

Compliance Management



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Chapter

1

Overview

Topics:

- Overview of the Compliance Management Module
- Access Compliance Management
- Compliance Management Workflow

Overview of the Compliance Management Module

Depending on your geographical location, regulatory bodies and industry authorities have different standards for inspections on various pieces of equipment. Many dictate when and how often equipment should be inspected. To integrate these requirements with APM, you can use the Compliance Management module to track when your equipment should be inspected to comply with these standards.

More Details

Compliance Management functionality is fully integrated with Inspection Management to allow you to manage reoccurring Inspection Tasks.

Access Compliance Management

Procedure

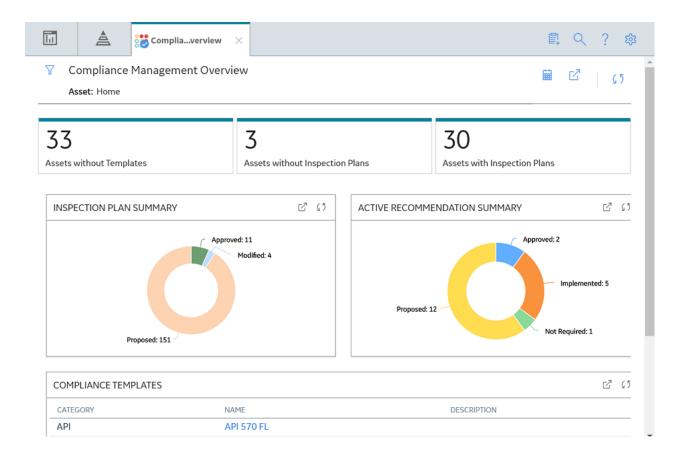
In the **Applications** menu, navigate to the **INTEGRITY** section, and then select **Compliance Management**.

Results

The **Compliance Management Overview** page appears, displaying the following information:

- The **Assets without Templates** section: Contains a list of assets that do not have linked Compliance Strategy Templates and match query results for any queries in Compliance Strategy Templates.
- The Assets without Inspection Plans section: Contains a list of assets that do not have associated Inspection Plans. The assets in this section have linked Compliance Strategy Templates.
- The **Assets with Inspection Plans** section: Contains a list of assets that have an associated Inspection Plan and linked Compliance Strategy Template.
- The Inspection Plan Summary widget: Contains a graph of Inspection Plans, grouped by state.
- The **Active Recommendation Summary** widget: Contains a graph of Compliance Recommendations from Inspection Plans that are in the Approved state.
- The Compliance Templates widget: Contains a list of Compliance Strategy Templates.

Note: The **Compliance Management Overview** page is not updated automatically when you return to the previously opened tab. You can select Refresh () button to update the page.



Compliance Management Workflow

This workflow provides the basic, high-level steps for using this module. The steps and links in this workflow do not necessarily reference every possible procedure.

- 1. Access the Compliance Management administrative features.
- 2. Create a Compliance Strategy Template.
- 3. Map a policy to a Compliance Strategy Template.
- 4. Add assets to the Compliance Strategy Template.
- 5. Suggest Compliance Strategy Templates for assets without templates.
- 6. Apply suggested Compliance Strategy Templates to assets without templates.
- 7. Create an Inspection Plan.
- 8. Review the Inspection Plan and Compliance Strategy Recommendations.
- 9. Approve an Inspection Plan.
- 10. Link an Inspection Task to a Compliance Recommendation.

Chapter

2

Workflows

Topics:

- Compliance Strategy Template Workflow
- Compliance Management Workflow
- Recommendation Implementation
- European Inspection
 Management Workflow

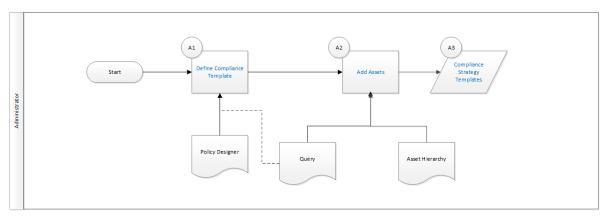
Compliance Strategy Template Workflow

Compliance Management: Compliance Strategy Template Workflow

This workflow details the process for managing Compliance Strategy Templates for Compliance Management.

In the following workflow diagram, the blue text in a shape indicates that the corresponding description has been provided in the sections that follow the diagram. For more information, refer to the Interpreting the Workflow Diagrams topic in the APM Product Workflows documentation.

Note: For information on the personas associated with a APM module, refer to the APM Product Workflows documentation.



Define Compliance Template

Persona: Administrator

Create a Compliance Strategy Template that has a linked policy.

Add Assets

Persona: Administrator

Add assets to the Compliance Strategy Template using a query or by selecting assets.

Compliance Strategy Templates

Persona: Administrator

Review the created Compliance Strategy Templates.

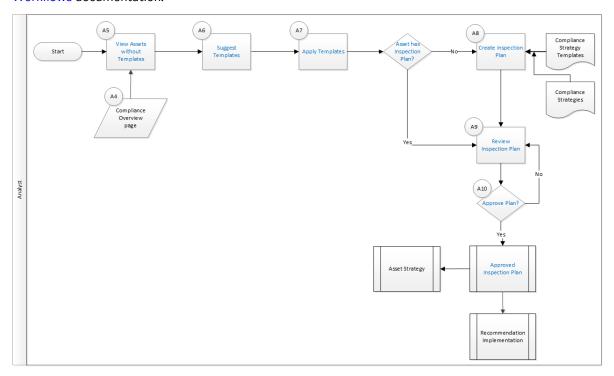
Compliance Management Workflow

Compliance Management: Compliance Management Workflow

This workflow details the process for managing assets and Inspection Plans for Compliance Management.

In the following workflow diagram, the blue text in a shape indicates that the corresponding description has been provided in the sections that follow the diagram. For more information, refer to the Interpreting the Workflow Diagrams topic in the APM Product Workflows documentation.

Note: For information on the personas associated with a APM module, refer to the APM Product Workflows documentation.



View Assets without Templates

Persona: Analyst

Review assets that do not have linked Compliance Strategy Templates.

Suggest Templates

Persona: Analyst

Get a list of assets that do not have assigned Compliance Strategy Templates. The list of assets has suggested Compliance Strategy Templates.

Apply Templates

Persona: Analyst

Apply suggested Compliance Strategy Templates to assets without templates.

Assets has Inspection Plan?

Persona: Analyst

Determine if assets with linked Compliance Strategy Templates have Inspection Plans.

Create Inspection Plan

Persona: Analyst

Create an Inspection Plan for an asset.

Review Inspection Plan

Persona: Analyst

Review the Inspection Plan and modify Compliance Recommendations.

Approve Plan?

Persona: Analyst

Determine if the Inspection Plan is ready to be approved.

Approved Inspection Plan

Persona: Analyst

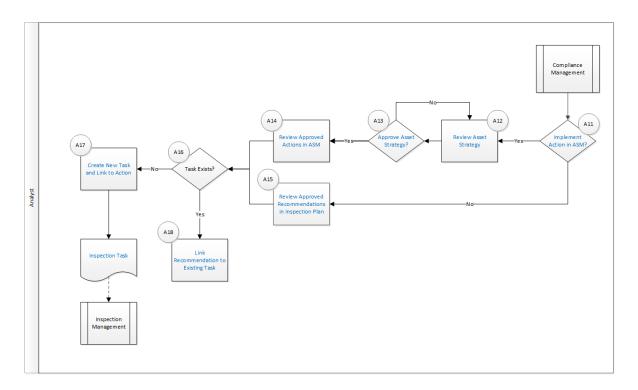
After the Inspection Plan is approved, the recommendations that are in the Approved state can be implemented as Inspection Tasks in the **Asset Strategy Management** page or in the **Inspection Plan** page.

Recommendation Implementation

Recommendation Implementation

This workflow describes the process of the below mentioned tasks.

- Reviewing the recommendations linked to an Asset
- Deciding whether to implement the recommended action in Inspection Plan or Asset Strategy Manager
- · Reviewing the inspection tasks linked to an Asset
- · Modifying or creating tasks.



Implement Action in ASM

Persona: Analyst

After you approve the Inspection Plan, you can implement the Compliance Recommendation to Task in Asset Strategy or in Inspection Plan. This decision needs to be made by the owner operator, depending on the corporate philosophy of implementing Strategy recommendations.

Review Asset Strategy

Persona: Analyst

After you approve an Inspection Plan, an Asset Strategy is created or updated for the asset. The Compliance recommendations linked to the asset are converted into actions. Review the Actions created in Asset Strategy Management.

Approve Asset Strategy

Persona: Analyst

Once you review the actions and it is ready for implementation, you must approve the Asset Strategy to change its status to Active.

Review Approved Recommendations in Inspection Plan

Persona: Analyst

Review the approved Compliance Recommendations in the inspection plan, if you decide to implement through Inspection Plan and not through Asset Strategy Manager.

Review Approved Actions in ASM

Persona: Analyst

If you decide to implement Compliance sourced actions in Asset Strategy Manager, review the approved actions to evaluate implementation options.

Link Recommendation to Existing Task

Persona: Analyst

If an existing Inspection Task provides the same instructions as a Compliance Recommendation, link the Recommendation to an existing Task. You can modify the Task if needed. You can link only one Inspection Task to a Recommendation. You can similarly link Compliance sourced action to an existing task if you choose to implement from Asset Strategy Manager.

Create New Task and Link to Action

Persona: Analyst

If an appropriate task does not exist, create a new task to implement the Compliance Recommendation. The newly created Task will be populated with the appropriate information from the Compliance Recommendation. Similarly you can create a new Inspection Task from Asset Strategy Manager to implement the Compliance sourced action and the newly created Task will be populated with appropriate information from the Compliance sourced action.

Inspection Task

Persona: Analyst

The asset strategy may be implemented as Tasks that have been defined directly from Actions in the asset strategy or recommendations in the Inspection Plan for an asset. These Tasks are typically managed in the Inspection Management or Thickness Monitoring module.

