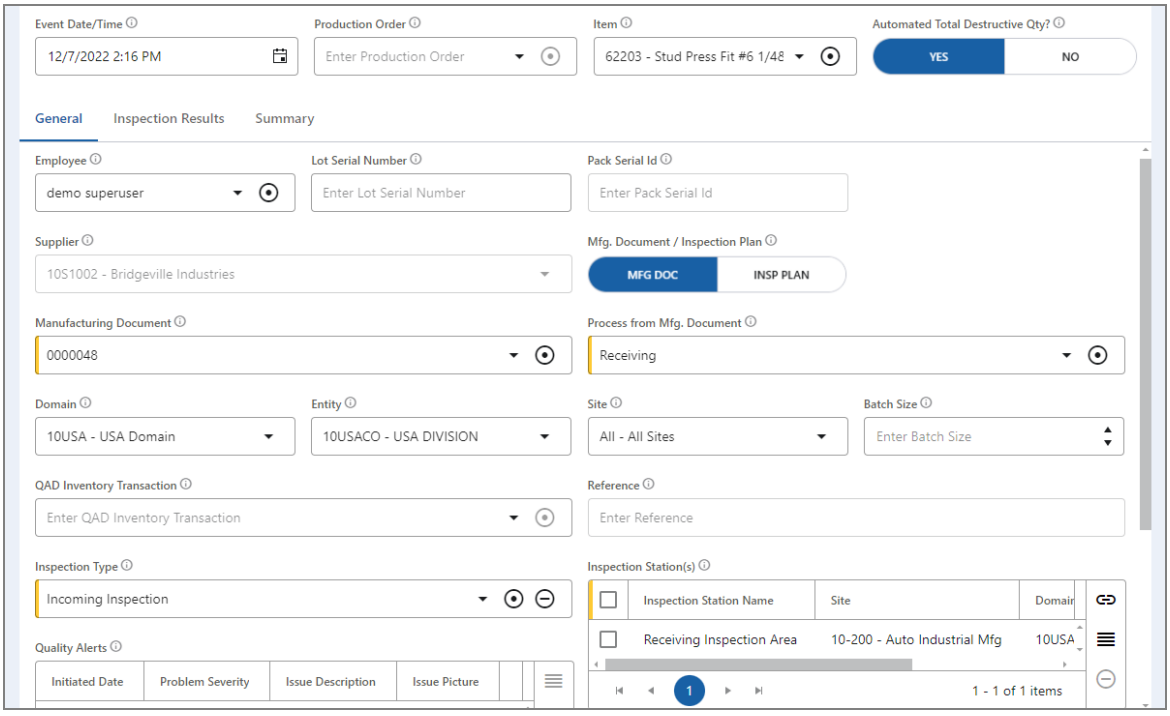
Inspection Events

Inspection events allow data to be collected for specific parts and processes before storing the results of an inspection that has been completed. The definition of what is being inspected on an inspection event is pulled from the control plan of a manufacturing document. See the APQP Libraries user guide to learn more about the Manufacturing Documents process.

Inspection events can also be created from an inspection plan. See "Inspection Plan" on page 52.

Inspection events may be linked to a site with an ITAR requirement. If this is true, then a new field appears on the General tab titled ITAR Restricted. Setting this toggle to YES means that only employees who are ITAR compliant can view, access, and interact with the inspection event and related results information.

Fig. 45: Inspection Events screen, General tab

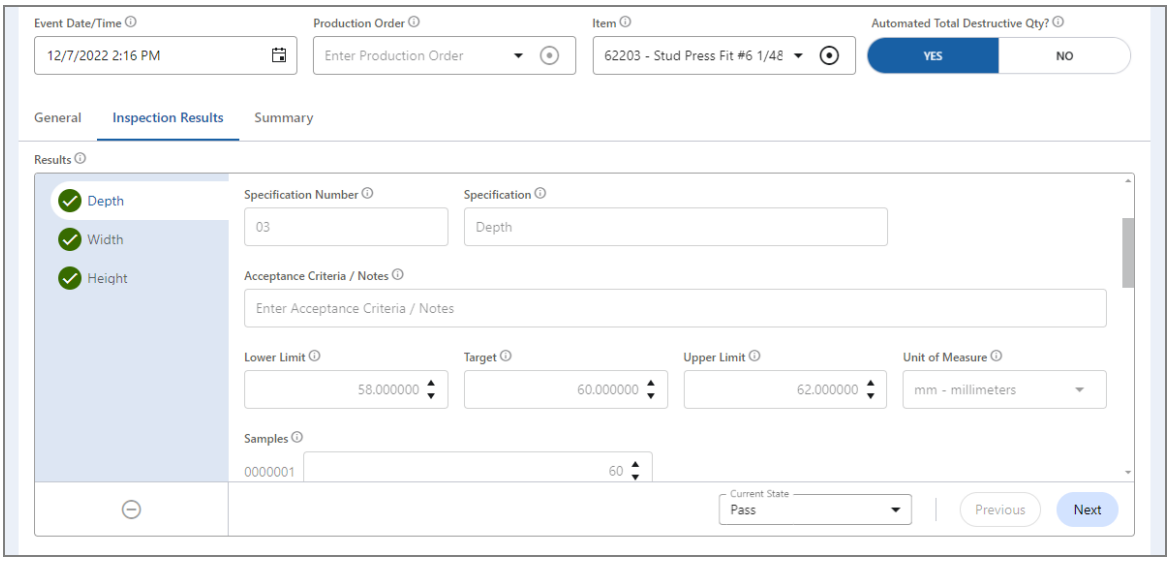


The General tab is used to define the basic details of an inspection event. All manual entry for the creation of an inspection event occurs on this tab.

This tab indicates whether the record is ITAR restricted, meaning that only employees who are ITAR compliant can view, access, and interact with the record.

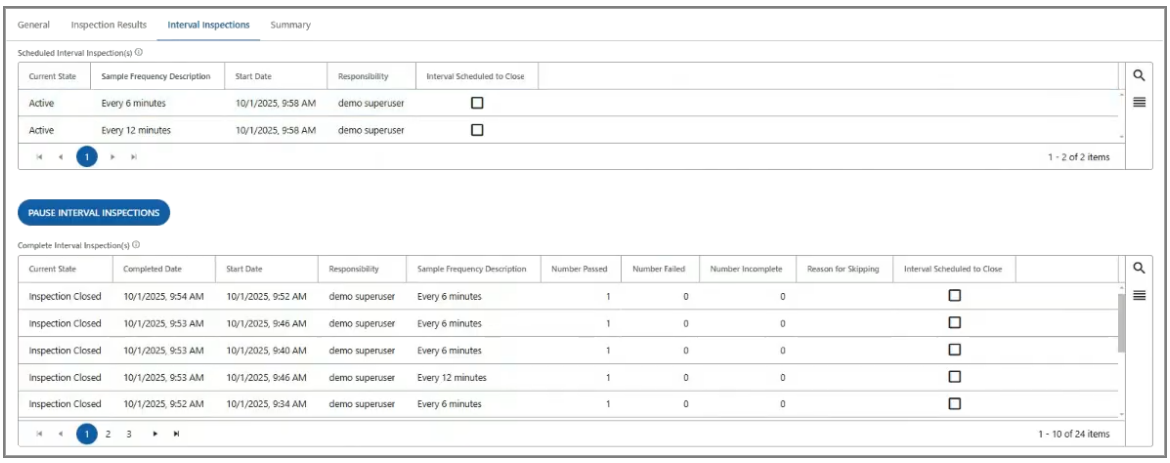
If any nonconformance were created as a result of the event outcome, then they are accessible from this tab. For Life Science users, an investigation may be created instead of a nonconformance; this depends on the setup of the associated site.

Fig. 46: Inspection Events screen, Inspection Results tab



The Inspection Results tab displays the results of the specifications being inspected. This tab is automatically generated based on the selected manufacturing document, inspection type, and inspection station.

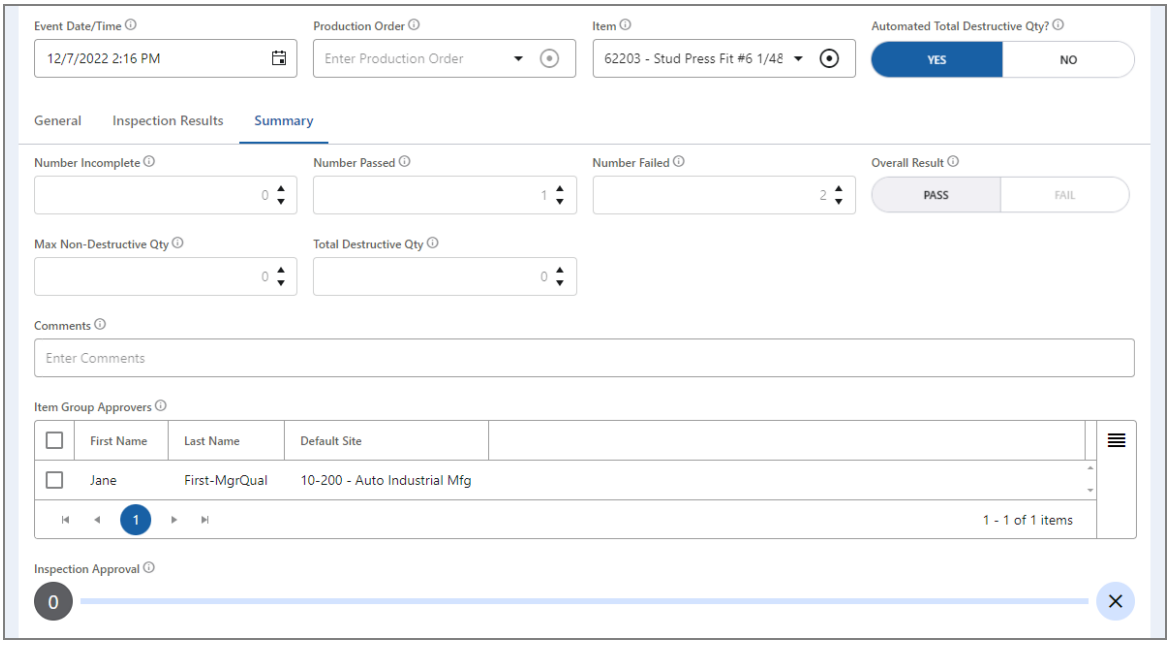
Fig. 47: Inspection Events screen, Interval Inspections tab



The Inspection Events screen also has an Interval Inspections tab. This tab generates time-based inspection results that occur at a defined frequency, such as every few minutes or every few hours. Interval inspections are created from either an inspection plan or a manufacturing document and must be configured as time-based to appear in this tab. You can view upcoming

scheduled interval inspections, pause the interval inspections, and review completed interval inspections. Inspection questions are displayed in the same format as standard inspection results, with additional controls related to timing and scheduling. Interval inspections can be stopped by completing the inspection or by adjusting the schedule so that no items remain scheduled.

Fig. 48: Inspection Events screen, Summary tab



The Summary tab displays the results of the inspection regarding the number of rows in the Results list that passed or failed, and whether the overall result passed or failed. If the inspection requires approval, then sign off in the Inspection Approval field.

Inspection Events States

This section defines each state available in the workflow for the Inspection Events process. See "State Change Security" on page 1 to learn more about how these states transition.

Scheduled (Default). The inspection event is scheduled or in process, but not yet complete.

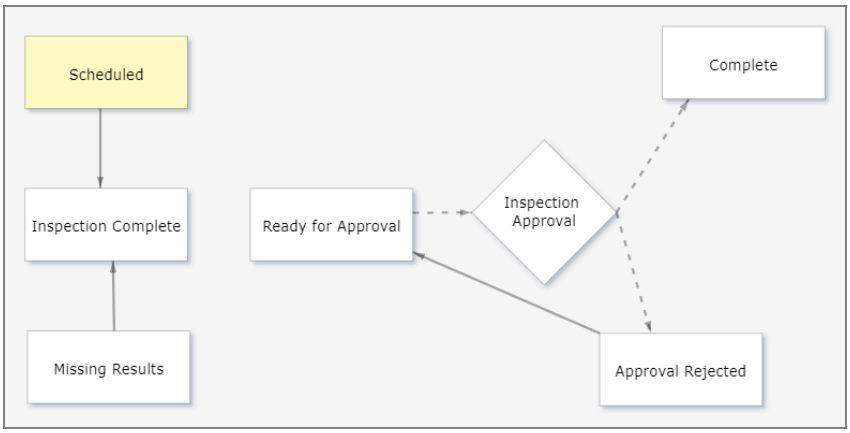
Inspection Complete. Select this state when you have completed all of the inspection results and documented any comments.

Missing Results. The inspection event was moved to Inspection Complete, but at least one inspection result was still In Process. Complete all results and then move to Inspection Complete.

Ready for Approval. The inspection event is ready for approval. The state will automatically be initiated when an inspection is complete and requires approval.

Complete. The inspection event is complete. This state is automatically set after approval passes or an inspection is complete that does not require approval.

Approval Rejected. The inspection event approval was rejected. Review the rejection comments and resubmit for approval.



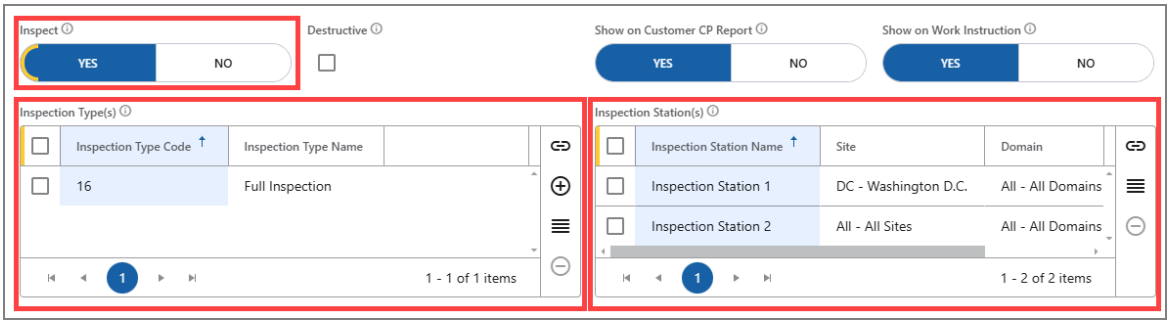
Inspection Event Tasks

Setting Up Inspections in APQP

The Inspection Event begins in the Manufacturing Document process in the APQP module. The manufacturing document must be in the Official state before an inspection event can begin. See the APQP Libraries user guide to learn how to create a manufacturing document.