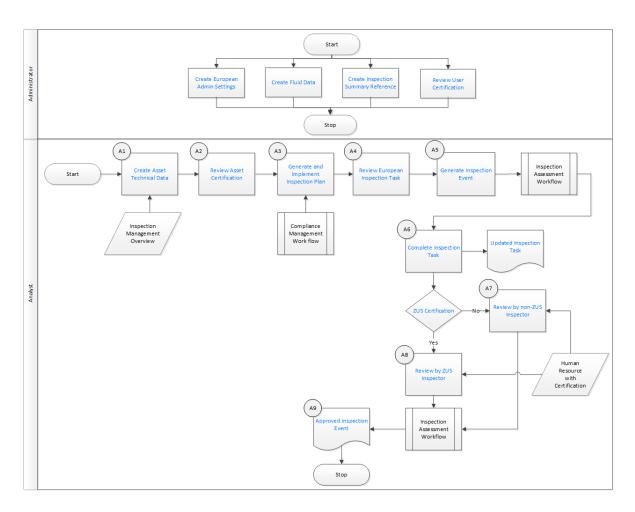
European Inspection Management Workflow

European Inspection Management Workflow

This workflow describes the process of reviewing asset certification, managing inspection assessment and assessment of European certification requirements.

In the following workflow diagram, the blue text in a shape indicates that the corresponding description has been provided in the sections that follow the diagram. For more information, refer to the Interpreting the Workflow Diagrams topic in the APM Product Workflows documentation.

Note: For information on the personas associated with a APM module, refer to the APM Product Workflows documentation.



Create European Admin Settings

Persona: Administrator

Define site-specific compliance information mapped to a newly created European Inspection Task datasheet for the site.

Create Fluid Data

Persona: Administrator

Create process Fluid Data. The fluid name must exist in the Integrity Fluid Name System Code Table.

Create Inspection Summary Reference

Persona: Administrator

Create Inspection Summary Reference records to auto-populate Inspection Summary field value in the Inspection Event record. You must be logged in as a superuser.

Review User Certification

Persona: Administrator

Create users and associate security roles. You must be logged in as a super user to create users.

Create Asset Technical Data

Persona: Analyst

Enter values in the available fields of the Asset Technical Data datasheet to calculate the certification requirements.

Review Asset Certification

Persona: Analyst

Review the certification requirement and modify the value in the certification field if required.

Generate and Implement Inspection Plan

Persona: Analyst

Apply the Compliance Strategy Template linked to the Asset based on the certification. Create the Inspection Plan consisting of recommendations and implement the plan.

Review European Inspection Task

Persona: Analyst

Review and implement a recommendation into a European Inspection Task.

Generate Inspection Event

Persona: Analyst

Create an Inspection Event to add the European Inspection Report to the Full Inspection family.

Complete Inspection Task

Persona: Analyst

Complete the European Inspection Task after performing inspection on the Asset.

Updated Inspection Task

Persona: Analyst

The Inspection Task is updated.

ZUS Certification

Persona: Analyst

The certification requirement is identified based on the calculation.

Review by Non-ZUS Inspector

Persona: Analyst

Inspection Task is reviewed by a Non-ZUS Inspector if the Asset Certification requirements is not ZÜS.

Review by ZUS Inspector

Persona: Analyst

Inspection Task is reviewed by a ZUS Inspector if the Asset Certification requirements is ZÜS.

Approved Inspection Event

Persona: Analyst

The Inspection Event is approved.

Chapter

3

Inspection Plans

Topics:

- About Inspection Plans
- About Inspection Plan Approval
- About Modifying Compliance Recommendations on an Inspection Plan
- Access an Inspection Plan
- Create an Inspection Plan from the Compliance Management Overview Page
- Create an Inspection Plan for any Asset Using the Asset Hierarchy
- Update Compliance Recommendations for an Inspection Plan
- Approve an Inspection Plan
- Delete an Inspection Plan

About Inspection Plans

An Inspection Plan can be created from any asset that is linked to a Compliance Strategy Template and meets the requirements of Compliance Strategy records in the policy that is associated with the Compliance Strategy Template.

When an MI Compliance Administrator creates a Compliance Strategy Template, the completed template has linked assets. From this point, an MI Compliance Analyst or MI Inspection Plan Approver can generate an Inspection Plan based on the policy that is mapped to the Compliance Strategy Template. Alternatively, users can get suggested Compliance Strategy Templates for assets; MI Compliance Analysts can apply Compliance Strategy Templates to these assets and create Inspection Plans from the **Compliance**Management Overview page. An Inspection Plan is attached to the asset from which it is generated, and the user can view the details of the Inspection Plan from Compliance Management. The Inspection Plan contains Compliance Recommendations and displays Inspection Tasks for an asset.

When the Inspection Plan is moved to the Approved state by an MI Inspection Plan Approver, users then can create or link an Inspection Task to the Compliance Recommendation. When the Compliance Recommendations have Inspection Tasks linked, the Inspection Plan is fully integrated with the Inspection Management module.

For more information on Security Roles and Inspection Plans, see Compliance Management Security Roles.

About Inspection Plan Approval

An MI Inspection Plan Approver can approve Inspection Plans that are created by the MI Compliance Analyst. Approving an Inspection Plan will also integrate the related asset with Asset Strategy Manager (ASM).

Compliance Recommendations are used to create Actions. For more information on ASM Integration, see, About Asset Strategy Management (ASM) Integration.

MI Compliance Analysts can review and modify the Inspection Plan if more changes are needed.

After an Inspection Plan is created, the MI Inspection Plan Approver and MI Compliance Analysts can review the plan and modify existing Compliance Recommendations. The MI Inspection Plan Approver can move the Inspection Plan to the Approved state.

When the Inspection Plan is in the Approved state, users can create or link Inspection Tasks to the Compliance Recommendations based on the application setting. If the MI Inspection Plan Approver or an MI Compliance Analyst is no longer satisfied by the items contained in the Inspection Plan, they can update the Inspection Plan, which moves the Inspection Plan back to the Modified state. The MI Inspection Plan Approver can then delete, mark as not required, or supersede Compliance Recommendations.

Each time the Inspection Plan is changed from the Approved to the Modified state, an Inspection Plan Revision record is created and linked to the existing Inspection Plan. For each existing Compliance Recommendation record, a Recommendation Revision record is created and linked to the Inspection Plan Revision.

In addition, the Inspection Plan must be returned to the Approved state by the MI Inspection Plan Approver before they can re-promote it to ASM.

About Modifying Compliance Recommendations on an Inspection Plan

An MI Compliance Analyst or MI Inspection Plan Approver can modify Compliance Recommendations if they want to modify an Inspection Plan.

An Inspection Plan should be modified in the following scenarios:

- A policy that is used in a Compliance Strategy Template is modified.
- The Compliance Strategy records that are associated with a policy that is mapped to a Compliance Strategy Template are modified.

Modifying Compliance Recommendations on an Approved Inspection Plan

An Inspection Plan that is in the Approved state is ready for implementation, but you can choose to modify the Inspection Plan further by modifying Compliance Recommendations. When you modify the Inspection Plan:

- The plan is moved from the Approved state to the Modified state.
- Linked tasks are removed from the Inspection Plan, but they remain linked to the asset.
- An Inspection Plan Revision record is created and linked to the existing Inspection Plan.
- For each existing Compliance Recommendation record, a Compliance Recommendation Revision record is created and linked to the Inspection Plan Revision.
- Any existing Compliance Recommendations are deleted. New Compliance Recommendations that are based on the mapped policy in the Compliance Strategy Template populate the Inspection Plan.

Modifying Compliance Recommendations on an Inspection Plan That is in the Proposed or Modified State

You can also modify Compliance Recommendations on Inspection Plans that are in the Proposed or Modified state.

- When an Inspection Plan that is in the Proposed state is modified, any existing Compliance
 Recommendations are updated, while any Compliance Recommendations that are in the Superseded
 or Not Required state are returned to the Proposed state. In addition, the value in the Comments field
 of the Compliance Recommendation datasheet is deleted. Depending on the mapped policy in the
 Compliance Strategy Template, new Compliance Recommendations may be created.
- When an Inspection Plan that is in the Modified state is modified, any existing Compliance
 Recommendations are deleted, and new Compliance Recommendations are generated based on the
 mapped policy in the Compliance Strategy Template.

Access an Inspection Plan

You can access an Inspection Plan for an asset that is linked to a Compliance Strategy Template.

Before You Begin

You must have assets for which you have created an Inspection Plan.

Procedure

1. Access Compliance Management, and then select the **Assets with Inspection Plans** tab.

2. Select an asset that has an Inspection Plan that you want to access. The **Inspection Plan** page for the selected asset appears.

Note: If the parent asset has any related RBI Components and the Alternative Inspection Plan preference in the RBI Admin Settings is set to true, then, the Compliance Recommendations will not be displayed and the Compliance workflow will not be completed.

Create an Inspection Plan from the Compliance Management Overview Page

You can create an Inspection Plan for assets that are linked to Compliance Strategy Templates.

Before You Begin

The assets must have one or more Compliance Strategy Templates linked to them.

Procedure

- Access Compliance Management, and then select the Assets without Inspection Plans tab.
 The Assets without Inspection Plans section appears, displaying a list of available assets based on the current filter.
- 2. In the Assets section, select the check boxes against the rows containing the asset to create an Inspection Plan.
 - The selected assets are highlighted.
- 3. Select Create Inspection Plans.

The job status appears in the page heading, displaying the progress of the Inspection Plan creation.

Note: When the process is complete, you can select to access the **Schedule Logs** page.

Create an Inspection Plan for any Asset Using the Asset Hierarchy

About This Task

You can create an Inspection Plan for assets that are linked to Compliance Strategy Templates.

Note: If the asset is not linked to a Compliance Strategy Template, the **Create Inspection Plans** button does not appear.

Before You Begin

The assets must have one or more Compliance Strategy Templates linked to them.

Note: The following procedure is applicable only if the selected asset does not contain an Inspection Plan.

Procedure

- Access the **Assets** page.
 The Asset Hierarchy appears in the **Assets** page.
- 2. In the left pane, in the **Hierarchy** section, enter the Asset ID in the Search box, and then press Enter.
- 3. Select an asset that does not contain an Inspection Plan.
- 4. Select the **Integrity** tab.

5. Select the link next to Compliance Management. The **Inspection Plan** page appears.

6. Select Create Inspection Plans.

The job status appears in the page heading, displaying the progress of the Inspection Plan creation.

Note: When the process is complete, you can select to access the **Schedule Logs** page.

Update Compliance Recommendations for an Inspection Plan

Any user with the MI Inspection Plan Approver or MI Compliance Analyst Security Role can update Compliance Recommendations for Inspection Plans for assets that previously contained Inspection Plans.

Before You Begin

- You must have an asset for which you had created an Inspection Plan.
- You must have one of the following Security Roles:
 - MI Inspection Plan Approver
 - MI Compliance Analyst

Procedure

1. Access Compliance Management, and then select the Assets with Inspection Plans tab.

Note: If you want to update only one Inspection Plan, you can access that Inspection Plan, and then select \bigcirc .

- 2. Select the check box next to each asset for the Inspection Plan for which you want to update the Compliance Recommendation.
- Select Update Compliance Recommendations.
 The Confirm Update window appears, asking you if you want to update the selected Inspection Plans.
- 4. Select Yes.

Tip: If any Inspection Plans for the selected assets are in the Approved state, the **Reason for Revision** window appears. In the text box, enter a reason for updating the Compliance Recommendations for the Inspection Plans, and then select **Done**.

The job status appears in the **Compliance Management Overview** page, displaying the progress of the update.

Note: When the process is complete, you can select to access the **Schedule Logs** page.

Approve an Inspection Plan

Any user with the MI Inspection Plan Approver Security Role can move an Inspection Plan to the Approved state. After the Inspection Plan is approved, recommendations can be implemented as tasks.

About This Task

When an Inspection Plan is in the Approved state, you can create new Inspection Tasks or link existing Inspection Tasks to the related recommendations. The Inspection Tasks are transferred to the Inspection Management module.

Note:

Approving an Alternative Inspection Plan will automatically implement tasks. For more information, refer to Approve an Alternative Inspection Plan.

Procedure

- 1. Access the Inspection Plan that you want to approve.
- In the **Proposed** box, select **Approve**, and then select **Done**.
 A message appears, stating that the Inspection Plan has been approved.

Note:

- After you approve an Inspection Plan, you cannot delete, supersede, or designate recommendations as Not Required. You must first move them to the Modified state.
- While the Inspection Plan is being modified, you cannot delete, supersede, or designate recommendations as Not Required.

Delete an Inspection Plan

You can delete Inspection Plans that are obsolete or unnecessary.

Before You Begin

You must have one of the following Security Roles:

- MI Inspection Plan Approver
- MI Compliance Analyst

Procedure

- 1. Access the Inspection Plan that you want to delete.
- 3. Select Yes.

The Inspection Plan is deleted.

Note: An Inspection Plan cannot be deleted if it has recommendations. If the field Use Alternative Inspection Plan preference is set to true, the recommendations must be removed through record manager.

Chapter

4

Inspection Plan Management

Topics:

- Overview
- Access Inspection Plan Management
- Approve Inspection Plans in Bulk
- Implement Inspection Plans in Bulk by Creating New Inspection Tasks
- Implement Inspection Plans in Bulk by Linking Existing Inspection Tasks
- Review Active Recommended Actions

Overview

The **Inspection Plan Management** page allows you to review multiple inspection plans and active recommended actions for any level in the Asset Hierarchy. In addition, you can approve or implement multiple Inspection Plans in bulk.

Note: Inspection plans can be created in either Risk Based Inspection or in Compliance Management.

Access Inspection Plan Management

Procedure

In the **Compliance Management Overview** page, select .

The **Inspection Plan Management** page appears, displaying the **Inspection Plans** section.

Next Steps

You can access Inspection Plans and Active Recommended Actions. You can also implement Inspection Plans that are in the Approved state in bulk.

Approve Inspection Plans in Bulk

Before You Begin

You must have one or more Inspection Plans that are in the Modified or Proposed state.

Procedure

1. Access the Inspection Plan Management page.

The Inspection Plan Management page appears, displaying the Inspection Plans section.

- 2. Select the check box next to each Inspection Plan in the Inspection Plans section.
- 3. Select **Approve**.
- 4. The **Confirm Approval** window appears, asking you to confirm if you want to approve the selected Inspection Plans.
- 5. Select Yes.

The job status appears in the page heading, displaying the progress of the Inspection Plan approval for the selected plans. To review the progress, you can select to access the **Schedule Logs** page and search for Type Mechanical Integrity and Description Inspection Plan Approval to check the progress of the approval.

Note: The Recommended Actions linked to the Approved Inspection Plans can be accessed in the Active Recommended Actions section.

User can choose to implement the Recommended Actions to Tasks in Asset Strategy Management or in Inspection Plan Management page.

Implement Inspection Plans in Bulk by Creating New Inspection Tasks

Before You Begin

You must have one or more Inspection Plans that are in the Approved state.

Note: This option is only available when the following selection in the Inspection Configuration section of the IM Admin Preferences available in the Applications settings of the Inspection Management is set to false. Implement Recommended Actions to Tasks in ASM should be unchecked.

Procedure

- 1. Access the Inspection Plan Management page.
 - The Inspection Plan Management page appears, displaying the Inspection Plans section.
- 2. In the **Inspection Plans** section, next to each Approved Inspection Plan that you want to implement, select the check box.
- Select Implement, and then select Create New.
 The Create New window appears, displaying the Select Recommended Actions section. This section displays all the Recommendations linked to the Inspection Plan that have not been implemented to Tasks.
- 4. Select each Recommended Action for which you want to create new Inspection Tasks.
- 5. Select **Next**.
 - The **Edit Details** section appears.
- 6. You can edit Last Date in bulk using the Bulk Edit Last Date or edit Last Date for individual records in edit details section for recurring recommendations only.

Note: For all non-recurring recommendations, one cannot edit the Last Date column in the Edit Details sections. Last Date is blank for non-recurring recommendations and is not updated when user edits the date in Bulk Edit Last Date field.

- 7. Modify the details for the Recommended Actions that you selected.
- 8 Select Finish

The job status appears in the page heading, displaying the progress of the Inspection Task creation. When the process is complete, you can select to access the **Schedule Logs** page.

Results

The newly created Inspection Tasks are linked to the selected Recommended Actions and linked to the Asset related to the Inspection Plan.

Implement Inspection Plans in Bulk by Linking Existing Inspection Tasks

Before You Begin

You must have one or more Inspection Plans that are in the Approved state.

Note: This option is only available when the Implement Recommended Actions to Tasks in ASM preference in the Inspection Configuration section of the IM Admin Preferences available in the Applications settings of the Inspection Management is unchecked.

Procedure

- 1. Access the Inspection Plan Management page.
 - The Inspection Plan Management page appears, displaying the Inspection Plans section.
- 2. In the **Inspection Plans** section, next to each Approved Inspection Plan that you want to implement, select the check box.
- 3. Select Implement, and then select Link Existing.
 - The **Link Existing Inspection Tasks** window appears, displaying the **Select Recommended Actions** section. This section displays all the Recommendations linked to the Inspection Plan that has not been implemented to Tasks.
- 4. Select each Recommended Action that you want to link to Inspection Tasks.

Note: For optimal performance, no more than 100 recommended actions should be selected at one time.

5. Select **Next**.

The **Edit Details** section appears with the Recommended Actions and the existing task which will be linked. The task to link is matched, based on the task type and related asset.

Note: If no task with a matching task type or related asset is found or if the recommended action is recurring and the matching task is nonrecurring, an error will be displayed.

6. Select Finish.

The job status appears in the page heading, displaying the progress of the Inspection Task creation.

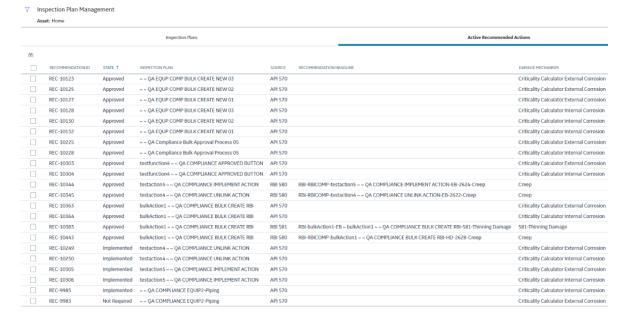
When the process is complete, you can select to access the **Schedule Logs** page.

Results

The Inspection Tasks are linked to the selected Recommended Actions.

Review Active Recommended Actions

The Active Recommended Actions section displays all the recommended actions that have Inspection Plans in an Approved state.



Chapter

5

European Inspection Management

Topics:

- About European Inspection Management
- About Configuring European Inspection Management
- Create Fluid Records
- Add Fluid Data
- Assign Assets to European Compliance Strategy Template
- Create Inspection Summary Reference Records
- European Inspection Management Workflow
- Identify an Asset
- Create Asset Technical Data Record
- Apply Suggested Compliance Strategy Templates for an Asset
- Create an Inspection Plan from the Compliance Management Overview Page
- Approve an Inspection Plan
- Implement an Inspection Plan
- Manage Inspection Tasks
- About Rescheduling an Inspection Task
- Manage Inspection Events

About European Inspection Management

In Germany, inspections of pressure-containing assets are regulated by the industrial safety regulation (**BetrSichV**). The aim of this regulation is to guarantee the protection of employees' health and safety when using work equipment. With this module, APM will provide a solution to help categorize the inspection activities according to Government Regulation based on pressure, volume, and fluid characteristics. According to this categorization, Compliance Management module of APM can recommend applicable inspection task types along with recommended interval based on each asset type. This module will also help you identify the certification requirements of Inspectors. For example, ZÜS (Approved Inspection Body) and bP (Qualified Person) based on the criticality of the asset.

This functionality is fully integrated with Compliance Management module and Inspection Management module.

About Configuring European Inspection Management

As an administrator, you must configure the following before an Inspector uses the data to create an inspection plan for an asset:

- · Create Fluid Records
- Add Fluid Data
- Assign Assets to European Compliance Strategy Template

Create Fluid Records

About This Task

To create process fluid data in Fluid Data family, the fluid name must exist in the Integrity Fluid Name System Code Table. For more information on System Code Tables, refer to the System Codes and Tables documentation.