1. In the Manufacturing Document process screen, navigate to the Process Control Plan tab. Then, double-click the process control plan record to open it.
2. Ensure that the following fields are filled out:
    a. Inspect (must be selected)
    b. Inspection Type
    c. Inspection Stations

Fig. 49: Required fields, Process Control Plan



3. Navigate to the Sampling tab. Ensure that the sampling technique, size description, and frequency are set to the desired specifications.

    Note: The Sampling data is pulled from the Library Control field in the General tab.

4. Save the Process Control Plan if any changes were made, then return to the main process screen.

5. Click the Actions button and select "Create Inspection Event Questions".
6. If any changes were made to the Manufacturing Document, then click Save to save the record.

Adding a New Inspection Event

To learn how to add a new inspection event through an inspection plan, see "Inspection Plan" on page 52.

1. Select Inspection Events from the left navigation panel. Then, click the Add Item button in the toolbar.
2. The following fields automatically populate:
    - Event Date/Time
    - Employee
    - Domain
    - Entity
    - Site
3. Select the appropriate production order or item. Note that if you select a production order, the Item field populates automatically.
4. Select whether you want to pull information from a manufacturing document or inspection plan. Two new fields appear: either Manufacturing Document or Inspection Plan, and Process from Mfg. Document or Process from Plan.
5. Select the appropriate manufacturing document or inspection plan and process.

    Note: The Item field drives the Manufacturing Document/Inspection Plan fields, which drive the Process field.

5. Enter a batch size if you are dealing with AQL or a 100% known batch size.
6. Select an inspection type.
7. Select one or more inspection stations.
    a. Click the Link button in the Inspection Stations field. A new window opens.
    b. Select one or more inspection stations from the list.
    c. Click OK.
8. Click Save to save the new record. When selecting the next state, click Scheduled.

Completing Inspection Event Results

1. In the Inspection Event detail screen, navigate to the Inspection Results tab.
2. Select one of the items in the Results list on the left side of the screen.
3. In the Samples field, enter the measurements of each sample. Include inspection result notes as necessary.

    Note: If the sample does not fall within the parameters of the Lower Limit / Target / Upper Limit fields, then a red marker appears beside that sample line to indicate the sample is out of spec.

4. Select which gauge was used.
5. Repeat steps 3-4 for all items in the Results list.
6. Click Save to save the inspection results. When selecting the next state, click Inspection Complete.

Note: See "Approving an Inspection Event" below if the inspection event requires approval.

7. Navigate to the Summary tab. If any results contained samples that were out of spec, then those results are counted in the Number Failed field. All other results are tallied in the Number Passed field.

Approving an Inspection Event

1. The person responsible for approving an inspection event is automatically notified when it is time for approval through the inbox or optionally from an e-mail notification (clicking the link in that message redirects you to the inspection event for approval).
2. Open the inbox, either through the Home Page dashboard or by clicking the Inbox icon in the toolbar.
3. Upon opening the inbox, click the approval item under the Inspection & SPC group to show the inbox action icons. Then click the Open icon. The screen navigates to the event's detail screen.
4. In the detail screen, navigate to the Summary tab and click the Approve/Reject button in the Inspection Approval field. A small window appears.
5. In the Sign Off window, enter your password and either approve or reject the change. Use the comments field to document any information about your decision. Comments are required for rejection.

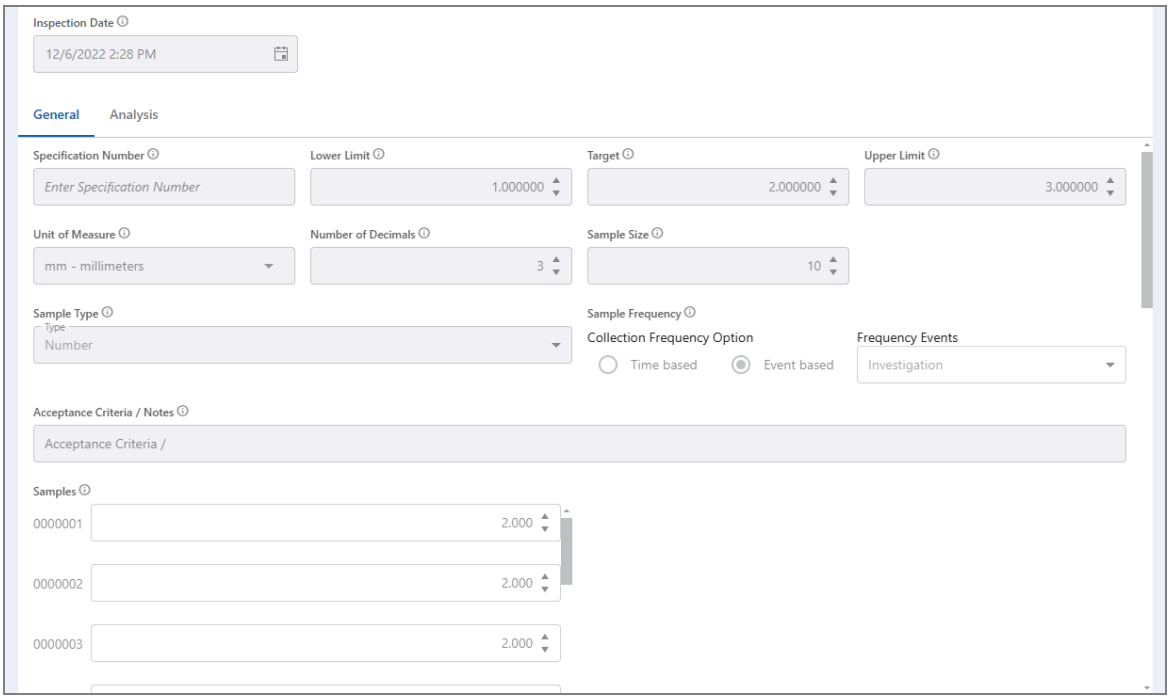
   Note: Once all members of the approval process have finished, the inspection event becomes official and ready for use.

Inspection Event Results

Inspection event results are the historical records of an inspection over time. They allow search and analysis of data by lot number, serial number, item number, process, specification, and more. These results are an output from the Inspection Events process and therefore are populated directly from the relevant inspection event. See "Inspection Events" on page 58.

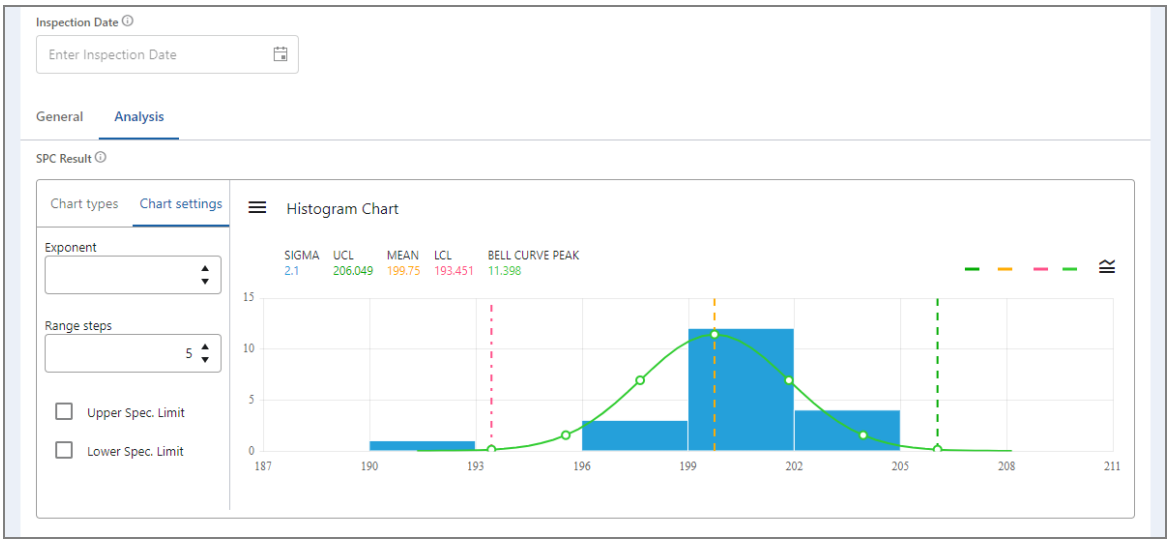
There is no need to add a new inspection event result record, as this is done by the system when data is collected on an inspection event. One record per spec/characteristic is created with the data collected; for example, if an inspection event has three characteristics defined per the control plan, then three records will be created in the Inspection Event Results process.

Fig. 50: Inspection Event Results screen, General tab



The General tab is used to define the basic details of an inspection event result. The Reference Video(s) field is automatically populated with the video linked to the associated manufacturing document's control plan.

Fig. 51: Inspection Event Results screen, Analysis tab



The Analysis tab contains a chart that displays the results of a completed inspection. All inspection data must be entered to produce a meaningful chart.

Inspection Event Results States

This section defines each state available in the workflow for the Inspection Event Results process. See "State Change Security" on page 1 to learn more about how these states transition.

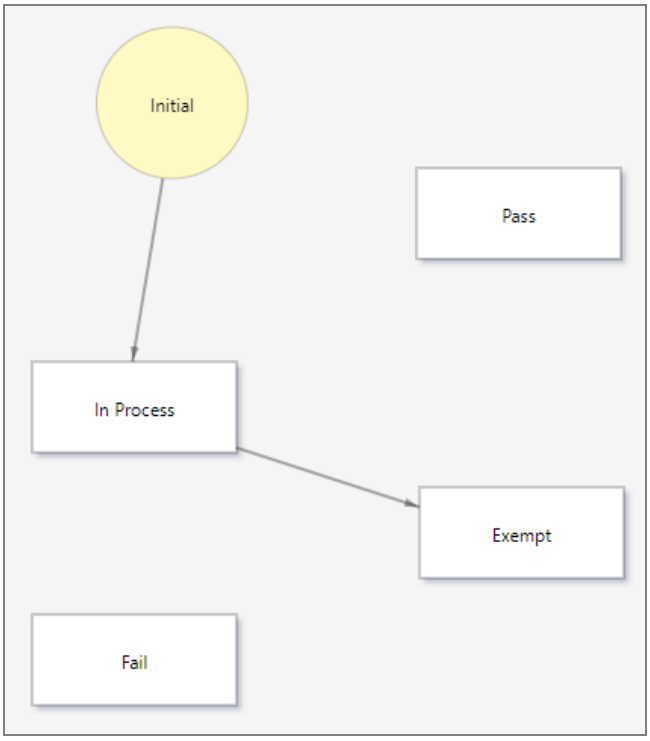
Initial (Default). The collection event result has not yet been started.

In Process. The collection event result is currently being performed.

Pass. Inspection for this item passed the specification.

Fail. Inspection for this item failed the specification.

Exempt. The inspection event result was not completed.



Inspection Event Results Tasks

There are no tasks available.

Skip Lot Inspection Rules Table

Skip lot sampling is a cost-saving mode of sampling wherein only a fraction of the submitted lots are inspected. This method of sampling is typically used only when a supplier has demonstrated that the submitted product's quality is consistently good.

The Skip Lot Inspection Rules Table process allows you to set up the parameters for a skip lot plan. There are several options for setting a threshold to trigger an inspection; for example, you

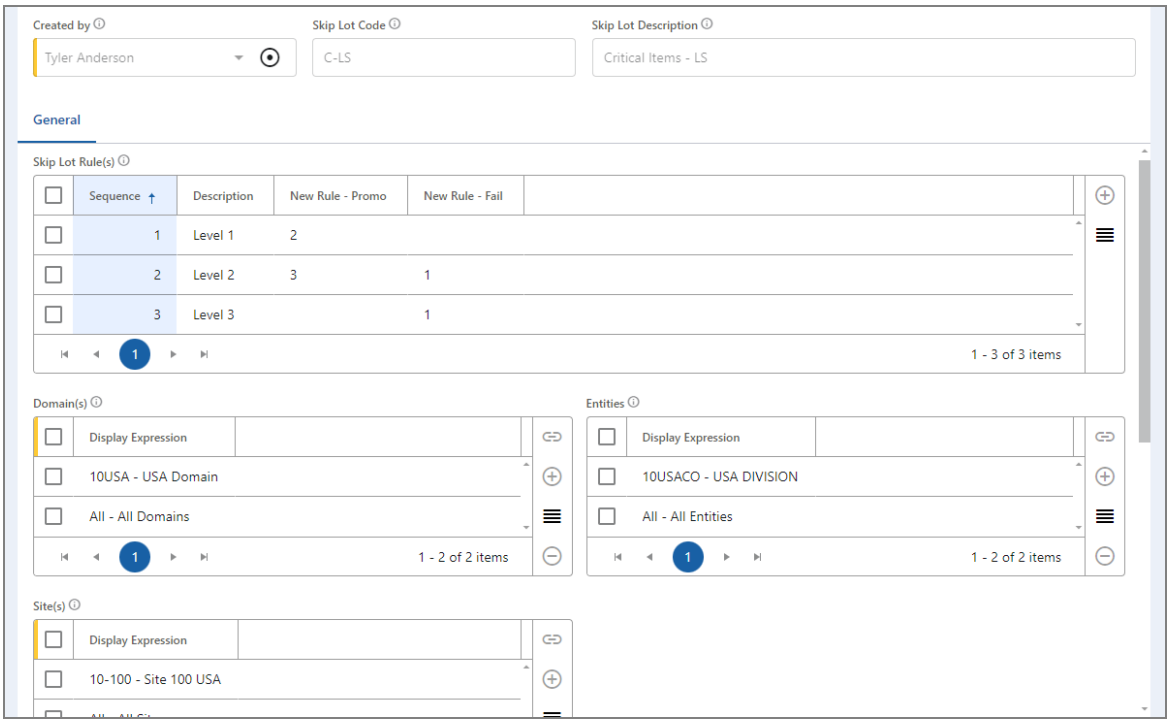
can plan for inspections to occur by tracking the date of the last inspection, or by tracking the total quantity of parts received in a facility.

In addition to setting up the threshold rules, you must set at least one additional condition:

- **Promotion.** How many successful inspections must pass before the table switches to the next rule in sequence.
- **Failure.** Which rule the table will move to in the event of a failure and also where the skip lot logic will resume at when the supplier meets the skip lot failure rules.

Once a skip lot inspection rules table is completed, it is used in the Skip Lot Setup process for assignment. See "Skip Lot Setup" on page 70.

Fig. 52: Skip Lot Inspection Rules Table process screen



Skip Lot Inspection Rules Table States

This section defines each state available in the workflow for the Skip Lot Inspection Rules Table process. See "State Change Security" on page 1 to learn more about how these states transition.

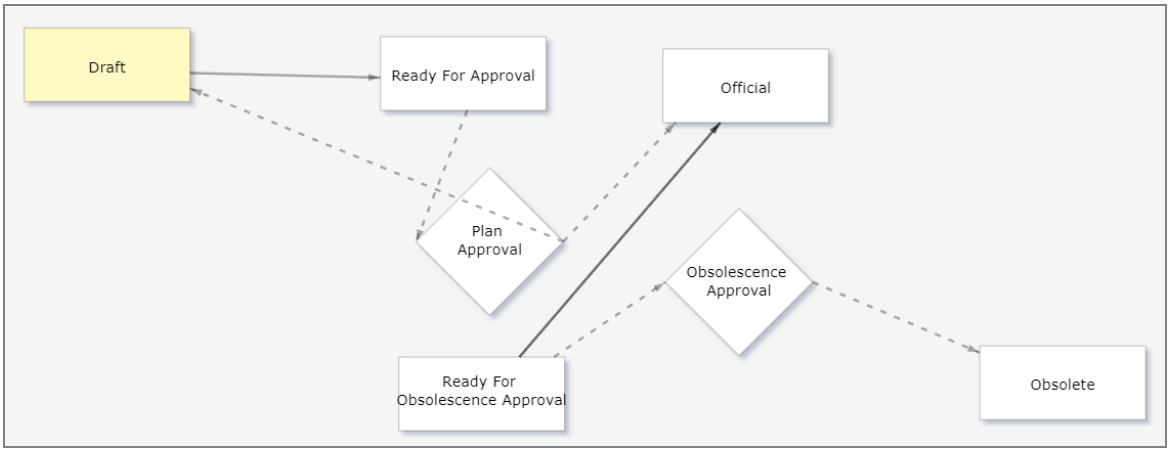
Draft (Default). The skip lot inspection rules table is being drafted and is not yet official.

Ready For Approval. The skip lot inspection rules table is ready to be approved so it may become official. A notification is sent to the plan approvers.

Official. The official version of the skip lot inspection rules table.

Ready For Obsolescence Approval. The skip lot inspection rules table is ready for approval so it may become obsolete. A notification is sent to the plan approvers.

Obsolete. The skip lot inspection rules table is obsolete. This version cannot be used.

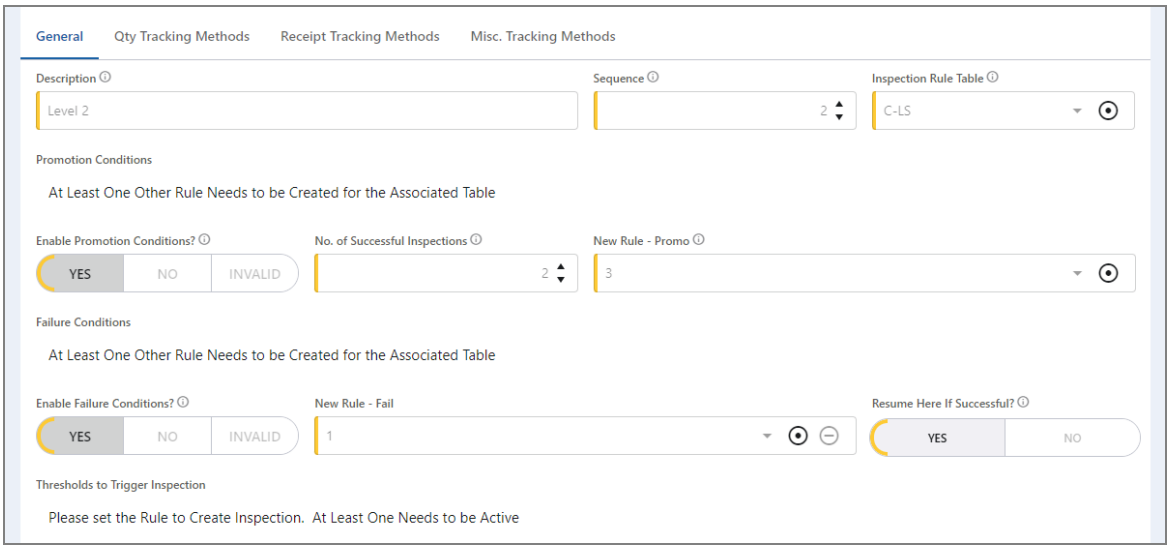


Skip Lot Inspection Rules Table Tasks

Adding a New Skip Lot Inspection Rules Table

1. Select Skip Lot Inspection Rules Table from the left navigation panel. Then, click the Add Item button in the toolbar.
2. Enter a skip lot code and description. The Created By field defaults.
3. Select values for the following fields:
    a. Domains
    b. Entities
    c. Sites
    d. Plan Approvers
4. In the Skip Lot Rules field, click the Add New Item button. A new screen appears.

Fig. 53: Skip Lot Rules screen



5. In the new screen, enter a description of the rule and a unique sequence number. The sequence should typically begin with 0.
6. In the Thresholds to Trigger Inspection toggle fields that follow, select at least one field to be active. Once the toggle is switched to Yes, a new field appears that allows you to enter a specific value.

   Note that inspection rules should be kept simple, so it is a best practice to not select several thresholds for a single inspection rule.

   a. **Track Quantity Received.** This will track the total quantity of parts received into the facility. Once the quantity received reaches or passes the specified value, an inspection is created.
   b. **Track Quantity by Lot Received.** This will track the total quantity for each lot into the facility. Once the quantity received for any lot reaches or passes the specified value, an inspection is created.
   c. **Track Number of Receipts.** This will track the total shipments received into the facility. Once the number of shipments received reaches or passes the specified value, an inspection is created.
   d. **Track Receipts by Lot.** This will track the shipments by lot into the facility. Once the number of shipments for a lot reaches or passes the specified value, an inspection is created.
   e. **Track Date of Last Inspection.** This will track how long it has been since the last inspection was conducted for the part being received into the facility. If a shipment received is a number of days (defined in the specified value) after the last inspection, an inspection is created.
   f. **Track Unique Lots Received.** This will track the different lots received into the facility. This will create inspections after X number of never-before-received lots are shipped into the facility where X is the specified value.

7. Once the thresholds are set, at least one other rule condition must be set for the associated table.
    a. **Enable Promotion Conditions.** When enabled, the associated rule table will switch to the next rule in sequence after a determined number of successful inspections.
    b. **Failure Conditions.** When enabled, the inspection rule will change if there is a failed inspection.
8. Click Save to save the record to Active and exit the screen.
9. Repeat steps 4-8 as many times as necessary to build the table.
10. Back in the main process screen, click Save to save the record. When selecting the next state, click Ready for Approval.

Approving a Skip Lot Inspection Rules Table

1. The person responsible for approving the table is automatically notified when it is time for approval through the inbox or optionally from an e-mail notification (clicking the link in that message redirects you to the table for approval).
2. Open the inbox, either through the Home Page dashboard or by clicking the Inbox icon in the toolbar.
3. Upon opening the inbox, click the approval item under the Inspection & SPC group to show the inbox action icons. Then click the Open icon. The screen navigates to the table's detail screen.
4. In the detail screen, scroll down to the Plan Approval field and click the Approve/Reject button. A small window appears.
5. In the Sign Off window, enter your password and either approve or reject the change. Use the comments field to document any information about your decision. Comments are required for rejection.

    Note: Once all members of the approval process have finished, the table becomes official and ready for use.

Obsoleting a Skip Lot Inspection Rules Table

1. In the Skip Lot Inspection Rules Table process screen, scroll down to the "Obsolete?" toggle field and select "Yes".
2. Click Save to save the record. The state automatically changes to Ready for Obsolescence Approval.
3. The person responsible for approving the obsoletion is automatically notified when it is time for approval through Actions.
4. Open the inbox, either through the Home Page dashboard or by clicking the Inbox icon in the toolbar.
5. Upon opening the inbox, click the approval item under the Inspection & SPC group to show the action icons. Then click the Open icon. The screen navigates to the table's detail screen.
6. In the detail screen, scroll down to the Obsolescence Approval field and click the Approve/Reject button. A small window appears.

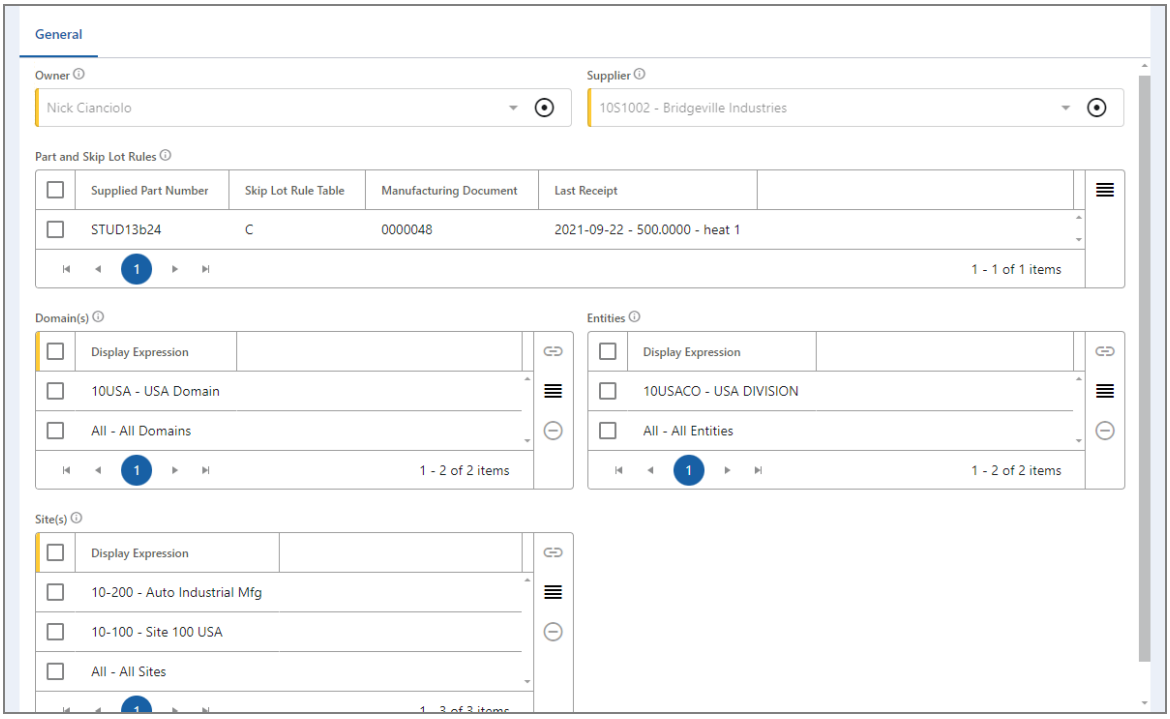
7. In the Sign Off window, enter your password and either approve or reject the change. Use the comments field to document any information about your decision. Comments are required for rejection.

   Note: Once all members of the approval process have finished, the table becomes obsolete. It can no longer be used.

Skip Lot Setup

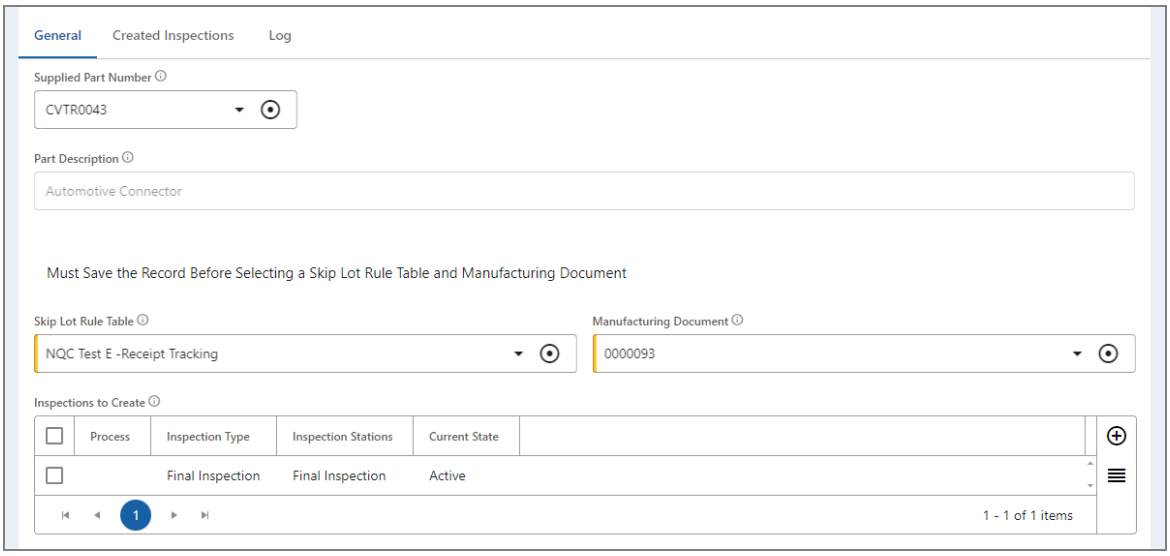
The Skip Lot Setup process configures inspection events for a specific supplier. After selecting a location and a supplier, individual skip lot rules can be assigned to each part supplied by that supplier. These rules can be further specified by process, inspection station, and inspection type, depending on the linked manufacturing document.