Procedure

- 1. Access the System Codes and Tables page.
- 2. From the System Tables section, select **Integrity Fluid Name**. The details of the Integrity Fluid Name table appears.
- In the System Code subsection, select +.
 The Create System Code window appears.
- 4. In the **ID** box, enter the ID for the fluid.

Note: The ID must be unique and must not be greater than 50 characters in length.

5. In the **Description** box, provide a description for the fluid.

Note: The description must not exceed 255 characters in length.

- 6. Select one or more of the following options:
 - **Default**: Select the check box if you want this fluid to be the default fluid for the Integrity Fluid Name System Code Table.
 - Active: Select the check box if you want the System Code to be active.
- 7. Select Save.

The new fluid is added and appears in the **System Code** subsection.

Next Steps

After you create the System Code for a fluid, do the following.

- Log out of the application and log back in, as the newly added fluid may not appear in the Fluid Data datasheet due to caching.
- Add Fluid Data to the fluid record.

Add Fluid Data

Before You Begin

Ensure that the fluid, for which you want to add the fluid properties, is created in the Integrity Fluid Name System Code Table. For more information, refer to the Create Fluid Records on page 24 topic.

About This Task

Now, you must add fluid properties for the new fluid added using Record Manager. For more information on Record Manager, refer to the Record Manager documentation. Based on the properties that you define, a group is assigned to the fluid. For more information on the fluid group assignment, refer to Table F of Annexure - 1.

Procedure

- 1. Using Record Manager, create a record in the Fluid Data family. The Fluid Data datasheet appears.
- 2. Enter values in the available fields.

 Based on the values, a group is assigned to the fluid.

Note: If required, you can change the default group assigned to the fluid.

3. Select ...
The fluid properties are added to the fluid record.

Assign Assets to European Compliance Strategy Template

About This Task

APM provides eight Compliance Strategy Templates for the European Inspection Compliance. Each Compliance Strategy Template is linked to a policy that enables recommendation generation based on certain guidelines. You can assign assets to the European Inspection Compliance Strategy Templates. After the assets are linked to the compliance strategy templates, Inspection Plans can be created by the MI Compliance Analyst or the MI Compliance Approver. When the Inspection Plan creation is initiated, the policy selected in the Compliance Strategy Template is executed against the assets that are linked to the template. Creating Inspection plans for assets also generates recommendations according to the guidelines specified in the policy. When an asset is linked to multiple Compliance Strategy Templates, the policy for each template executes, and the generated recommendations are linked to the Inspection Plan and the asset.

Procedure

Access the administrative features of Compliance Management.
 The Compliance Strategy Templates page appears, displaying all the available Compliance Strategy Templates.

- 2. Select one of the following Compliance Strategy Templates:
 - EU_PIPE_FL: Template for Piping for Functional Location
 - **EU_PIPE_EQ**: Template for Piping Equipment
 - EU_SB_FL: Template for Steam Boiler for Functional Location
 - **EU_SPV_FL**: Template for Simple Pressure Vessel for Functional Location
 - **EU_PV_EQ**: Template for Pressure Vessel Equipment
 - EU_SPV_EQ: Template for Simple Pressure Vessel Equipment
 - EU_PV_FL: Template for Pressure Vessel for Functional Location
 - **EU_SB_EQ**: Template for Steam Boiler Equipment

The Compliance Strategy Template datasheet appears, displaying the **Template Details** section.

- 3. Select the **Assets** tab.
 - The **Assets** section appears, displaying a list of assets associated with the selected Compliance Strategy Template.
- 4. Perform one of the following steps:
 - To add Assets via query, complete the following steps:
 - a. Select +.
 - b. In the Add Assets to <Asset ID> window, next to each query that you want to use to search for assets to add to the Compliance Strategy Template, select the check box, and then select Next.

Note:

- After you select the first query and assets, the query that you selected is stored in the Asset Lookup Query field of the Compliance Strategy Template record. Subsequent uses of the Add Asset via Query tool will use the previously selected query by default. Additionally, the results of this query are used in the **Assets without Templates** section of the **Compliance Management Overview** page. To use a different query in the Add Asset via Query tool, select **Previous**, and then select a query from the catalog.
- When you use a query to select assets, one of the output fields of the query must be the entity key for an asset. The field in the query must be named ASSET_ENTY_KEY.
- If you have already added assets to the Compliance Strategy Template, you can filter the query results using a WHERE parameter; the entity key of the template must be TEMP_ENTY_KEY.

The **Select Assets** section appears, displaying the results of the query that you selected.

- c. In the **Select Assets** section, next to each asset that you want to add, select the check box.
- d. Select Finish.
- To add Assets via finder, complete the following steps:
 - a. Select +.
 - b. In the Hierarchy Finder window, navigate to the asset that you want to add.
 - c. Next to each asset that you want to add to the Compliance Strategy Template, select .

 The selected assets appear in the **Hierarchy Finder** window.
 - d. Select **OK**.

Results

The selected assets appear in the **Assets** section.

Important:

- When you select assets to add, you must select assets that are in the same family as the defined asset family for the template. Additionally, you cannot add the same asset more than once.
- When you are adding assets to the Compliance Strategy Template, the assets listed in the Hierarchy Finder and the queries listed are site filtered.

Tip: If one or more assets cannot be added to the Compliance Strategy Template, an error message will appear. You can select the error to view a list of assets that were not successfully added to the template.

Create Inspection Summary Reference Records

About This Task

Inspection Summary Reference records are used to auto populate Inspection Summary field value for Inspection Event record using data from Inspection Summary Reference records. Inspection Summary Reference records can be added using Record Manager.

Procedure

- 1. Access Record Manager, select **Inspection Summary Reference** from the list. The Inspection Summary Reference datasheet appears.
- 2. In the datasheet, select or enter appropriate values in the available fields.

European Inspection Management Workflow

About This Task

This workflow provides the basic, high-level steps for using European Inspection Management. The steps and links provided in the workflow do not necessarily reference every possible procedure.

Procedure

- 1. Identify an Asset
- 2. Create Asset Technical Data Record
- 3. Apply the Suggested Compliance Strategy templates for an Asset
- 4. Create an Inspection Plan
- 5. Approve an Inspection Plan
- 6. Implement an Inspection Plan
- 7. Manage Inspection Tasks on page 37
- 8. Reschedule an Inspection Task
- 9. Manage Inspection Events on page 40

Identify an Asset

This topic describes how to identify the certification requirements for the inspectors based on the criticality of the assets.

Procedure

- 1. Access the **Assets** page.
 - The Asset Hierarchy appears in the **Assets** page.
- 2. In the **Hierarchy** section, in the Search box, enter the Asset ID for which you want to create or edit Asset Technical Data, and then press Enter.
 - The asset appears in the **Hierarchy** section.
- 3. Select the Integrity tab, and then select **Inspection Assets** for Inspection Management to view and edit the Inspection Management Overview page for the related asset.

Note: For better workflow walkthrough, we are using asset E0110A-097 from Asset Hierarchy as an example. The steps in the below workflow are based on the E0110A-097 asset.

- 4. In the **Integrity** tab, no inspections appear for the selected asset.
- 5. Select the link on the **0 Inspections**.

The Inspection Management Overview page appears for the related asset.

Create Asset Technical Data Record

This topic describes how to create an Asset Technical Data record to determine the certification requirements of the inspectors based on the criticality of the assets. You can create multiple Asset Technical Data records for an Asset.

Procedure

- 1. Access the Inspection Management Overview page.
- 2. Select 3 and then select **View Asset Technical Data**.

 The **Asset Technical Data** page appears, displaying the assets and the related families for Asset Technical Data and NR13 Technical Data.

Note: All the families for an asset are displayed in the Has Technical Data relationship family.

- 3. To modify a record for Asset Technical Data or NR13 Technical Data, select the related asset from the **Technical Data** pane.
- 4. To add a new Asset Technical Data datasheet, select , and then select **Asset Technical Data**. A blank Asset Technical Data datasheet for the selected asset appears.
- 5. As needed, enter values in the available fields. Based on the fields entered in the datasheet, the value in the certification field is calculated.

Example

Example: Identify certification requirement for a Pressure Vessel

In this example, two records in Asset Technical Data family are created (that is, for the Shell Chamber and for the Tube Chamber).

| Field | Value for Shell Chamber | Value for Tube Chamber |
|---|--|---|
| Chamber | Shell | Tube |
| Fluid | C1 | C2 |
| Fluid Group | 1 | 2 |
| Fluid Phase | Gas | Liquid |
| Protected Pressure (P) | 50 Bar | 30 Bar |
| Volume (V) | 1200 Litre | 500 Litre |
| Outer Diameter (DN) | This field is blank as values for this field are used for the certification calculation of Asset Type is Piping. | This field is blank as values for this field are used for the certification calculation of Asset Type Piping. |
| PV (Protected Pressure*Volum e) | 6000 Bar.Litre | 15000 Bar.Litre |
| PDN (Protected Pressure*Outer Diameter) | This field is disabled as the Asset Type is Pressure Vessel. | This field is disabled as the Asset Type is Pressure Vessel. |
| Certification | ZUS | ВР |

Note:

- For Shell Chamber, refer to Reference Table 4 for the certificate calculation.
- For Tube Chamber, refer to Reference Table 5 for the certification calculation.