Fig. 54: Skip Lot Setup process screen



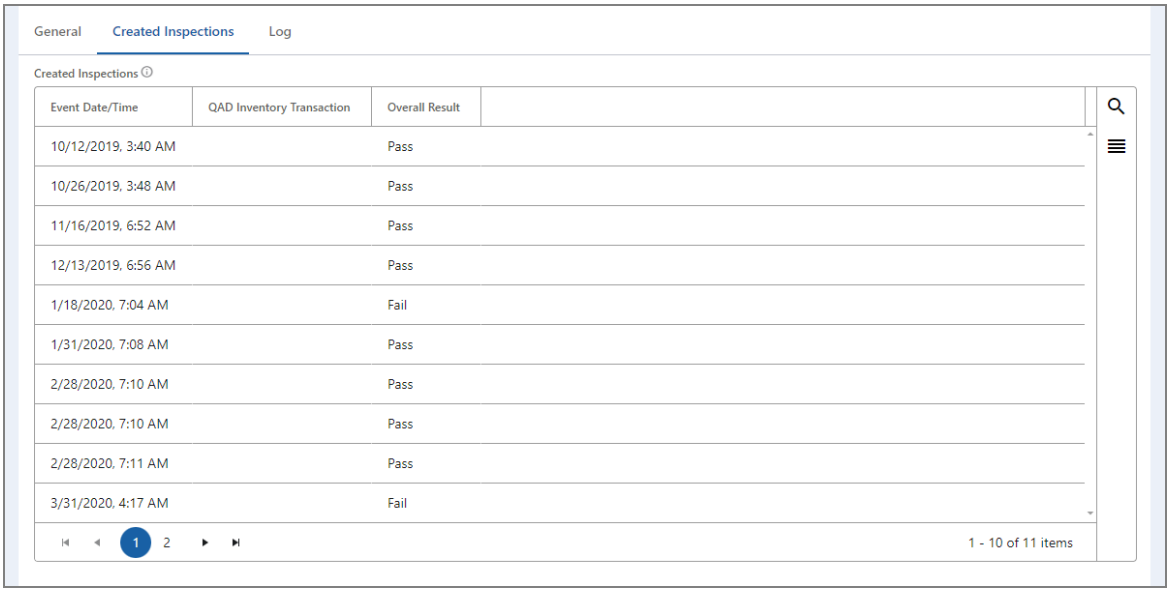
Because much of the work conducted in this process occurs within the Part and Skip Lot Rules field, screen shots of this sub-process are included below.

Fig. 55: Part Skip Lot Rules screen, General tab



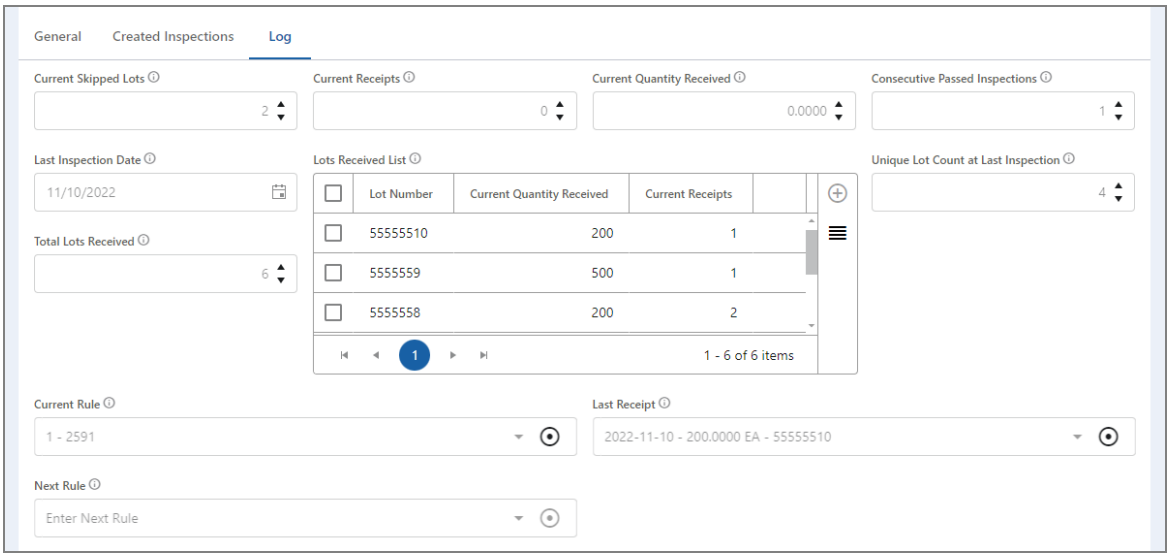
The General tab is the point of data entry for the Part Skip Lot Rules screen. The Supplied Part Number field filters the selection options for the other two drop-down fields.

Fig. 56: Part Skip Lot Rules screen, Created Inspections tab



The Created Inspections tab is automatically populated and displays all inspections created using the part skip lot rule.

Fig. 57: Part Skip Lot Rules screen, Log tab



The Log tab is automatically populated as product is received and inspections are conducted. The fields here calculate the number of skipped lots, quantity of parts received, number of inspections that have passed all criteria, the total number of lots received, and much more. It also displays the skip lot rule that is currently being applied and the skip lot rule that is expected to be applied next.

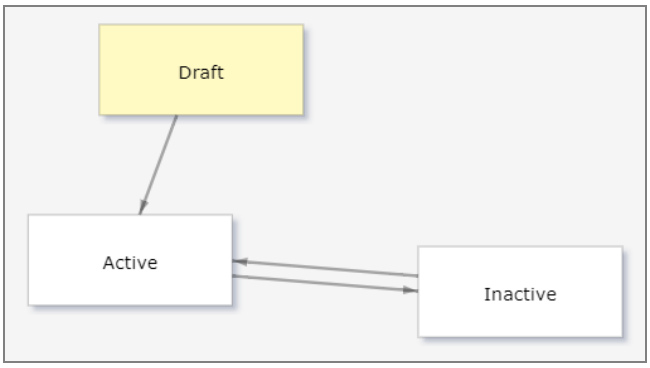
Skip Lot Setup States

This section defines each state available in the workflow for the Skip Lot Setup process. See "State Change Security" on page 1 to learn more about how these states transition.

Draft (Default). The skip lot setup is being drafted and is not yet official.

Active. A skip lot setup that is active used.

Inactive. A skip lot setup that is no longer in use.

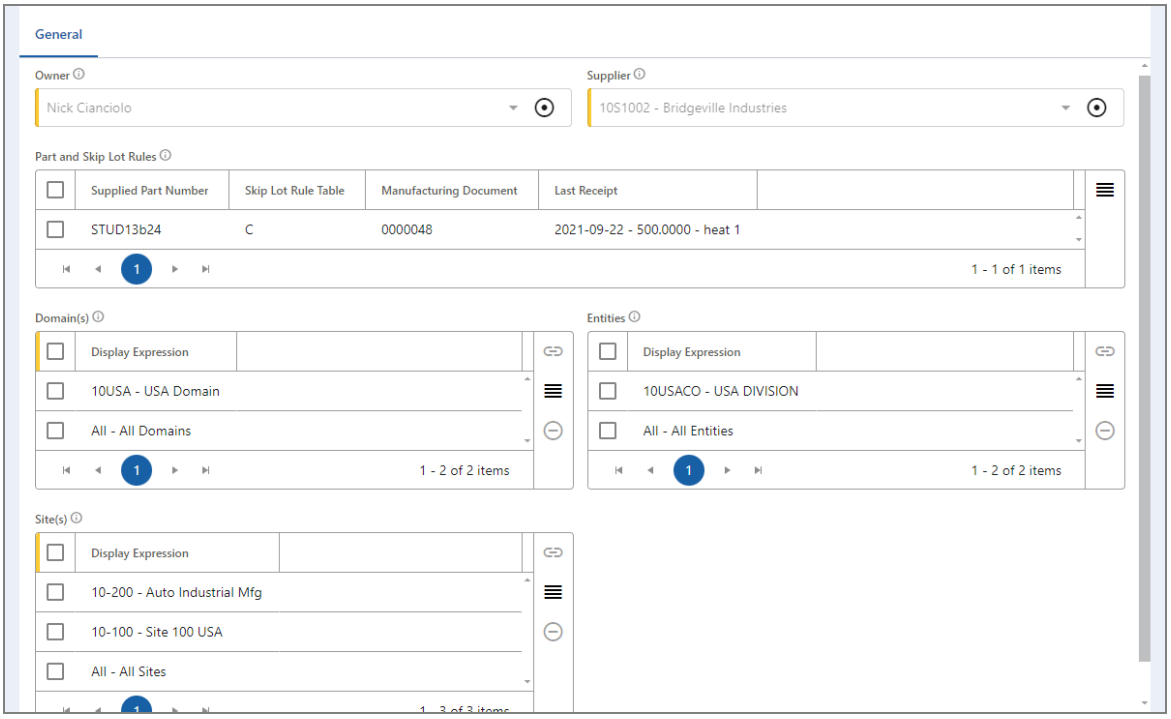


Skip Lot Setup Tasks

Adding a New Skip Lot Setup

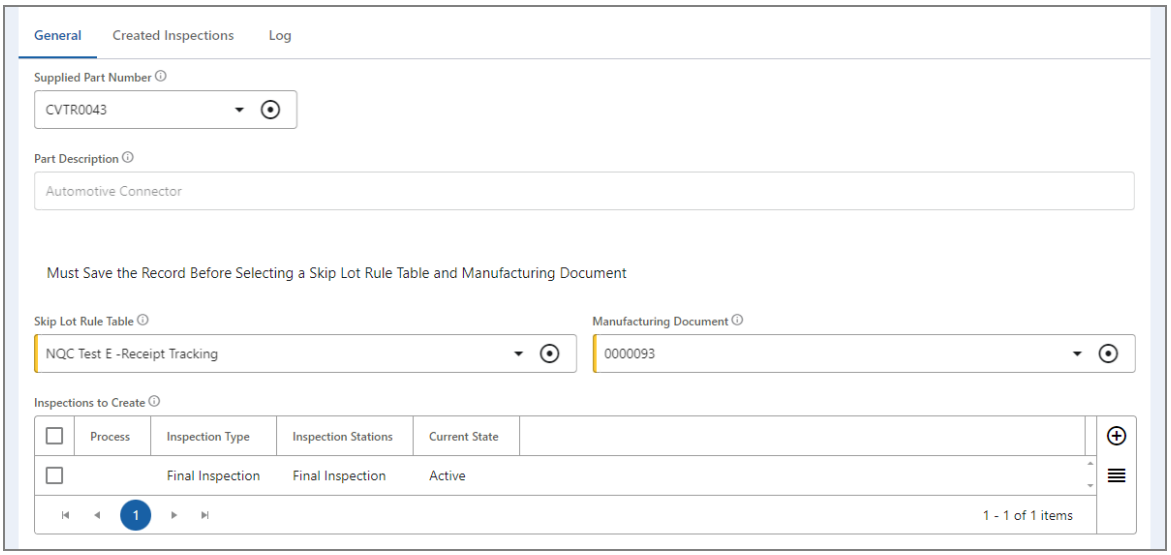
1. Select Skip Lot Setup from the left navigation panel. Then, click the Add Item ⊞ button in the toolbar.

Fig. 58: Skip Lot Setup screen



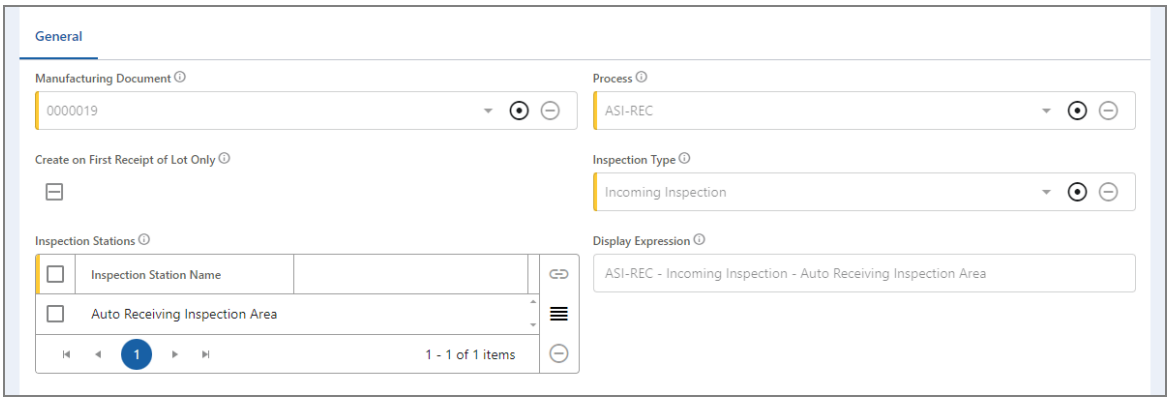
2. Select the owner, supplier, domain, entity, and site.
3. Click the Actions ⚡ button in the toolbar and select "Add Part". A new record is added to the Parts and Skip Lot Rules field. Double click this record to open it.

Fig. 59: Part Skip Lot Rules screen



4. In the new Part Skip Lot Rules screen, select a supplied part number and click Save to save the record.
5. Select a skip lot rule table and a manufacturing document. The Manufacturing Document field is filtered by the Supplied Part Number field.
6. Click the Add New Item button in the Inspections to Create field. A new screen opens.

Fig. 60: Skip Lot Inspection Event Definitions screen



7. Select a process, an inspection type, and one or more inspection stations.

   Note: These fields are filtered by the Manufacturing Document field, which automatically populates. The information in these fields come from the Process Control Plan tab in the linked manufacturing document.

8. Click Save to save the record. When selecting the next state, click Active.
9. Repeat steps 6-7 as needed for each inspection event that you want to create.
10. When finished, click the save button and close the Part Skip Lot Rules screen.

11. Back in the main process screen, click Save to save the new record. When selecting the state, click Active.

Chapter 4

Inbox Messages

Introduction to Inbox Messages

Most processes in the system require multiple people, departments, or groups to coordinate on completing a process. The inbox automates notifications sent to the appropriate users at specific times in the process.

An individual inbox action item represents a single task, approval, or notification that has been sent to you. This task will remain in your inbox until the necessary steps have been taken for completion.

Inbox messages can be separated into three different action types:

- **Assignment.** You are required to take some action in the system to move it beyond your workflow.
- **Approval.** Your approval is requested. You must approve or reject the process item.
- **Acknowledgment.** This is only for your information. You can acknowledge the notification to remove it from your inbox.

See the User Interface user guide to learn how to access inbox messages.

Inbox Messages

The table below describes each action item involved in the Inspection & SPC module. In addition to title and description, the table indicates which process each item comes from, who receives the message, and when it is sent. See the User Interface user guide to learn more about inbox messages.