The Certification for the Shell chamber is determined based on the values in the following fields:

| Field | Value |
|------------------------|--------------------------------|
| Asset ID | 00000000010000202 |
| Asset Type | Pressure Vessel |
| Applicable Regulation | European Inspection Regulation |
| Operational Start Date | 06/04/2019 17:58:37 |
| Chamber | Shell Chamber |
| Override Certification | True |
| Internal Access | True |
| External Access | False |

| Field | Value |
|----------------------------|----------------|
| Internal Inspection Access | False |
| Insulated | False |
| Internal Filling? | False |
| Cryogenic | False |
| Fluid | C1 (C1) |
| Fluid Type | Combustible |
| Fluid Phase | Gas |
| Fluid Group | 1 |
| Operating Pressure | 2 (BAR(G)) |
| Protected Pressure | 50 (BAR(G)) |
| Volume | 1,200 (Liters) |
| PV | 59,999.99 |

| Field | Value |
|----------------------------|--------------------------------|
| Asset ID | 0000000010000202 |
| Asset Type | Pressure Vessel |
| Applicable Regulation | European Inspection Regulation |
| Operational Start Date | 08/08/2015 00:25:14 |
| Chamber | Tube |
| Override Certification | False |
| Internal Access | True |
| External Access | True |
| Internal Inspection Access | True |
| Insulated | False |
| Internal Filling? | True |
| Cryogenic | False |
| Fluid | HCL (HCL) |
| Fluid Type | Combustible |
| Fluid Phase | Liquid |
| Fluid Group | 1 |
| Operating Pressure | 480 (BAR(G)) |

| Field | Value |
|-----------------------|-----------------------|
| Protected Pressure | 520 (BAR(G)) |
| Volume | 30 (Liters) |
| Operating Temperature | 240 (Degrees Celsius) |
| PV | 15,600 |

Example: Identify certification requirement for a Simple Pressure Vessel

In this example, a single record is created for the Simple Pressure Vessel.

| Field | Value |
|---|--|
| Fluid | C2 |
| Fluid Group | 2 |
| Fluid Phase | Gas |
| Protected Pressure (P) | 20 Bar |
| Volume (V) | 400 Litre |
| Outer Diameter (DN) | This field is blank as values for this field is used for the certification calculation of Asset Type Piping. |
| PV (Protected Pressure*Volume) | 8000 Bar.Litre |
| PDN (Protected Pressure*Outer Diameter) | This field is disabled as the Asset Type is Simple Pressure Vessel. |
| Certification | zus |

Note: For Simple Pressure Vessel, refer to Reference Table 7 for certificate calculation.

The following fields are used for determining the certification:

| Field | Value |
|----------------------------|--------------------------------|
| Asset Type | Simple Pressure Vessel |
| Applicable Regulation | European Inspection Regulation |
| Override Certification | False |
| Internal Access | True |
| External Access | True |
| Internal Inspection Access | True |
| Insulated | False |
| Internal Filling? | True |

| Field | Value |
|-----------------------|----------------------|
| Cryogenic | False |
| Fluid | C2 (C2) |
| Fluid Type | Flammable |
| Fluid Phase | Gas |
| Fluid Group | 2 |
| Operating Pressure | 12 (BAR(G)) |
| Protected Pressure | 20 (BAR(G)) |
| Volume | 400 (Liters) |
| Operating Temperature | 60 (Degrees Celsius) |
| PV | 8,000 |

Example: Identify certification requirement for Piping

In this example, a single record is created for the Piping Asset.

| Field | Value |
|---|---|
| Fluid | C3 |
| Fluid Group | 2 |
| Fluid Phase | Gas |
| Protected Pressure (P) | 12 Bar |
| Volume (V) | This field is blank as values for this field is used for the certification calculation of Asset Type Pressure Vessel, Simple Pressure Vessel, and Steam Boiler. |
| Outer Diameter (DN) | 114.3 mm |
| PV (Protected Pressure*Volume) | This field is disabled as the Asset Type is Piping. |
| PDN (Protected Pressure*Outer Diameter) | 1371.6 Bar.mm |
| Certification | bP |

Note: For Piping, refer to Reference Table 9 for certificate calculation.

The following fields are used for determining the Certification:

| Field | Value | |
|-----------------------|--------------------------------|--|
| Asset Type | Piping | |
| Applicable Regulation | European Inspection Regulation | |

| Field | Value |
|-----------------------------|----------------------|
| Override Certification | False |
| Internal Access | False |
| External Access | True |
| Internal Inspection Access | False |
| Insulated | False |
| Internal Filling? | True |
| Cryogenic | False |
| Fluid | C3 (C3) |
| Fluid Type | Combustible |
| Fluid Phase | Gas |
| Fluid Group | 2 |
| Operating Pressure | 7.5 (BAR(G)) |
| Protected Pressure | 12 (BAR(G)) |
| Operating Temperature | 80 (Degrees Celsius) |
| Piping Nominal Diameter-DN | 100 |
| Piping Nominal Diameter-NPS | 4 |
| Schedule | 80 (X) |
| Outer Diameter | 114.3 (Millimeters) |
| Nominal Thickness | 8.56 (Millimeters) |
| PDN | 1,371.6 |

Example: Identify certification requirement for a Steam Boiler

In this example, a single record is created for the Steam Boiler.

| Field | Value |
|--------------------------------|--|
| Fluid | Test |
| Fluid Group | 1 |
| Fluid Phase | Liquid |
| Protected Pressure (P) | 35 Bar |
| Volume (V) | 100 Litre |
| Outer Diameter (DN) | This field is blank as values for this field is used for the certification calculation of Asset Type Piping. |
| PV (Protected Pressure*Volume) | 3500 Bar.Litre |

| Field | Value |
|--|---|
| PDN (Protected Pressure*Outer Diameter) | This field is disabled as the Asset Type is Steam Boiler. |
| Certification | ZUS |

Note: For Steam Boiler, refer to Reference Table 9 for certificate calculation.

The following fields are used for determining the Certification:

| Field | Value |
|----------------------------|--------------------------------|
| Asset ID | 00000000010000202 |
| Asset Type | Steam Boiler |
| Applicable Regulation | European Inspection Regulation |
| Operational Start Date | 06/18/2019 17:12:40 |
| Override Certification | False |
| Internal Access | False |
| External Access | False |
| Internal Inspection Access | False |
| Insulated | True |
| Internal Filling? | False |
| Cryogenic | False |
| Fluid | ACID (ACID) |
| Fluid Type | Flammable |
| Fluid Phase | Liquid |
| Fluid Group | 1 |
| Operating Pressure | 30 (BAR(G)) |
| Protected Pressure | 35 (BAR(G)) |
| Volume | 100 (Liters) |
| Operating Temperature | 250 (Degrees Celsius) |
| PV | 3,500 |

Apply Suggested Compliance Strategy Templates for an Asset

Users can get suggested Compliance Strategy Templates for assets that are in the **Assets without Templates** section of the **Compliance Management Overview** page. This section contains assets that

do not have linked Compliance Strategy Templates, but match queries attached to Compliance Strategy Templates.

Before You Begin

Procedure

 Access the Compliance Management Overview page, and then select the Assets without Templates tab.

The **Assets without Templates** section appears.

2. Select Suggest Templates.

A window appears, stating that the current Suggested Compliance Template records will be deleted if you proceed.

3. Select Yes.

The Suggest Templates process executes. A scheduled job is created.

- 4. **Optional:** If you want to view the status of the job, select ...

 The **Schedule Logs** page appears, displaying a list of all the operations in APM that are in progress, along with the percentages of completion. You can also access a list of operations that have been successful or have failed.
- 5. After selecting Suggested Template, refresh the page.
- Select the check boxes next to the Asset IDs, and then select **Apply Template**.
 The **Confirm Apply Template** window appears asking you to confirm if you want to apply the suggested templates to the selected assets.
- Select Yes.
 The templates are applied to the selected assets, and the assets appear in the Assets without Inspection Plans section of the Compliance Management Overview page.

Results

Note: For European Inspection Compliance, APM has 8 Compliance Strategy Templates that are available for use. When assets are added, the query is added to the Compliance Strategy Template record and is saved for later use. If a Compliance Strategy Template does not have a query attached to the record, it is excluded from the Suggest Templates job. Additionally, if an asset does not match a query that is attached to a Compliance Strategy Template, it will not receive a suggested Compliance Strategy Template.

Create an Inspection Plan from the Compliance Management Overview Page

You can create an Inspection Plan for assets that are linked to Compliance Strategy Templates.

Before You Begin

The assets must have one or more Compliance Strategy Templates linked to them.

- Access Compliance Management, and then select the Assets without Inspection Plans tab.
 The Assets without Inspection Plans section appears, displaying a list of available assets based on the current filter.
- 2. In the Assets section, select the check boxes against the rows containing the asset to create an Inspection Plan.

The selected assets are highlighted.

3. Select Create Inspection Plans.

The job status appears in the page heading, displaying the progress of the Inspection Plan creation.

Note: When the process is complete, you can select to access the **Schedule Logs** page.

Approve an Inspection Plan

Any user with the MI Inspection Plan Approver Security Role can move an Inspection Plan to the Approved state. After the Inspection Plan is approved, recommendations can be implemented as tasks.

About This Task

When an Inspection Plan is in the Approved state, you can create new Inspection Tasks or link existing Inspection Tasks to the related recommendations. The Inspection Tasks are transferred to the Inspection Management module.

Note:

Approving an Alternative Inspection Plan will automatically implement tasks. For more information, refer to Approve an Alternative Inspection Plan.

Procedure

- 1. Access the Inspection Plan that you want to approve.
- In the **Proposed** box, select **Approve**, and then select **Done**.
 A message appears, stating that the Inspection Plan has been approved.

Note:

- After you approve an Inspection Plan, you cannot delete, supersede, or designate recommendations as Not Required. You must first move them to the Modified state.
- While the Inspection Plan is being modified, you cannot delete, supersede, or designate recommendations as Not Required.

Implement an Inspection Plan

Before You Begin

- Ensure that the **Implement Recommended Actions to Tasks in ASM** setting is set to False in the **Inspection Configuration** section of the **IM Admin Preferences** page.
- You must have an Inspection Plan that is in the Approved state.

About This Task

This task describes how to implement an Inspection Plan to an Inspection Task. When you implement an Inspection Plan, all the Compliance Recommendations associated with the Inspection Plan are implemented to an Inspection Tasks.

- 1. You can view if the state of the Inspection Plan from the top-right corner of the page.
- 2. Select the check box against the recommendation that you want to implement and select **Implement** from the top-right corner of the page.

Note: You can perform only one implementation at a time. Select a recommendation using the check box to implement. Bulk implemented is not allowed. For more information on Recommendation Details, see Recommendation ID.

The Implement as Inspection Task dialog appears

- 3. You can implement as a new task or link it to an existing task. Here, we are implementing all the three tasks as a new task.
- 4. As needed, modify the details for the Recommended Actions that you selected.
- 5. All the three recommendations of the asset have been implemented as new task and are visible in **Existing Tasks** section of the page.

The Inspection Plan page appears.

Manage Inspection Tasks

Before You Begin

Ensure that you have implemented an Inspection Plan. For more information on Implementing an Inspection Task, refer to the Implement an Inspection Plan topic.

About This Task

This topic describes how to create and manage a European Inspection Task. The European Inspection Task is introduced to the Inspection Task family to manage the European Inspection tasks, according to the Compliance regulation.

- 1. Select any one task from the **Task ID** column in Inspection Plan. The **Inspection Task** datasheet appears.
- 2. Select the **European Inspection Task** datasheet from the **Datasheet ID** drop-down list. The European Inspection Task record appears for the asset.
- As needed, enter values in the available fields of the datasheet.
 For more information on the Mappings, refer to the European Technical Data and Compliance Recommendation Mappings topic. The following fields are available as part of the Inspection Event.

| Field | Value | Source |
|-----------------------|--|---------------------------|
| Applicable Regulation | If the inspection is a European Inspection, then you need to select European Inspection Regulation. The values in this field are populated from the MI_INTGY_REGULATION system code table. | Compliance Recommendation |
| Certification | The values in this field are populated from the MI_COMPLIANCE_STANDARDS system code table. By default, it shows ZUS and BP. | Compliance Recommendation |
| Previous Next Date | This field is populated automatically by the APM system. This filed stores the Next Date before the rescheduling occurs. This field is always disabled. | European Inspection |

| Field | Value | Source |
|---------------------------------|--|-------------------------|
| Task Rescheduling Basis | This field captures the information based on how the Next Date field is calculated. The field can be calculated either by the Completion Date or the Previous Next Date. | European Inspection |
| Compliance Window | This field stores the information about the duration of compliance in months. | European Admin Settings |
| Inspection Documentation Window | This field stores information about the duration in months for documenting an inspection report. | European Admin Settings |
| Compliance Min Date | The earliest date on which an inspection may be performed. | European Inspection |
| Compliance Max Date | The time between the Last Date and the Max Date. | European Inspection |

Note:

- The **Applicable Regulation** and **Certification** field values are mapped from the related Compliance Recommendation record from which the Inspection Task was created.
- The Applicable Regulation value is set to European Inspection Regulation and the
 Certification field value is set to ZUS, then the Inspectors with respective certification or
 Inspection Administrators will be able to select the Modifiable Task field. If the Certification field
 value is set to ZUS, certification for the inspector will not be checked to select the modifiable task
 attribute.
- Value in the fields Compliance Window and Inspection Documentation Window in European
 Inspection Task datasheet are auto populated from European Admin Settings. These values must
 be pre-defined at a Site Level.
- If the Certification field value is set, then Modifiable field will set to false before updating the Inspection Task.

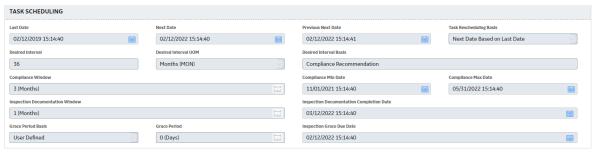
About Rescheduling an Inspection Task

You can reschedule an Inspection Task after completing an Inspection Event. For an Inspection Task that have the **Applicable Regulation** set to European Inspection Regulation, the **Next Date** is updated in an Inspection Task based on the following two scenarios:

- Scenario 1: For Completion Date before Compliance Min Date
 - Next Date field on Inspection Task is set based on the value in the Completion Date + Desired Interval.
 - Task Rescheduling Basis field on Inspection Task will be updated to Next Date based on Last Date.
- Scenario 2: For Completion Date after Compliance Min Date
 - Next Date field on Inspection Task is set based on the value in the Previous Next Date + Desired Interval.
 - Task Rescheduling Basis field on Inspection Task will be updated to Next Date based on Next Date.

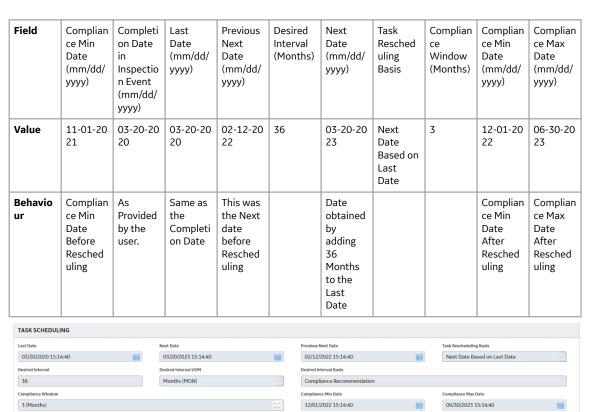
The above two scenarios are explained in a form of an example. The following table is used as an example to calculate the Next Date of an Inspection Task Details before any rescheduling.

| Field | Last Date (mm/dd/yyyy) | Desired Interval (Months) | Next Date (mm/dd/yyyy) | Compliance Window (Months) | Compliance Min Date (mm/dd/ yyyy) | Compliance Max Date (mm/dd/ yyyy) |
|-----------|--|------------------------------|---|------------------------------------|--|---|
| Value | 02-12-2019 | 36 | 02-12-2022 | 3 | 11-01-2021 | 05-31-2022 |
| Behaviour | This is the date in the Inspection Task which will be same as Completion date in Inspection Event. This is a Modifiable field. | | The Next Date is updated based on the Last Date + Desired Interval. | Predefined in EU Admin Settings | The date is updated to the First Date of Month for Next Date - Compliance Window | The date is updated to the Last Date of Month for Next Date + Compliance Window |



Using the above example, rescheduling will be done in the following two scenarios.

Scenario 1: Completion Date in Inspection Event is before the Compliance Min Date in the Inspection
Task. Next Date = Last Date + Desired interval



04/20/2023 15:14:40

Inspection Grace Due Date

03/20/2023 15:14:40

1 (Months)

Grace Period Basis

User Defined

Grace Period

0 (Days)

Scenario 2: Completion Date in Inspection Event is after the Compliance Min Date in Inspection Task.
 Next Date = Previous Next date + Desired interval

| Field | Complian ce Min Date (mm/dd/ yyyy) | Completi on Date in Inspectio n Event (mm/dd/ yyyy) | Last Date (mm/dd/ yyyy) | Previous Next Date (mm/dd/ yyyy) | Desired Interval (Months) | Next Date (mm/dd/ yyyy) | Task Resched uling Basis | Complian ce Window (Months) | Complian ce Min Date (mm/dd/ yyyy) | Complian ce Max Date (mm/dd/ yyyy) | |
|-------------------------|--|---|----------------------------------|--|---------------------------------|---|--|--------------------------------------|---|---|--|
| Value | 12-01-20 22 | 05-24-20 23 | 05-25-20 23 | 03-20-20 23 | 36 | 03-20-20 26 | Next Date Based on Previous Next Date | 3 | 12-01-20 25 | 06-30-20 26 | |
| Behavio ur | Complian ce Min Date from Scenario -1 | As Provided by User | Same as Completi on Date | Next Date from Scenario -1 | | Date obtained by adding 36 Months to the Previous Next Date | | | Complian ce Min Date After Resched uling | Complian ce Max Date After Resched uling | |
| TASK SCHEDULI | ING | | | | | | | | | | |
| Last Date | | | Vext Date | | Previous | Previous Next Date | | Task Reschedulli | Task Rescheduling Basis | | |
| 05/25/2023 15:1 | 4:40 | | 03/20/2026 15:14:40 | | 03/20 | 03/20/2023 15:14:40 | | Next Date B | Next Date Based on Previous Next Date | | |
| Desired Interval | | | Desired Interval UOM | | Desired | Interval Basis | | | | | |
| 36 Months (MON) | | | | Comp | Compliance Recommendation | | | | | | |
| 36 | | | | | | | | | | | |
| 36 Compliance Window | | | | | Complia | nce Min Date | | Compliance Max | Date | | |
| | | | | | | nce Min Date 1/2025 15:14:40 | | | | | |

04/20/2026 15:14:40

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Manage Inspection Events

About This Task

1 (Months)

This task describes how to create and manage an Inspection Event. The European Inspection Report is added to the Full Inspection family to manage an Inspection event for an Asset.

Procedure

- 1. Access the **Inspection Management Overview** page and select an asset for which you want to create an Inspection Event.
- 2. Select , and then select **Create Inspection**. The **Create Inspection** window appears.
- 3. In the **Inspection Event** box, select the Inspection Event.

0 (Days)

4. In the Inspection Tasks box, select the Inspection Tasks.

Note:

- You can create an Inspection without selecting any value in the Inspection Tasks box.
- You can select either a single Inspection Task or multiple Inspection Tasks using the check box.
- 5. Select Create.

The Inspection Details workspace appears, displaying the Full Visual Inspection datasheet.

6. Select **EU Inspection Report** from the drop-down list.

The EU Inspection Report datasheet appears.