Process	Title	Message	Action Type	Sent To / Sent When
Processes	Owner – Approval Approved	The following process approval has been approved. This is just a notification of the approval.	Assignment	Sent to the Process Owner when the process has been approved and the state moves to Official.
Processes	Owner – Requires Review	The following process requires review. Please review the process and start a new change if changes are required or move the state back to official if no changes are required.	Assignment	Sent to the Process Owner when the state moves to Requires Review.
Processes	Owner – Approval Rejected	The following process approval has been rejected. This is just a notification of the rejection	Assignment	Sent to the Process Owner when the state moves to Approval Rejected.

Process	Title	Message	Action Type	Sent To / Sent When
Processes	Change Owner – Affected Process Ready for Change	Process {ProcessCode_f} is ready for change. Reason: {ReasonforChange_f} Due date: {ChangeDueDate_f}	Assignment	Sent to the Change Owner when a process is created in the Draft state, the process is **not** part of a change request, and the change owner is changed in any state.
Processes	Change Owner – Change Overdue	Process {ProcessCode_f} is past due for change. Reason: {ReasonforChange_f} Due date: {ChangeDueDate_f}	Assignment	Sent to the Change Owner when the current date is past the date in the Change Due Date field, the process is **not** part of a change request, and the process is **not** complete.
Processes	Change Owner > reports to – Change Overdue – Escalation	Process {ProcessCode_f} is past due for change - Escalation Please address this with {ChangeOwner_f} Reason: {ReasonforChange_f} Due date: {ChangeDueDate_f}.	Assignment	Sent to the person that the Change Owner reports to when the current date is 7 days past the change due date.
Processes	Past Effective Date and Not Approved	Process {ProcessCode_f} is past effective date and has not been approved. Reason: {ReasonforChange_f} Due date: {ChangeDueDate_f}.	Assignment	Sent to the Process Owner when the current date is past the effective date and the process is not approved.
Processes	Past Effective Date and Not Approved – Escalation	Process {ProcessCode_f} is past effective date and has not been approved - Please address with {ProcessOwner_f} Reason: {ReasonforChange_f} Due date: {ChangeDueDate_f}.	Assignment	Sent to the person that the Change Owner reports to when the current date is past the effective date and the process is not approved.

Process	Title	Message	Action Type	Sent To / Sent When
Processes	Owner - Draft Created from New Process Request	The following draft Process was created as a result of a New Process Request Process Name: {ProcessName_f} Change Description: {ChangeDescription_f}	Assignment	Sent to the Process Owner when a new draft Process record is created as a result of a new process request.
Processes	Owner - Obsoletion Approval Rejected	The following processes obsoletion approval has been rejected. Please review the comments from the approvers, make the necessary changes and then re-submit the process for obsoletion approval. Process Name: {ProcessName_f} Reason for Obsoleting: {ReasonforObsoleting_f}	Assignment	Sent to the Process Owner when the current state changes from Awaiting Obsoleting Approval to Official.
Processes	Approvers – Awaiting Approval	The following process is ready for approval, please approve or reject the change.	Approval	Sent to approvers when the state moves to Ready for Approval.
Drawings	Owner – Approval Rejected	The following drawing's approval has been rejected. Please review the comments from the approvers, make the necessary changes and then re-submit the drawing for approval. Title: {DrawingTitle_f} Change Description: {ChangeDescription_f}	Assignment	Sent to the Drawing Owner when the state becomes Approval Rejected.
Drawings	Owner – Approval Approved	The following drawing's approval has been approved. This is just a notification of the approval. Title: {DrawingTitle_f} Change Description: {ChangeDescription_f}	Assignment	Sent to the Drawing Owner when the drawing has been approved and the state moves to Official.

Process	Title	Message	Action Type	Sent To / Sent When
Drawings	Owner – Approver Escalation	The approval for the following drawing's is past due. This is just a notification that the approval is past due. To view the approvers who have not yet approved or rejected the current change, please view the drawing's details. Title: {DrawingTitle_f} Change Description: {ChangeDescription_f}	Assignment	Sent to the Drawing Owner when the drawing still requires approval and the current date is beyond the approval due date.
Drawings	Notification – Drawing Official State	The following document's current state has become official. Title: {DrawingTitle_f} Change Description: {ChangeDescription_f}	Assignment	Sent to the drawing viewers when the current state becomes Official.
Drawings	Change Owner – Affected Drawing Ready for Change	Drawing {DrawingNumber_f} is ready for change. Reason: {ReasonforChange_f} Due date: {ChangeDueDate_f}	Assignment	Sent to the Change Owner when the current state is Draft and the drawing is **not** part of a change request.
Drawings	Change Owner – Change Overdue	Drawing {DrawingNumber_f} is past due for change. Reason: {ReasonforChange_f} Due date: {ChangeDueDate_f}	Assignment	Sent to the Change Owner when the current date is past the approval due date.
Drawings	Change Owner > Reports To – Change Overdue – Escalation	Drawing {DrawingNumber_f} is past due for change - Escalation Please address this with {ChangeOwner_f} Reason: {ReasonforChange_f} Due date: {ChangeDueDate_f}	Assignment	Sent to the person that the Change Owner reports to when the current date is past the approval due date.

Process	Title	Message	Action Type	Sent To / Sent When
Drawings	External Supplier Contacts – Drawing Official State	The following drawing has been shared with your company. Title: {DrawingTitle_f} Change Description: {ChangeDescription_f} Open the link below to access this drawing.	Assignment	Sent to the External Supplier role when the drawing becomes official and the Share With All Suppliers field is true.
Drawings	External Supplier Role – Drawing Official State	The following drawing has been shared with your company. Title: {DrawingTitle_f} Change Description: {ChangeDescription_f} Open the link below to access this drawing.	Assignment	Sent to the External Supplier contacts when the drawing becomes official and the Share With These Suppliers field is populated.
Drawings	Owners Supervisor – Approver Escalation	Drawing {DrawingNumber_f} is past due for change - Please address with the Reason: {ReasonforChange_f} Due date: {ChangeDueDate_f}	Assignment	Sent to the Drawing Owner's supervisor when the drawing requires approval and the current date is past the approval due date.
Drawings	Owner - Draft Created from New Drawing Request	The following draft Drawing was created as a result of a New Drawing Request Title: {DrawingTitle_f} Change Description: {ChangeDescription_f}	Assignment	Sent to the Drawing Owner when the drawing is in the Draft state and was created from a new drawing request.
Drawings	Owner - Obsoletion Approval Rejected	The following drawing's obsoletion approval has been rejected. Please review the comments from the approvers, make the necessary changes and then re-submit the drawing for obsoletion approval. Title: {DrawingTitle_f} Reason for Obsoleting: {ReasonforObsoleting_f}	Assignment	Sent to the Drawing Owner when the state moves from Awaiting Obsoletion Approval to Official.

Process	Title	Message	Action Type	Sent To / Sent When
Drawings	Approvers – Awaiting Approval	The following drawing is ready for approval, please approve or reject the change by {ApprovalDueDate_f}. Title: {DrawingTitle_f} Owner: {Owner_f} Change Description: {ChangeDescription_f}	Approval	Sent to the approvers when the current state moves to Awaiting Approval.
Inspection Plan	Inspection Plan Requires Reviews	Inspection Plan {Inspectionplannumber_f} requires review due to a drawing change - Please review the plan and decide if any action is required	Assignment	Sent to the Inspection Plan Owner when the current state moves to Ready for Approval
Inspection Plan	Inspection Plan Approval Rejected	Inspection plan {Inspectionplannumber_f} has been rejected. Please address the reason for rejection and reroute for approval	Assignment	Sent to the Inspection Plan Owner when approval of the inspection plan was rejected.
Inspection Plan	Inspection Plan Past Due for Approval	Inspection plan {Inspectionplannumber_f} is past due for approval - Please review the plan and approve or reject as soon as possible	Assignment	Sent to the Inspection Plan Owner when the current date is past the approval due date.
Inspection Plan	Escalation – Inspection Plan Past Due for Approval	Inspection plan {Inspectionplannumber_f} is 7 days past due for approval by (Responsibility) - Please review this action with (Responsibility) as soon as possible	Assignment	Sent to the Responsibility's supervisor when the current date is 7 days past the due date.
Inspection Plan	Inspection Plan Ready for Approval	Inspection plan {Inspectionplannumber_f} ready for approval - Please review the plan and approve or reject	Approval	Sent to the approvers when the current state moves to Ready for Approval.

Process	Title	Message	Action Type	Sent To / Sent When
Inspection Events	Inspector - Inspection Event Scheduled	The following inspection event is scheduled: Inspection Type: {InspectionType_f} Item: {Item_f} Process: {Process_f} Lot Number: {LotNumber_f}	Assignment	Sent to the inspectors when the inspection event is scheduled.
Inspection Events	Inspector - Approval Rejected	The following inspection event has been rejected: Inspection Type: {InspectionType_f} Item: {Item_f} Process: {Process_f} Lot Number: {LotNumber_f}	Assignment	Sent to the inspectors when the inspection event is rejected.
Inspection Events	Quality Manager - New Inspection	Please assign an inspector to the inspection event. Item: {Item_f} Lot: {LotNumber_f}	Assignment	Sent to the Quality Manager when an inspection event is scheduled.
Inspection Events	Approvers – Ready for Approval	The following inspection event is ready for approval: Inspection Type: {InspectionType_f} Item: {Item_f} Process: {Process_f} Lot Number: {LotNumber_f}	Approval	Sent to the approvers when the current state is Ready for Approval.
Skip Lot Inspection Rules Table	Approval Rejected	Skip Lot Code: {SkipLotCode_f} Skip Lot Description: {SkipLotDescription_f} Change Description: {ChangeDescription_f} Domain(s): {Domains_f} Site(s): {Sites_f}	Assignment	Sent to the user who created the record when the record is rejected.

Process	Title	Message	Action Type	Sent To / Sent When
Skip Lot Inspection Rules Table	Ready for Approval	Skip Lot Code: {SkipLotCode_f} Skip Lot Description: {SkipLotDescription_f} Change Description: {ChangeDescription_f} Domain(s): {Domains_f} Site(s): {Sites_f}	Approval	Sent to the approvers when the current state is Ready for Approval.
Skip Lot Inspection Rules Table	Ready for Obsolescence Approval	Skip Lot Code: {SkipLotCode_f} Skip Lot Description: {SkipLotDescription_f} Change Description: {ChangeDescription_f} Domain(s): {Domains_f} Site(s): {Sites_f}	Approval	Sent to the approvers when the state moves to Ready for Obsolescence.

Chapter 5

Metrics and Reports

Introduction to Metrics and Reports

The QMS system includes reporting and metric features that let you analyze the data in each process, measuring efficiency and effectiveness. The metrics and reports available differ between each process.

Report are generated within each process, either from the search screen or the detail screen. Metrics and key process indicators (KPIs) are gadgets that can be placed on one of your dashboards.

See the User Interface user guide to learn how to generate reports, metrics, and KPIs.

Reports

Pre-set reports have been set up to be pulled on a process by process basis, though not every process has a pre-set report. Certain reports require additional parameters in order to be previewed. The parameters are listed on the right side of the preview window. If a report requires parameters, then this pane will automatically appear. Once you have selected the desired parameters, click the Preview button to see the report preview.

Below is a table that describes each report available in the Inspection & SPC module. In addition to title and description, the table indicates which process each report comes from and whether it is pulled from the search screen or detail screen. Lastly, if the report requires specific parameters in order to be generated properly, a description of those parameters is included below that report. See the User Interface user guide to learn how to access reports.

Process	Pulls From	Title	Description
Sample Sizes	Detail Screen	Audit Trail – Sample Sizes	Provides a path of how the record has progressed over time with changes (who, what, and when).
Drawing Types	Detail Screen	Audit Trail – Drawing Types	Provides a path of how the record has progressed over time with changes (who, what, and when).
Item Types	Detail Screen	Audit Trail – Item Types	Provides a path of how the record has progressed over time with changes (who, what, and when).
Item Groups	Detail Screen	Audit Trail – Item Groups	Provides a path of how the record has progressed over time with changes (who, what, and when).
Product Lines	Detail Screen	Audit Trail – Product Lines	Provides a path of how the record has progressed over time with changes (who, what, and when).
Inspection Types	Detail Screen	Audit Trail – Inspection Types	Provides a path of how the record has progressed over time with changes (who, what, and when).
Inspection Stations	Detail Screen	Audit Trail – Inspection Stations	Provides a path of how the record has progressed over time with changes (who, what, and when).
Processes	Detail Screen	Audit Trail – Processes	Provides a path of how the record has progressed over time with changes (who, what, and when).

Process	Pulls From	Title	Description
Processes	Search & Detail Screens	Management System Standard Coverage	Matrix of processes versus section/requirements of a selected management system standard to show which processes cover which section/requirement. A section/requirement with no processes would indicate a missing process.
Processes	Search & Detail Screens	Process Audit Coverage	Displays each process for a selected site and whether or not the process has been audited in the last 12 months from the current date.
Processes	Detail Screen	Process Card	Displays the details of a process in a convenient card format.
Processes	Detail Screen	Process Turtle Diagram	Displays the details of a process in a turtle diagram format. Typically the turtle diagram is the starting point for conducting a process-based audit.
Library Specifications	Detail Screen	Audit Trail – Library Specifications	Provides a path of how the record has progressed over time with changes (who, what, and when).
Drawings	Detail Screen	Audit Trail – Drawings	Provides a path of how the record has progressed over time with changes (who, what, and when).
Items	Detail Screen	Audit Trail – Items	Provides a path of how the record has progressed over time with changes (who, what, and when).
Inspection Plans	Detail Screen	Audit Trail – Inspection Plans	Provides a path of how the record has progressed over time with changes (who, what, and when).
Inspection Events	Detail Screen	Audit Trail – Inspection Events	Provides a path of how the record has progressed over time with changes (who, what, and when).
Inspection Events	Detail Screen	Certificate of Analysis	A report showing key information about an inspection event, including a summary of each inspected characteristic and sample value, pass/fail status and summary of the number passed, failed, incomplete with an overall result status to serve as a certificate of analysis.
Inspection Event Results	Detail Screen	Audit Trail – Inspection Event Results	Provides a path of how the record has progressed over time with changes (who, what, and when).
Inspection Event Results	Search Screen	Samples Raw Data Report	A minimally formatted report suitable for exporting to Excel or CSV that contains detail sample data on all records in the current search screen.
Skip Lot Inspection Rules Table	Detail Screen	Audit Trail – Skip Lot Inspection Rules Table	Provides a path of how the record has progressed over time with changes (who, what, and when).
Skip Lot Setup	Detail Screen	Audit Trail – Skip Lot Setup	Provides a path of how the record has progressed over time with changes (who, what, and when).

Metrics

Below is a table that describes each metric available in the Inspection & SPC module. In addition to title and description, the table indicates which process each metric comes from. Lastly, if the metric requires specific parameters in order to be generated properly, a description of those parameters is included below that metric. See the User Interface user guide to learn more about metrics.

Process	Pulls From	Title	Description
Drawings	Gadgets	Total Official Drawings	The total number of official drawings within the system.
Drawings	Gadgets	Total Official Drawings by Drawing Type	The total number of official drawings within the system, grouped by drawing type.
Drawings	Gadgets	Total Official Drawings by Site	The total number of official drawings within the system, grouped by site.
Inspection Events	Gadgets	Number of Completed Inspection Events Grouped by Month for a Specific Site and Date Range	Number of inspection events that have been completed during a month for a date range specified by the user.
Inspection Events	Gadgets	Number of Inspection Events that Failed by Item, by Site for a Defined Time Period	The number of inspection events that failed overall inspection, grouped by site for a specific date range that can be defined by the user.
Inspection Events	Gadgets	Number of Open Inspections Events for a Site Grouped by Inspection Type and Station	Number of open inspection events filtered by site. This metric is grouped by inspection type and inspection station.
Inspection Event Results	Gadgets	Number of Inspection Event Results that Failed by Item, by Characteristic, by Site for a Defined Time Period	A graph, grouped by specification, that shows the number of failed inspections for a characteristic over for a date range that can be defined by the user.

KPIs

See the User Interface user guide to learn more about KPIs.

There are no KPIs available for this module.

Chapter 6

Security Settings

Security Roles

Security roles define how various users access and control different types of processes and data. These roles are then assigned to each user. Some roles are used by many users, while others may only be applied to one or two individuals.

The following security roles apply in the Inspection & SPC module.

All Roles

System-controlled All Roles value. Any security applied to this special system role grants that security access to all users of the system.

APQP Administrator

Allows you to add, edit, and remove records in any process from the APQP module.

APQP Champion

Allows you to add records in any process from the APQP module.

APQP Library Maintenance

Allows you to add, edit, and remove records in Library Specifications, Library FMEA, and Library Controls.

APQP Maintenance

Allows you to add, edit, and remove specification names, process symbols, special symbols, FMEA detection/occurrence/severity ratings, frequency events, drawing types, and control methods.

Aside from adding and removing items from those processes, you can also view and edit all fields within the processes noted. Typically, this maintenance account is only given to one or two individuals who are responsible for setting up this data for others to use.

APQP Navigation

Allows you to navigate the APQP module.

Auditing Administrator

Allows users to add, edit, and remove records in any process in the Auditing module.

Auditing Champion

Allows users to add records in any process in the Auditing module.

Auditing Maintenance

Allows users to add, edit, and remove audit types, audit finding types, processes, and global choice options.

Auditing Navigation

Allows users to navigate the Auditing module.

Design Engineer

Allows you to perform most functions in the Design FMEA area of manufacturing documents in the APQP module.

Document Maintenance

Allows you to add and remove document types, drawing types, document templates, and record types, as well as add review frequencies.

Aside from adding and removing items from those processes, you can also view and edit all fields within the processes noted. Typically, this maintenance account is only given to one or two individuals responsible for setting up this data for others to use.

Documents Administrator

Allows you to add, edit, and remove records in any process from the Document Control module.

Documents Champion

Allows you to add records in any process from the Document Control module.

Drawing Add/Edit

Allows you to add and edit new drawings and specifications. Upon adding a drawing, you become the drawing owner by default. The drawing owner and the drawing administrator security role are the only users who can edit the drawing.

Drawing Administrator

Allows you to add new drawings and drawing features. The drawing administrator also has the ability to edit any drawing as if he or she were the drawing owner.

External Supplier

Allows specific permissions meant for users linked to supplier accounts. Also allows you to view documents linked to your company record, or to all suppliers.

Inspection & SPC Administrator

Allows you to add, edit, and remove records in any process from the Inspection & SPC module.

Inspection & SPC Champion

Allows you to add records in any process in the Inspection & SPC module.

Inspection & SPC Maintenance

Allows you to add, edit, and remove collection event types, locations, and inventory status codes. Typically, this maintenance account is only given to one or two individuals responsible for setting up this data for others to use.

Inspection & SPC Navigation

Allows you to navigate to the Inspection & SPC module.

Inspection Event Add/Edit

Allows you to add new inspection events, as well as edit the result of an inspection event.

Items Maintenance

Allows you to add, edit and remove items and item types.

System Administrator

Allows you to add and remove security roles, domains, entities, sites, locations, generalized code types and codes, product lines, item groups, item types, review frequencies, company types, cost accounts, and units of measure.

Aside from adding and removing items, you can also view and edit all fields within the processes noted. Typically, this maintenance security role is only given to one or two individuals who are responsible for setting up the data for others to use.

System View

System view is a generic role that most users and modules use. This role allows you to view (but in most cases not edit) much of the non-sensitive data in the system. Being able to view the data is still subject to you having the ability to navigate to, and open, a process.

Every user should have this security role because it allows users to view non-secure data for most processes. For users who typically only have to approve data, but do not have to add or edit data, this role is what they need.

Process Security Roles

Each list below displays the security roles that provide you with permissions to add items for the indicated individual process.

Frequency Event

- APQP Maintenance

Sample Sizes

- APQP Administrator
- APQP Champion

- APQP Maintenance

Drawing Types

- APQP Administrator
- APQP Champion
- APQP Maintenance
- Document Maintenance
- Documents Administrator
- Drawing Administrator

Item Types

- APQP Administrator
- APQP Champion
- APQP Maintenance
- Items Maintenance
- System Administrator

Item Groups

- APQP Administrator
- APQP Champion
- APQP Maintenance
- Items Maintenance
- RFQ Administrator
- RFQ Planner
- System Administrator

Product Lines

- APQP Administrator
- APQP Champion
- APQP Maintenance
- Items Maintenance
- System Administrator

AQL Levels

- APQP Administrator
- APQP Champion
- APQP Maintenance

AQL

- APQP Administrator
- APQP Champion
- APQP Maintenance

Inspection Types

- APQP Administrator
- APQP Champion
- APQP Maintenance
- Inspection & SPC Administrator
- Inspection & SPC Champion

Inspection Stations

- APQP Administrator
- APQP Champion
- APQP Maintenance
- Inspection & SPC Administrator
- Inspection & SPC Champion

Processes

- APQP Administrator
- APQP Champion
- APQP Maintenance
- Auditing Administrator
- Auditing Champion
- Auditing Maintenance

Library Specifications

- APQP Administrator
- APQP Champion
- APQP Library Maintenance
- APQP Maintenance
- Drawing Add/Edit
- Drawing Administrator

Drawings

- APQP Administrator
- APQP Champion
- Documents Administrator
- Drawing Add/Edit
- Drawing Administrator

Items

- APQP Administrator
- APQP Champion
- Drawing Add/Edit
- Drawing Administrator

- Items Maintenance
- RFQ Administrator

Inspection Events

- Inspection & SPC Administrator
- Inspection & SPC Champion
- Inspection Event Add/Edit

Inspection Event Results

- Inspection & SPC Administrator
- Inspection & SPC Champion
- Inspection Event Add/Edit

Skip Lot Inspection Rules Table

- Quality Engineer
- Quality Manager

Skip Lot Setup

- Quality Engineer
- Quality Manager

Inspection Plan

- Quality Engineer
- Quality Manager

State Change Security

As you complete tasks in the system, changes occur based on your activities (such as changing a record's state) and when other events occur (such as a specific amount of time passing). The changes based on your activities are called **actions**, while the event-based changes are called **transactions**. The main difference between the two is the initiator: actions are performed by users, and transactions are managed by the system.

Each system change may depend on a number of factors, including where you are in the system, who is involved, which fields are populated, and more. It is important to know the actions and transactions for each process because these affect your ability to complete a task.

The state change security for each process is separated into two sections:

1. **Security.** Which users (by security role or field role) can change the state of a record. Field roles are indicated with an asterisk*.
2. **Transactions.** The conditions that must be met to initiate a transactions.

Security

Drawing Types

Transition	APQP Administrator	Drawing Administrator
Active >> Inactive	✓	✓
Inactive >> Active	✓	✓

Item Types

Transitions	APQP Administrator	Items Maintenance	System Administrator
Active >> Inactive	✓	✓	✓
Inactive >> Active	✓	✓	✓

Item Groups

Transition	APQP Administrator	RFQ Administrator	System Administrator
Active >> Inactive	✓	✓	✓
Inactive >> Active	✓	✓	✓

Product Lines

Transactions	APQP Administrator	APQP Maintenance	System Administrator
Active >> Inactive	✓	✓	✓
Inactive >> Active	✓	✓	✓

Processes

Transactions	Change Coordinator*	Change Owner*	APQP Administrator	APQP Champion	APQP Maintenance	Auditing Administrator	Auditing Champion	Auditing Maintenance
Approval Rejected >> Ready for Approval	✓	✓	✓	X	✓	✓	X	✓
Draft >> Ready for Approval	✓	✓	✓	✓	✓	✓	✓	✓
Obsolete >> Ready for Approval	✓	X	✓	X	X	✓	X	X

Transactions	Change Coordinator*	Change Owner*	APQP Administrator	APQP Champion	APQP Maintenance	Auditing Administrator	Auditing Champion	Auditing Maintenance
Ready for Approval >> Draft	✓	✓	✓	X	✓	✓	X	✓

Library Specifications

Transitions	APQP Administrator	APQP Library Maintenance	APQP Maintenance	Drawing Administrator
Active >> Inactive	✓	✓	✓	✓
Inactive >> Active	✓	✓	✓	✓

Drawings

Transitions	Change Owner*	Owner*	APQP Administrator	Drawing Add/Edit	Drawing Administrator
Approval Rejected >> Awaiting Approval	✓	✓	✓	✓	✓
Awaiting Approval >> Draft	X	✓	✓	✓	✓
Draft >> Awaiting Approval	✓	✓	✓	✓	✓

Inspection Events

Transaction	Inspection & SPC Administrator	Inspection & SPC Champion	Inspection Event Add/Edit
Approval Rejected >> Ready for Approval	✓	✓	✓
Missing Results >> Inspection Complete	✓	✓	✓
Scheduled >> Inspection Complete	✓	✓	✓

Inspection Event Results

Transactions	Inspection & SPC Administrator	Inspection & SPC Champion	Inspection Event Add/Edit
In Process >> Exempt	✓	✓	X

Transactions	Inspection & SPC Administrator	Inspection & SPC Champion	Inspection Event Add/Edit
Initial >> In Process	✓	✓	✓

Skip Lot Inspection Rules Table

Transactions	Quality Engineer	Quality Manager
Draft >> Ready for Approval	✓	✓

Skip Lot Setup

Transactions	Quality Engineer	Quality Manager
Active >> Inactive	✓	✓
Draft >> Active	✓	✓
Inactive >> Active	✓	✓

Inspection Plan

Transactions	Quality Engineer	Quality Manager
Draft >> Ready for Approval	✓	✓

Transactions

Drawing Types

Current User Isn't ITAR Compliant

When the current user is not ITAR compliant, the ITAR Restricted field is hidden.

First Save

Upon the first save, the system links the employee who created the drawing type to the Approvers list.

Site Isn't ITAR Restricted

When the selected site is not ITAR restricted, the ITAR Restricted field is set to FALSE and is hidden.

Processes

Approval Rejected

When the current state changes to Approval Rejected, a notification is sent to the Process Owner to notify them that a review of the process is rejected.

Awaiting Effective Date

When the current state changes to Awaiting Effective Date, the following changes occur:

- A notification is sent to the Process Owner to notify them that the approval for the process has been approved.
- The linked Change Order is saved and its state is updated to Ready for Release
- The current Process record is saved
- The linked Change Item's state is updated to Complete

Awaiting Obsoletion Approval Rejected

When the current state changes from Awaiting Obsoleting Approval to Official, a notification is sent to the Process Owner to notify them that the obsoletion approval for the process has been rejected.

Change Due Date Changed

When the Process record's overall change due date is changed, the system updates the change due date on the linked change items.

Change Order is NULL

When no change orders are linked to the process, the Update from Change Order Effective Date field is hidden.

Change Owner Changed

When the Change Owner is changed and the current state is Draft, the Change Owner is updated on the linked change items.

Additionally, a notification is sent to the new Change Owner informing them that the process is ready for change.

Change Request is NULL

When no change requests are linked to the process, the Change Coordinator field is hidden.

Created from Process Request

When the current record is created from a new process request, the process request is updated.

Current Date 7 Days Greater or Equal to Effective Date and Not Approved

When the current state is Ready for Approval and the current date is seven days past or equal to the effective date, a notification is sent to the user that the Process Owner reports to, notifying them that the process is late and requires approval.

Current Date Greater Than Effective Date and Not Approved

When the current state is Ready for Approval and the current date is one day past or equal to the effective date, a notification is sent to the Process Owner, notifying them that the process is late

and requires approval.

Current Date Greater Than or Equal to Effective Date

When the current date is Awaiting Effective Date and the Effective Date field is before or equal to the current date, the system updates the current state to Official.

If the Effective Date field is blank, then once the current state is changed to Awaiting Effective Date, it automatically transitions to Official.

Current Date Greater Than or Equal to Next Review Date

When the current state is Official and the Next Review Due is before or equal to the current date, the system selects the "Requires Review" check box.

Current User Isn't ITAR Compliant

When the current user is not ITAR compliant, the ITAR Restricted field is hidden.

Draft

When a new version is created, the previous version's state becomes Official – Draft Pending and the current version's state becomes Draft.

Draft Created from New Process Request

When a new Process record is created from a new process request and is in the Draft state, a notification is sent to the Process Owner to notify them that a draft process was created as a result of a new process request.

Draft, No Change Request

When the record is in the Draft state and is not linked to a change request, a notification is sent to the Change Owner to inform them that the process is ready for a change.

First Save

When the process is saved for the first time, the system creates a risk associated with the process of reach record in the Risk Library linked to a risk driver that is ultimately linked to the "Processes" system driver.

List Process FMEA in APQP is False then Library Process FMEA is Not Null

The FMEA Label field is visible if the "List Process in APQP" check box is selected and the Library Process FMEA is null.