For more information on the Mappings, refer to the Inspection Task and Inspection Event Mappings topic. The following fields are available as part of the Inspection Event.

| Field | Value | Source |
|------------------------------|--|---------------------|
| Applicable Regulation | If the inspection is a European Inspection, then you need to select European Inspection Regulation. The values in this field are populated from the MI_INTGY_REGULATION system code table. | Inspection Task |
| Certification | The values in this field are populated from the MI_COMPLIANCE_STANDARDS system code table. By default, it shows ZUS and BP. | Inspection Task |
| Inspection Document Category | The field populates the following values: Test Certificate by ZUS Test Record by Company Inspector Test Report by Subcontractor | European Inspection |
| Inspection Instruction | This field stores a list of instructions for an inspector. The list is populated in a drop-down list box. | European Inspection |

Note:

- Inspection Report Owner field will display all the users who satisfy following conditions:
 - If the value in the Certification field is ZUS:
 - The Inspector role with a valid matching Certification can perform inspection.
 - The Team Member with a valid matching Certification can perform inspection.
 - If the Certification field does not have a value:
 - The inspector role can perform the inspection.
 - The Team member can perform the inspection.
- Reviewer Name field will display all the users who satisfy following conditions:
 - If the Certification field has a value:
 - The Inspector Supervisor role with a valid matching Certification can perform the inspection.
 - The Team Member with a valid matching Certification can perform the inspection.
- If the certification field has a value, then the check boxes Inspection Lock and Inspection Task
 Complete can be selected by either the Inspector or any Team Member provided they have the
 respective certification.
- If the Application Regulation is European Inspection Regulation, Certification is ZUS then
 Inspection Document Category is set to Test Certificate by ZUS and disabled. If the Certification
 is not ZUS, then the Inspection Document Category field would be enabled.
- An **Inspection Summary** appears based on the **Inspection Document Category** and **Inspection Instructions** selected. Select the values based on the available fields.
- 7. In the datasheet, enter values in the available fields.

| 8. | An Inspection is created for an asset in a European Inspection Report an asset. |
|----|---|
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Chapter

6

Compliance Recommendations

Topics:

- Access a Compliance Recommendation
- Modify a Compliance Recommendation
- Delete a Compliance Recommendation
- Implement a Compliance Recommendation to an Inspection Task
- Unlink an Inspection Task from a Compliance Recommendation

Access a Compliance Recommendation

You can access a Compliance Recommendation that is part of an existing Inspection Plan.

Procedure

- 1. Access the Inspection Plan that contains the Compliance Recommendations that you want to access.
- 2. Select the Recommendation ID of the Compliance Recommendation that you want to access. The Compliance Recommendation appears.

Modify a Compliance Recommendation

Compliance Recommendations can be marked not required, superseded, or deleted.

Before You Begin

You must have one of the following Security Roles to modify a Compliance Recommendation:

- MI Compliance Analyst
- MI Inspection Plan Approver

- 1. Access the Inspection Plan that contains the Compliance Recommendations that you want to access.
- 2. Modify the Compliance Recommendation in one of the following ways:

| State | Action |
|------------------|---|
| Supersede (ਨੈ) | Changes the state of the Compliance Recommendation to Superseded. To supersede recommendations: |
| | a. Next to two or more Compliance Recommendations, select the check boxes. |
| | b. Select 🔥 . |
| | The Supersede Recommended Actions window appears. |
| | c. Select the Compliance Recommendation that you want to designate as the master recommendation. |
| | d. Select Supersede. The master recommendation supersedes the other Compliance Recommendations and appears in the grid. |
| | Note: You can view the superseded recommendations by selecting the number in the Linked Actions column. |
| Not Required () | Changes the state of the Compliance Recommendation to Not Required. |
| | Select the check box next to each Compliance Recommendation that you want to mark Not Required. |
| | b. Select . |

| State | Action |
|-----------------------------------|--|
| Halink Supercoded Recommendations | A window appears, asking you to confirm that you want to mark the Compliance Recommendation as Not Required. c. Select Yes. The Reason for Not Required window appears. d. Enter a reason for marking the Compliance Recommendation as Not Required, and then select Done. The Compliance Recommendation is moved to the Not Required state. |
| Unlink Superseded Recommendations | This unlinks superseded Compliance Recommendations from the master recommendation. The state of the unlinked Compliance Recommendations is modified from Superseded to Proposed. |
| | a. Select the number in the Linked Actions column of the master recommendation you would like to unlink superseded recommendations from. The Linked Recommended Actions window appears, displaying the linked superseded Compliance Recommendations. b. Select the check box next to each Compliance Recommendation that you want to unlink. c. Select Unlink. The Compliance Recommendations are unlinked from the master recommendation and appear in the grid. The Compliance Recommendations are then moved to the Proposed state. |

Delete a Compliance Recommendation

- 1. Access the Inspection Plan that contains the Compliance Recommendations that you want to delete.
- 2. Next to each Compliance Recommendation that you want to delete, select the check box.
- 4. Select **Yes**. The Compliance Recommendations are deleted.

Implement a Compliance Recommendation to an Inspection Task

You can create new Inspection Tasks or link existing Inspection Tasks to a Compliance Recommendation that is in the Approved state to add them to the Inspection Plan.

Before You Begin

- Ensure that the **Implement Recommended Actions to Tasks in ASM** setting is set to False in the **Inspection Configuration** section of the **IM Admin Preferences** page.
- You must have an Inspection Plan that is in the Approved state.

Procedure

- 1. Access the Inspection Plan that contains the Compliance Recommendations that you want to implement.
- 2. Next to the Compliance Recommendation that you want to implement, select the check box.
- Select Implement.
 The Implement as Inspection Task window appears.
- 4. Select one of the following:

| ociect one of the following. | |
|------------------------------|--|
| Action | Description |
| Create New | Creates a new task that is linked to the Compliance Recommendation. The new task is assigned a Task ID, and the Task ID appears in the Task ID column for the respective Compliance Recommendation. |
| Link Existing | Allows you to select an existing Inspection Task to link to the Compliance Recommendation. The task uses the existing Task ID. |
| | Note: You cannot link non-reoccurring tasks to Compliance Recommendations. |

5. Select **Implement**.

The Compliance Recommendation is changed to the Implemented state. The Inspection Task is linked to the Compliance Recommendation and appears in the **Existing Tasks** section of the **Inspection Plan** page. Also, some Inspection Task fields are populated by values from the Compliance Recommendation.

Unlink an Inspection Task from a Compliance Recommendation

- 1. Access the Inspection Plan that contains the Compliance Recommendations from which you want to
- 2. Select the check box next to the Compliance Recommendation that you want to unlink from its related Inspection Task.
- 3. Select ... A message appears, asking if you want to unlink the selected recommendation from the task.
- Select Yes.
 The Inspection Task is unlinked from the Compliance Recommendation.

Note: The Inspection Task will remain linked to the parent asset. Also, the Desired Interval and Desired Interval Basis fields in the Inspection Task will remain populated based on the previously linked recommendation.

Chapter

7

Inspection Plan Revision History

Topics:

- About Inspection Plan Revision History
- Access Inspection Plan Revision History

About Inspection Plan Revision History

An Inspection Plan Revision History record is created when the state of an Inspection Plan is changed from Approved to Modified.

You can modify an Inspection Plan in any of the following scenarios:

- For Compliance Management: When an MI Inspection Plan Approver or an MI Compliance Analyst updates the Compliance Recommendations.
- For Risk Based Inspection (RBI): When an RBI Risk Analysis is moved to the Risk Completed state.

The Inspection Plan Revision History record can be accessed through the Inspection Plan. Using this record, you can track the progress of an Inspection Plan and view the following details:

- The name of the user who modified or approved the Inspection Plan.
- · The date of revision.
- The reason for revision.

Access Inspection Plan Revision History

You can access the revision history of an Inspection Plan that has been updated.

- 1. Access the Inspection Plan for which you want to access the revision history.
- 2. In the **Inspection Plan** page, select ... The **Inspection Plan Revision History** window appears, displaying an Inspection Plan Revision History record for each instance in which the Inspection Plan was updated.
- 3. In the **Revision Date** column, select the link in the row that contains the Inspection Plan Revision History record that you want to access.
 - The Inspection Plan Revision History record appears.

Chapter

8

Suggested Compliance Strategy Templates

Topics:

- About Suggested Templates
- Suggest a Compliance Strategy Template for an Asset
- Apply a Compliance Strategy Template to an Asset

About Suggested Templates

Users can generate suggested Compliance Strategy Templates for assets in the **Assets without Templates** section of the **Compliance Management Overview** page. This section contains assets that do not have linked Compliance Strategy Templates, but match query results that are associated with existing templates. The Suggested Templates are based on query results used in Compliance Strategy Templates for adding assets.

When a user creates a Compliance Strategy Template, they can add assets using a query. When they select the query that adds the assets, the query is added to the Compliance Strategy Template record and is saved for later use.

In the **Assets without Templates** section of the **Compliance Management Overview** page, a user can select the **Suggest Templates** button to generate suggested Compliance Strategy Templates for each asset. When this job is executed, the queries that are defined in Compliance Strategy Template records are executed for all assets in the **Assets without Templates** section. If the assets find a match with a query related to a Compliance Strategy Template, the Compliance Strategy Template becomes the suggested template for the asset.

If a Compliance Strategy Template does not have a query attached to the record, it is excluded from the Suggest Templates job. Additionally, if an asset does not match a query that is attached to a Compliance Strategy Template, it will not receive a suggested Compliance Strategy Template.

Suggest a Compliance Strategy Template for an Asset

Users can get suggested Compliance Strategy Templates for assets that are in the **Assets without Templates** section of the **Compliance Management Overview** page.

Before You Begin

An MI Compliance Administrator must have selected a query on your Compliance Strategy Templates by adding assets to the template using a query.

If a Compliance Strategy Template does not have a query attached to the record, it is excluded from the Suggest Templates job. Additionally, if an asset does not match a query that is attached to a Compliance Strategy Template, it will not receive a suggested Compliance Strategy Template.

- 1. Access the **Configuration Management Overview** page, and then select the **Assets without Templates** tab.
 - The **Assets without Templates** section appears.
- 2. Select **Suggest Templates**.
 - A window appears, stating that the current Suggested Compliance Template records will be deleted if you proceed.
- 3. Select Yes.
 - The Suggest Templates process executes. A scheduled job is created.
- 4. Optionally, if you want to view the status of the job, select .

 The **Schedule Logs** page appears, displaying a list of all the operations in APM that are in progress, along with the percentages of completion. You can also access a list of operations that have been successful or have failed.

5. Refresh the **Compliance Management Overview** page to update the **Assets without Templates** section.

Suggested Compliance Templates appear in the **Suggested Template** column for each selected asset.

Apply a Compliance Strategy Template to an Asset

After using Suggest Templates to match assets to Compliance Strategy Templates, users can apply Compliance Strategy Templates to assets that are in the **Assets without Templates** section of the **Compliance Management Overview** page.

Before You Begin

You must have assets with Suggested Compliance Templates.

Procedure

 Access the Configuration Management Overview page, and then select the Assets without Templates tab.

The **Assets without Templates** section appears.