Not Completed, No Change Request, 1 Day Past the Change Due Date

The Change Owner receives a notification that the process is past due for a change when the following rules are true:

- The record is not in the Complete state
- The current date is one day past the change due date
- The record is not linked to a change request

Not Completed, No Change Request, 7 Day Past the Change Due Date

The person who the Change Owner reports to receives a notification that the process is past due for a change when the following rules are true:

- The record is not in the Complete state
- The current date is seven days past the change due date
- The record is not linked to a change request

Obsoletion Fields

When the current state is NOT Obsolete, the following fields are hidden:

- Reason for Obsoleting
- Obsoletion Approval

Official

When the current state changes to Official, the following changes occur:

- The linked change order is saved and can create action notifications.
- The linked change items are updated to the Complete state.
- The Library Specification Process field is updated to the new Official version of the process.

Official – Create Training Event Check Box is Checked

When the "Create Training Event" check box is selected and the state is changed to Official, the system creates a new training event based on the Progress information.

Process Owner Changed

When the Process Owner field changes and the current state is Draft or Approval Rejected, the Risk Owner field is updated.

Processes FMEA Field is Not Null then Processes Control Field is Hidden

The Process Controls field is hidden when the Processes FMEA field is not null.

Ready for Approval

When the current state is Ready for Approval, the system unlinks employees **without** training roles selected in the Authorities field and links employees **with** training roles selected in the Authorities field.

In addition, the process approvers receive a notification when the process is ready for approval.

This action will remain on your action manager until you either approve or reject it.

Requires Review

When the "Flag for Requires Review" check box is selected and review was not previously required, the process owner receives a notification that a review of the process is required.

This inbox action will remain in your inbox until you move the state of the process to another state besides Requires Review.

Responsible Site Changed to non-ITAR Compliant and ITAR Restricted is True

When the site is changed to a non-ITAR compliant site and the ITAR Restricted field is true, the ITAR Site Warning field is hidden.

Responsible Site Isn't ITAR Restricted

When the linked site is NOT ITAR restricted, the ITAR Restricted field is set to False and hidden.

Reverse Cross Reference Process FMEA is Not Filled Then it Should Be Hidden

The Library Process FMEAs field is hidden when empty.

Review Frequency = None

When the Review Frequency is set to 0, the following fields are hidden:

- Last Review
- Next Review Due
- Review Completed By

State is Obsolete

When the current state is Obsolete, then Process Specifications field is hidden.

Sys: Create Change Order is True

When the current Sys: Create Change Order is changed to True, the system creates a change order for the current process. This only takes place if the process is in the Draft state and already has a change request with no linked change order.

Once the new change order is saved, it can create action notifications.

Training is Not Required

When the "Requires Training" check box is not selected, the Create Training Event field is hidden.

Update from CO is True and Effective Date Doesn't Match CO

When the "Update Effective Date from Change Order" field is set to true and the effective date does not match the effective date from the linked change order, the current record's effective date is set to the linked change order's date.

Library Specifications

Active

When the current state is Active, the system updates the value of the Sample Data Type field based on the value of the Specification Data Type field.

Current User Isn't ITAR Compliant

When the current user is not ITAR compliant, the ITAR Restricted field is hidden.

Data Type = Date

When the Specification Data Type field is set to Date, the following fields are hidden:

- Customer Unit of Measure
- Lower Limit
- Number of Decimals
- Target
- Unit of Measure
- Upper Limit

Data Type = Logical

When the Specification Data Type field is set to Logical, the following fields are hidden:

- Customer Unit of Measure
- Lower Days
- Lower Limit
- Number of Decimals
- Target
- Unit of Measure
- Upper Days
- Upper Limit

Data Type = Numeric

When the Specification Data Type field is set to Numeric, the following fields are hidden:

- Lower Days
- Upper Days

Data Type Changed to Date

When the current data type is changed to Date, the following fields are set to blank:

- Number of Decimals
- Target
- Lower Limit
- Upper Limit
- Unit of Measure
- Customer Unit of Measure

Data Type Changed to Logical

When the current data type is changed to Logical, the following fields are set to blank:

- Lower Days
- Upper Days
- Number of Decimals
- Target
- Lower Limit
- Upper Limit
- Unit of Measure
- Customer Unit of Measure

Data Type Changed to Numeric

When the current data type is changed to Numeric, the following fields are set to blank:

- Lower Days
- Upper Days

Update to "Special Classification"

When the Special Classification field is updated, the following fields are updated on the linked PFMEA Failure Analysis Library record:

- Special Classification
- Custom Symbol

Validation Type = "Greater than Lower Limit"

When the data type is Numeric and the validation type is Greater than Lower Limit, the Upper Limit field is set to null and hidden.

Validation Type = "Less than Upper Limit"

When the data type is Numeric and the validation type is Less than Upper Limit, the Lower Limit field is set to null and hidden.

Drawings

Approval Past Due

When the current state is Awaiting Approval and the approval due date is past the current date, a notification is sent to the Owner to notify them that not all approvers have approved or rejected the current change and it is beyond the approval due date.

Approval Past Due – Escalation

When the current state is Awaiting Approval and the current date is seven days past the approval due date, a notification is sent to the user the Owner reports to, notifying them that not all approvers have approved or rejected the current change and it is beyond the approval due date.

Approval Rejected

When the current state changes to Approval Rejected, the system updates all features associated with this drawing to the Unlocked state.

Awaiting Approval

When the current state changes to Awaiting Approval, the system updates all features associated with the drawing to the Locked state. Additionally, the Approval Start Date field is updated to the current date and time.

Awaiting Effective Date

When the current state changes to Awaiting Effective Date, the system saves the linked change order after initial creation; this allows the change order to sent action notifications, as it was originally created by stored procedure.

Awaiting Obsoletion Approval Rejected

When the current state changes from Awaiting Obsoletion Approval to Official, the Owner receives a notification that the approval for the drawing has been rejected.

Change Due Date Changed

When the record's change due date is changed, the change due date is updated on all change items.

Change Order is NULL

The Update from Change Order Effective Date field is hidden when there is no linked change order.

Change Owner is Changed

When the Change Owner changes, the Change Owner field is updated on the linked change items.

Change Request is NULL

The Change Coordinator field is hidden when there is no change request.

Changed to Draft

When the current state changes to Draft, the following changes occur:

- The system updates all features associated with the drawing to the Unlocked state.
- The current state is updated to Official – Draft Pending.
- The items linked to this drawing series are updated with this drawing version.
- The Change Items field is updated.

Created from New Drawing Request

When the drawing record is created as a result of a new drawing request, the linked change item is updated.

Current Date greater than Effective Date

When the current state is Awaiting Effective Date and the Effective Date field is set before or at the current date, the state of the drawing becomes Official.

If the Effective Date field is blank, then the drawing state moves directly from Awaiting Effective Date to Official.

Current User Isn't ITAR Compliant

When the current user is not ITAR compliant, the ITAR Restricted field is hidden.

Draft Created from New Drawing Request

When the drawing is in the Draft state and was created as a result of a new drawing request, a notification is sent to the Owner to notify them that a new drawing has been created.

Draft, No Change Request, Change Owner Changed

When the Change Owner is changed, the record is in the Draft state, and the record is NOT linked to a change request, the Change Owner receives a notification that the drawing is ready for change.

First Time Official and Initial Version

When the current state changes to Official, the previous state was not Requires Review, and the VersionMasterID is equal to zero, the system updates the Version Date field with the previous version date.

> ***Note:*** The VersionMasterID field is equal to zero for a new document created using the Add Item ⊞ button.

ITAR Restricted and Current User Has Permission

If the record is ITAR restricted and the current user is ITAR compliant, then the ITAR Restricted warning is hidden.

New Draft, Not the First Version

When a new draft is created and it is not the first version of the record, the linked inspection plan is updated to require review.

Not Completed, No Change Request, 1 Day Past the Change Due Date

A notification is sent to the Change Owner to inform them that the drawing is past due for change when the following rules are true:

- The current state is Draft, Awaiting Approval, Approval Rejected, or Awaiting Effective Date
- The current date is equal to or past the change due date
- There is no change request linked to the drawing

Not Completed, No Change Request, 7 Day Past the Change Due Date

A notification is sent to the person who the Change Owner reports to in order to inform them that the drawing is past due for change when the following rules are true:

- The current state is Draft, Awaiting Approval, Approval Rejected, or Awaiting Effective Date
- The current date is 7 days past the change due date
- There is no change request linked to the drawing

Not the Initial Version

When the VersionMasterID is not equal to zero, the following fields are hidden:

- Starting Version Date
- Starting Version Number

> ***Note:*** The VersionMasterID field is equal to zero for a new document created using the Add Item ⊞ button.

Obsoletion Fields

When the current state is NOT Obsolete, the following fields are hidden:

- Obsoletion Approval
- Reason for Obsoleting

Official

When the current state changes to Official, the following changes occur:

- The change items are updated to Complete.
- The drawing version is updated on any manual documents that include the drawing.
- Items linked to the drawing are unlinked and then re-linked to the latest drawing version.
- The state of the associated change order moves to Closed.

Responsible Site Changed to non-ITAR Compliant and ITAR Restricted is True

When the responsible site is changed to a site that is not ITAR Compliant, and ITAR Restricted is True, the ITAR Site Warning field is hidden.

Share with All Suppliers is True

When the Share with All Suppliers field is True, the Share With These Suppliers field is hidden.

Share with All Suppliers is True and Drawing Becomes Official

When the current state changes to Official and the Share With All Suppliers field is true, a notification is sent to the External Supplier role to inform them that the drawing's current state is Official.

Share with These Suppliers is Not Null and Drawing Becomes Official

When the current state changes to Official and the Share With These Suppliers field is populated, a notification is sent to the External Supplier contacts to inform them that the drawing's current state is Official.

Site Isn't ITAR Restricted

When the site connected to the drawing is not ITAR restricted, the following fields are hidden:

- ITAR Restricted
- ITAR Restricted Warning

State is Not Draft, Source Drawing is Null

When the current state is NOT Draft and the Source Drawing field is empty, that field is hidden.

Sys: Create Change Order is True

When the current Sys: Create Change Order is changed to True, the system creates a change order for the current drawing. This only takes place if the drawing is in the Draft state and already has a change request with no linked change order.

Once the new change order is saved, it can create action notifications.

Update from CO is True and Effective Date Doesn't Match CO

The current record's effective date is set to match the effective date on the linked change order when the "Update Effective Date from Change Order" field is selected and the drawing's effective date does not match the linked change order's effective date.

Items

Out of Service Date is Filled In

When the "Out of Service Date" field is populated, the system adds a year to the disposal date of all linked records.

There are no Program Items or First Save

When the Program Item reverse cross-reference field is empty OR the record is saved for the first time, the system creates a Program Item linked to the Item record.

Inspection Plan

Before the Save

The contents of the Training Events field are hidden before the record is saved.

Create Event

When an inspection event is created from the inspection plan, the inspection event is saved and a link to the event is inserted in the inspection plan record.

Current User Isn't ITAR Compliant

When the current user is NOT ITAR compliant, the ITAR Restricted field is hidden.

Escalation – Inspection Plan Past Due For Approval

When the current date is seven days past the inspection approval date and the plan is not approved or rejected, a notification is sent to the Inspection Plan Owner to inform them that the inspection plan is past due for approval.

First Save

When a new version of the inspection plan is created, the system updates the linked drawing to the latest version.

Inspection Plan Approval Rejected

When the inspection plan's approval is rejected, a notification is sent to the Inspection Plan Owner to inform them that approval was rejected.

Inspection Plan Past Due for Approval

When the inspection plan's approval date is reached and the plan has not been approved or rejected, a notification is sent to the Inspection Plan Owner to inform them that the plan requires approval.

Inspection Plan Requires Review

When the inspection plan requires review, a notification is sent to the Inspection Plan Owner to inform them that the inspection plan requires review due to a drawing change.

ITAR Restricted and Current User Has Permission

When the inspection plan is ITAR restricted and the current user has ITAR permission, the ITAR Restricted Warning field is hidden.

ITAR Restricted or Site has Changed

When the ITAR Restricted or Site fields change, the Quality Manager is set based on the site and ITAR restrictions.

ITAR Restricted set to True

When the ITAR Restricted field is set to True, the system removes additional approvers that are not ITAR compliant.

New Draft

When a new draft of the inspection plan record is created, the previous version's state becomes Official – Draft Pending.

Not ITAR Restricted

When the inspection plan is not ITAR restricted, the ITAR Restricted Warning field is hidden.

Obsolete? Equals Yes and All Items are Completed

When the "Obsolete?" check box is selected and all inspection items are completed, the state becomes Ready for Obsolescence and the "Obsolete?" check box is deselected.

Obsolete? Not Equals Yes

When the "Obsolete?" check box is not selected, the following fields are hidden:

- Obsolescence Approval
- Obsolescence Reason
- Open Inspection Events

Official

When the current state moves to Official, inspection event questions are created. Additionally, the Version Date field is updated to the date when the current version become official.

Official or Obsolete

When the state moves to either Official or Obsolete, the inspection plan items are updated to the Locked state.

Original Inspection Plan Creation Date is Null and the Record is the First Version

When the Original Inspection Plan Creation Date field is empty and the current record is the first version, the Original Inspection Plan Creation Date field is set to the date when the first version of the inspection plan was created. This field is locked and no user can edit it.

Ready for Approval

When the current state moves to Ready for Approval, the approval due date calculates based on the current date when the record transitions to Ready for Approval, plus the number indicated in the Days for Approval field.

Ready for Obsolescence / Obsolete

When the state is either Ready for Obsolescence or Obsolete, the following fields are hidden:

- Obsolete?
- Open Inspection Events

Responsible Site Isn't ITAR Restricted

When the responsible site is not ITAR restricted, the ITAR Restricted field is set to False and the following fields are hidden:

- ITAR Restricted
- ITAR Restricted Warning

Review is Not Required

When review is not required, the following fields are hidden:

- Inspection Plan Requires Review
- Requires Review

Site Changed to non-ITAR Compliant and ITAR Restricted is True

When the current site is changed to a site that is not ITAR compliant and ITAR Restricted is True, the ITAR Site Warning field is hidden.

True

The Inspection Plan Requires Review back color is set when any of the related drawings have changed versions from the one linked to the inspection plan.

Inspection Events

Approval Rejected

When the current state is Approval Rejected, a notification is sent to the responsible employee to inform them that the inspection event has been rejected.

Automated Total Destructive Qty is False

When the "Automated Total Destructive Qty?" field is False, the Total Destructive Qty field is hidden.

Automated Total Destructive Qty is True

When the "Automated Total Destructive Qty?" field is True, the Total Destructive Qty field is hidden.

Complete

When the current state is Complete, the inspection plan completed count is updated.

Current User Isn't ITAR Compliant

When the current user is not ITAR Compliant, the ITAR Restricted field is hidden.

Does Not Require Approval

When the inspection does NOT require approval, the following fields are hidden:

- Item Group Approvers
- Inspection Approval

From Skip Lot

If the record was created from a skip lot, then the inspection event quantities are updated.

Incident Investigation is Null

The Incident Investigation field is hidden when empty.

Incident Investigation is Not Null

When the Incident Investigation field is populated, the Nonconformances field is hidden.

Inspection Complete and All Pass

When the current state is Inspection Complete and all results have passed, the system updates the Overall Result field to Pass.

Inspection Complete and Incomplete Results

When the current state is Inspection Complete and there are results with incomplete samples, the current state is updated to Missing Results.

Inspection Complete and NO Approval

The current state updates to Complete when the following criteria are met:

- The current state is Inspection Complete
- The Number Incomplete field equals zero
- The selected process does not require approval

Inspection Complete and Requires Approval

The current state updates to Ready for Approval when the following criteria are met:

- The current state is Inspection Complete
- The Number Incomplete field equals zero
- The selected process requires approval

Inspection Plan is Checked

When the "Mfr.Doc \ Inspection Plan" toggle field is set to Inspection Plan, the following fields are hidden:

- Manufacturing Document
- Process

Inspection Scheduled

When the current state changes to Scheduled, a notification is sent to the responsible employee to notify them that the inspection event is scheduled.

ITAR Restricted and Current User has Permission

When the record is ITAR restricted and the current user is ITAR compliant, the ITAR Restricted Warning field is hidden.

ITAR Restricted or Item or Site Changed

Item group approvers are linked to the record when the current state is Complete and one of the following is true:

- The record is ITAR restricted
- The Item field is changed
- The Site field is changed

Users that are not ITAR compliant will be excluded if the record is set as ITAR restricted.

Manufacturing Document – Use Document for Receiving Inspection? is No OR Null AND Manufacturing Document/Inspection Plan is False

The Supplier field is hidden when the following rules are true:

- The Use Document for Receiving Inspection? field is No OR Null
- The Mfg. Doc./Inspection Plan field is False

Mfr. Doc is Checked

When the "Mfr.Doc \ Inspection Plan" toggle field is set to Mfr.Doc, the following fields are hidden:

- Inspection Plan
- Process

Neither the Mfr. Doc nor Inspection Plan are Checked

When the "Mfr.Doc \ Inspection Plan" toggle field is set to Undecided, the following fields are hidden:

- Inspection Plan
- Manufacturing Document
- Process

Not ITAR Restricted

When the record is NOT ITAR restricted, the ITAR Restricted Warning field is hidden.

QAD Trans Field is Blank

When the QAD Inventory Transaction field is blank, the following fields are hidden:

- Order Number
- QAD Inventory Transaction

Received Item is Blank

The Received Item field is hidden when blank.

Responsible Site Isn't ITAR Restricted

When the responsible site is not ITAR restricted, the ITAR Restricted field is marked as False. Additionally, the following fields are hidden:

- ITAR Restricted
- ITAR Restricted Warning

Scheduled and No Inspector

When the current state is Scheduled and no inspector is selected, an action is sent to the quality manager. The inbox action requests that the quality manager assign an inspector.

Scheduled, Man Doc Selected, No Item

The system automatically populates the Item field with data from the selected manufacturing document when the following criteria are met:

- The current state is Scheduled
- A manufacturing document is filled in
- No item has been selected

Site Changed to non-ITAR Compliant and ITAR Restricted is True

When the site is changed to a site that is not ITAR compliant and the ITAR Restricted field is set to True, the ITAR Site Warning field is hidden.

State is Scheduled or Inspection Complete and Inspection Requires Approval

Item group approvers are added based on the item selected when the following rules are true:

- The current state is Scheduled OR Inspection Complete
- The Inspection Requires Approval field is True

Note that users who are not ITAR compliant will be excluded if the record is set to be ITAR restricted.

Inspection Event Results

Additional Documents is Null

The Additional Document(s) field is hidden when empty.

Edit Results is True

When the current state is NOT Inspection Complete and the Edit Results field is True, the system sets the state to In Process and updates Edit Results to null.

Gauge is Null

When the Gauge field is null, the Gauge Calibration State field is hidden.

Gauge Used Changed

When the Gauge Used field is changed or populated, the Gauge Calibration state will be updated to show the current calibration status of the gauge selected.

Gauge Type is Null

When the Gauge Type field is null, the Gauge Used field is hidden.

In Process and Spec Type = 1

Specification Type 1 is for Numeric Specification Types that use minimum (lower limit), maximum (upper limit), and nominal (target) values.

If any of the samples are less than the minimum or greater than the maximum specification, the current state is set to Fail. If all of the samples are between the minimum and maximum, the current state is set to Pass.

In Process and Spec Type = 2

Specification Type 2 is for Numeric Specification Types that use minimum (lower limit), maximum (upper limit), and nominal (target) values.

If any of the samples are greater than the maximum specification, the current state is set to Fail. If all of the samples are between the minimum and maximum, the current state is set to Pass.

In Process and Spec Type = 3

Specification Type 3 is for Numeric Specification Types that use minimum (lower limit), maximum (upper limit), and nominal (target) values.

If any of the samples are less than the minimum specification, the current state is set to Fail. If all of the samples are between the minimum and maximum, the current state is set to Pass.

In Process and Spec Type = 4

Specification Type 4 is for non-standard criteria that is not met by any other specification type. The user must pass or fail each Inspection Event Result record manually.

If the "Pass or Fail" check box is set to Pass, the current state is set to Pass. If the "Pass or Fail" check box is set to Fail or is null (empty), the current state is set to Fail.

In Process and Spec Type = 5

Specification Type 5 is for Logical Specification Types that use a pass or fail specification. If any of the samples are set to Fail, then the current state is set to Fail. If all of the samples are set to Pass, then the current state is set to Pass.

In Process and Spec Type = 7

Specification Type 7 is for Date Specification Types that use minimum days (lower days limit), maximum days (upper days limit), and the date difference from the target day (Current Date).

If the difference between the result date and the current date is greater than the upper days limit, or lower than the lower days limit, the current state is set to Fail. If the difference between the result date and the current date is between the upper days limit and the lower days limit, the current state is Pass.

In Process and Spec Type = 8

Specification Type 8 is for Date Specification Types that use minimum days (lower days limit), maximum days (upper days limit), and the date difference from the target day (Current Date).

If the difference between the result date and the current date is greater than the upper days limit, the current state is set to Fail. If the difference between the result date and the current date is between the upper days limit and the lower days limit, the current state is Pass.

In Process and Spec Type = 9

Specification Type 9 is for Date Specification Types that use minimum days (lower days limit), maximum days (upper days limit), and the date difference from the target day (Current Date).

If the difference between the result date and the current date is lower than the lower days limit, the current state is set to Fail. If the difference between the result date and the current date is between the upper days limit and the lower days limit, the current state is Pass.

Spec Data Type = Date

When the Specification Data Type is set to "date", the following fields are hidden:

- Lower Limit
- Number of Decimals
- Samples
- Target
- Unit of Measure
- Upper Limit

Spec Data Type = Logical

When the Specification Data Type is set to "logical", the following fields are hidden:

- Lower Days
- Lower Limit
- Number of Decimals

- Result Date
- Target
- Unit of Measure
- Upper Days
- Upper Limit

Spec Data Type = Numeric

When the Specification Data Type is set to "numeric", the following fields are hidden:

- Lower Days
- Result Date
- Upper Days

Spec Type !=4

If the Spec Type field is not set to 4 (none), the "Pass or Fail" check box is hidden.

Spec Type = 4

If the Spec Type field is set to 4 (none), the following fields are hidden:

- Lower Limit
- Sample Size
- Sample Type
- Samples
- Sampling Technique
- Target
- Unit of Measure
- Upper Limit

Special Classification is Null

The Special Classification field is hidden when empty.

State is not Fail

The Reaction Plan field is hidden unless the current state is Fail.

State is Pass or Fail

When the state changes to either Pass or Fail and was previously not at that state, and when a gauge uses usage-based scheduling, the gauge's "hours since last active" is updated by the number of samples in the Inspection Event Result.

In this context, the "Hours Since Last Inactive" field is tracking "uses" of a gauge and not the amount of time.

Tooling and Equipment is Null

When the Tooling and Equipment field is null, the Cavity field is hidden.

Visual Aid 1 is Null

When the Visual Aid #1 field is null, the following fields are hidden:

- Visual Aid #1
- Visual Aid Description #1

Visual Aid 2 is Null

When the Visual Aid #2 field is null, the following fields are hidden:

- Visual Aid #2
- Visual Aid Description #2

Skip Lot Inspection Rules Table

Approval Rejected

When the current state changes to Rejected, a notification is sent to the user who created teh record to inform them that the record was rejected.

Draft or Ready for Approval

When the current state is either Draft or Ready for Approval, the promotion rules are updated to a new version.

Obsolete Equals True

When the "Obsolete?" field transitions to True, the current state updates to Ready for Obsolescence Approval

Obsoletion Rejected

When the previous state was Ready for Obsolescence Approval and the current state is Official, the "Obsolete?" field transitions to False.

Official

When the Skip Lot Rules table is official, the following items occur:

- The tables for associated part rules are updated
- The previous version ID is set
- Rules are set for other versions to be inactive

This rule helps manage change control for skip lots to ensure only valid skip lot rules are used in production.

Record is Obsolete

When the current state transitions to Obsolete, the Skip Lot Inspection Rules linked to the current record are moved to the Inactive state.

Skip Lot Setup

Active

When the current state is Active, the associated part skip lot rules are moved to the Active state.

Domain Added

When one or more domains are linked to the record, domain values are linked from the source Skip Lot Setup record.

Domain Removed

When one or more domains are unlinked from the record, domain values are unlinked from the source Skip Lot Setup record.

Inactive

When the current state is Inactive, the associated part skip lot rules are moved to the Inactive state.

Site Added

When one or more sites are linked to the record, site values are linked from the source Skip Lot Setup record.

Site Removed

When one or more sites are unlinked from the record, site values are unlinked from the source Skip Lot Setup record.

Commands

Some processes utilize command buttons to perform pre-defined actions. Commands can be found under the Actions icon in the top toolbar of the appropriate process.

Below is a table that describes each command available in the Inspection & SPC module. In addition to title and description, the table indicates which process each command comes from, the roles that can execute the command, and the states when the command can be executed.

Process	Title	Description	Used By	State When Used
Processes	Update Risks from Library	Adds a Risk record associated with the process for each record in the risk library linked to a risk driver with the system driver Processes.	All Roles	Draft
Processes	Start New Version	Initiates a new draft version of the record. The state of the previous version moves to Official	APQP Administrator; APQP Champion; APQP Maintenance;	Official

Process	Title	Description	Used By	State When Used
		– Draft Pending.	Auditing Administrator; Auditing Champion; Auditing Maintenance	
Drawings	Delete Current Draft Drawing	Removes the current draft drawing from the system. Previous versions of this drawing are updated from Official – Draft Pending to Official.	Owner; APQP Administrator	Draft
Drawings	Start New Version	Initiates a new draft version of the record. The state of the previous version moves to Official – Draft Pending.	Owner; APQP Administrator; APQP Champion; Drawing Add/Edit; Drawing Administrator	Official
Drawings	Copy Drawing Features	Copies drawing features from the drawing in the Source Drawing field.	Owner; APQP Administrator; Drawing Add/Edit; Drawing Administrator	Draft
Drawings	Delete Current Drawing	Removes the current obsolete drawing from the system.	APQP Administrator	Obsolete
Inspection Plan	Import Drawing Features	Creates inspection plan items based on the linked drawings.	Quality Engineer; Quality Manager	Draft
Inspection Plan	Create an Inspection Plan Item	Creates an empty Inspection Plan Item for the user to then add details.	Quality Engineer; Quality Manager	Draft
Inspection Plan	Create an Inspection Event	Creates an inspection event using the information from the current inspection plan.	Inspection Plan Owner; Quality Engineer; Quality Manager	Official
Inspection Plan	Start New Version	Initiates a new draft version of the record. The state of the previous version moves to Official – Draft Pending.	Inspection Plan Owner; Quality Engineer; Quality Manager	Official
Inspection Plan	Delete Current Draft Inspection Plan	Removes the current draft inspection plan from the system. Previous versions of this record are updated from Official – Draft Pending to Official.	Inspection Plan Owner; Quality Engineer; Quality Manager	Draft
Skip Lot Inspection Rules Table	Start New Version	Initiates a new draft version of the record.	Quality Engineer	Official
Skip Lot Setup	Create New Entry for Supplier Part	Creates an empty record in the Parts and Skip Lot Rules field for the user to then add details,	Quality Engineer; Quality Manager	Draft; Inactive

Process	Title	Description	Used By	State When Used
		if there is not already one with an empty Supplier Part Number value.		

Chapter 7

Module Frequently Asked Questions

Frequently Asked Questions

Why shouldn't I delete items?

Records should only be deleted when you are sure that they are no longer needed. Even though records use a soft delete mechanism, there is still work that must be done to restore an item once it has been deleted.

The best thing to do with an item that is no longer needed is to set it to Inactive, Retired, or Obsolete, whichever state is applicable. This way, the item historically remains in the system but cannot be used.

If you do need to delete an item for good, then use the Trash button in the toolbar. Typically, only the system administrator can delete items.

I just changed the state of a process. What happens now?

When a process' state makes a transition, the system typically takes some automated steps. Details about these steps are listed in the State Transitions section of each process in this user guide.

Typically, state transition steps perform one of three functions:

1. **Notifications.** Notifications are sent to the users that are responsible for the next state of a process.
2. **Field Update.** Fields that depend on a state, date, or action are updated.
3. **Another State Transition**. A process' state may be transitioned automatically by the system, depending on a state, date, or action update.

Some processes may not have any automatic state transitions. In that case, it is useful to check the States section to view the process' state map and read the definitions of each state.

You can also review the Task list for that process. Each list typically describes which state to select when saving a process record.