2. Next to the assets for which you want to apply Compliance Strategy Templates, select the check box.

Note

- The **Apply Template** button is disabled until you select assets.
- The assets that you select must have a Compliance Strategy Template listed in the Suggested Template column.
- 3. Select Apply Template.

A window appears, asking you to confirm that you want to apply the suggested template to the selected asset.

4. Select Yes.

The assets that have templates applied appear in the **Assets without Inspection Plans** section of the **Compliance Management Overview** page.

Chapter

9

Admin

Topics:

• Compliance Configuration

Compliance Configuration

About Compliance Strategy Templates

Compliance Strategy Templates help you manage your assets and generate recommendations based on a selected policy.

Creating a Compliance Strategy Template lays the groundwork for creating a cohesive and compliant Inspection Plan for linked assets. When an MI Compliance Administrator creates a Compliance Strategy template, they must choose a policy to link to the template that will enable recommendation generation when the Inspection Plan creation is initiated. After the policy is selected, the MI Compliance Administrator then links assets to the Compliance Strategy Template. At this point, Inspection Plans can be created by the MI Compliance Analyst or the MI Compliance Approver.

When the Inspection Plan creation is initiated, the policy selected in the Compliance Strategy Template is executed against the assets that are linked to the template. Then, Inspection Plans are created, and recommendations are generated according to the guidelines specified in the policy. When an asset is linked to multiple Compliance Strategy Templates, the policy for each template executes, and the recommendations are linked to the Inspection Plan of that asset.

Access the Administrative Features of Compliance Management

By accessing the administrative features of Compliance Management, you can create Compliance Strategy Templates, which enables you to create Inspection Plans.

Procedure

- 1. In the Applications menu, navigate to ADMIN > Application Settings > Inspection Management.
- Select Compliance Configuration.The Compliance Configuration workspace appears.

Access a Compliance Strategy Template

Procedure

- 1. Access the administrative features of Compliance Management.
- In the Compliance Templates section, select the name of the Compliance Strategy Template that you want to access.

The Compliance Strategy Template datasheet appears, displaying the **Template Details** section.

Create a Compliance Strategy Template

Procedure

- 1. Access the Compliance Strategies workspace.
- 2. In the **Compliance Templates** section, select .

 The Compliance Strategy Template datasheet appears, displaying the **Template Details** section.
- 3. In the datasheet, enter values in the available fields.

Note:

- In the **Compliance Category Name** drop-down, you can add a new Compliance Category by entering a name in the Add Caption field.
- When you select a policy to link to the Compliance Strategy Template, you must select a policy that has the same family as the Compliance Strategy Template.
- You can select the Policy Link field to navigate to the Policy Designer to view or modify the selected policy.
- 4. Select Save.

The Compliance Strategy Template is saved.

Delete a Compliance Strategy Template

Procedure

- 1. Access the administrative features of Compliance Management.
- 2. In the **Compliance Templates** section, next to the name of the Compliance Strategy Template that you want to delete, select the check box.
- Select **Yes**.
 The Compliance Strategy Template is deleted.

Add Assets to a Compliance Strategy Template

Procedure

- 1. Access the Compliance Strategy Template to which you want to add assets.
- 2. Select the **Assets** tab.

The **Assets** section appears, displaying a list of assets associated with the selected Compliance Strategy Template.

- 3. In the **Assets** section, select +.
- 4. In the drop-down list box, select an option:

| Add an Asset | Ac | tions |
|-----------------|----------|---|
| Via Finder | a. | In the Hierarchy Finder window, navigate to the asset that you want to add. |
| | b. c. | Next to each asset that you want to add to the Compliance Strategy Template, select the . The selected assets appear in the Hierarchy Finder window. Select OK . |
| Via Query | a. | In the Add Assets to <asset id=""></asset> window, next to each query that you want to use to search for assets to add to the Compliance Strategy Template, select the check box, and then select Next . |
| | | Note: |
| | | After you select the first query and assets, the query that you selected is stored in the Asset Lookup Query field of the Compliance Strategy Template record. Subsequent uses of the Add Asset via Query tool will use the previously selected query by default. Additionally, the results of this query are used in the Assets without Templates section of the Compliance Management Overview page. To use a different query in the Add Asset via Query tool, select Previous, and then select a query from the catalog. When you use a query to select assets, one of the output fields of the query must be the entity key for an asset. The field in the query must be named ASSET_ENTY_KEY. |
| | | If you have already added assets to the Compliance Strategy Template, you can filter the query results using a WHERE parameter; the entity key of the template must be TEMP_ENTY_KEY. |

| Add an Asset | Ac | tions |
|-----------------|----|---|
| | | The Select Assets section appears, displaying the results of the query that you selected. |
| | b. | In the Select Assets section, next to each asset that you want to add, select the check box. |
| | C. | Select Finish. |

The selected assets appear in the **Assets** section.

Important:

- When you select assets to add, you must select assets that are in the same family as the defined asset family for the template. Additionally, you cannot add the same asset more than once.
- When you are adding assets to the Compliance Strategy Template, the assets listed in the Hierarchy Finder and the queries listed are site filtered.

Tip: If one or more assets cannot be added to the Compliance Strategy Template, an error message will appear. You can select the error to view a list of assets that were not successfully added to the template.

Delete Assets from a Compliance Strategy Template

Procedure

- 1. Access the Compliance Strategy Template from which you want to delete assets.
- 2. Select the **Assets** tab.
 - The **Assets** section appears, displaying a list of assets associated with the Compliance Strategy Template.
- 3. Next to each asset that you want to delete, select the check box.
- 4. Select .
 - A window appears, asking you to confirm that you want to delete the asset.
- 5. Select Yes.

The asset is deleted from the Compliance Strategy Template.

Map a Policy to a Compliance Strategy Template

Before You Begin

You must have an existing Compliance Strategy Template that has a linked policy.

Procedure

- 1. Access the Compliance Strategy Template to which you want to map a policy.
- 2. Select the **Policy Mapping** tab.

The **Policy Mapping** section appears, displaying a list of families and policy nodes.

3. Next to the family that you want to modify, in the **Policy Node** box, enter the name of the policy node that you want to map to the family.

Note: The policy node that you map to the family should be an entity node that is part of the policy that you linked to the Compliance Strategy Template.

4. Select

The policy mapping is saved.

Example: Compliance Strategy Template and Inspection Plan

The following example details a Compliance Strategy Template with a working policy that results in a cohesive Inspection Plan.

This topic has been intentionally excluded from the APM product documentation website. This topic is available to you via the product documentation that is provided within the APM system.

Compliance Strategy Templates for European Inspection Management

The following table lists the Compliance Strategy Templates for the European Inspection Management:

| Compliance Strategy Template | Asset Type | Policy | Family | Query |
|---------------------------------|------------|--------------|---------------------|--|
| EU_PIPE_FL | Piping | EU_PIPE_FLOC | Functional Location | Public \Meridium \Modules \Inspection \Compliance \EU Regulation \Queries\EU_ Available_ Assets_ Piping_FLOC |
| EU_PIPE_EQ | Piping | EU_PIPE_EQPT | Equipment | Public \Meridium \Modules \Inspection \Compliance \EU Regulation \Queries\EU_ Available_ Assets_ Piping_EQP |

| Compliance Strategy Template | Asset Type | Policy | Family | Query |
|---------------------------------|------------------------|-------------|---------------------|--|
| EU_SB_FL | Steam Boiler | EU_SB_FLOC | Functional Location | Public \Meridium \Modules \Inspection \Compliance \EU Regulation \Queries\EU_ Available_ Assets_ SteamBoiler_ FLOC |
| EU_SB_EQ | Steam Boiler | EU_SB_EQPT | Equipment | Public \Meridium \Modules \Inspection \Compliance \EU Regulation \Queries\EU_ Available_ Assets_ SteamBoiler_ EQP |
| EU_SPV_FL | Simple Pressure Vessel | EU_SPV_FLOC | Functional Location | Public \Meridium \Modules \Inspection \Compliance \EU Regulation \Queries\EU_ Available_ Assets_SPV_ FLOC |

| Compliance Strategy Template | Asset Type | Policy | Family | Query |
|---------------------------------|------------------------|-------------|---------------------|---|
| EU_SPV_EQ | Simple Pressure Vessel | EU_SPV_EQPT | Equipment | Public \Meridium \Modules \Inspection \Compliance \EU Regulation \Queries\EU_ Available_ Assets_SPV_ EQP |
| EU_PV_FL | Pressure Vessel | EU_PV_FLOC | Functional Location | Public \Meridium \Modules \Inspection \Compliance \EU Regulation \Queries\EU_ Available_ Assets_ PressureVesse l_FLOC |
| EU_PV_EQ | Pressure Vessel | EU_PV_EQPT | Equipment | Public \Meridium \Modules \Inspection \Compliance \EU Regulation \Queries\EU_ Available_ Assets_ PressureVesse l_EQP |

Create European Admin Settings

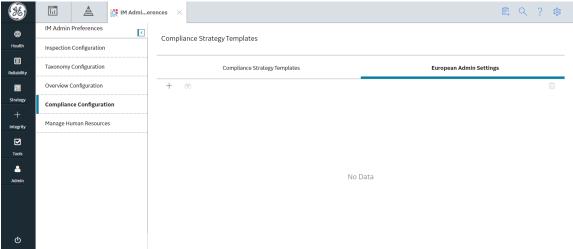
About This Task

The European Admin Settings family stores site-specific Compliance related information which is mapped to a newly created Inspection Task for the site.

Procedure

- 1. In the module navigate menu select Admin > Application Settings > Inspection Management. The IM Admin Preferences page appears.
- 2. Select Compliance Configuration. The **Compliance Strategy Templates** workspace appears.
- 3. Select the European Admin Settings tab.

The **European Admin Settings** section appears. A M Admi...erences



4. Select +

The New European Admin Settings workspace appears, displaying the European Admin Settings

- 5. In the datasheet, enter values in the available fields.
- 6. Select

A new site-specific record is created in the **European Admin Settings** datasheet.

Note: To print the record, select $\frac{8}{3}$, and then select **Print**. The records is printed in the PDF format and downloaded to the default download directory.

Delete a European Admin Settings Record

About This Task

You can delete a site-specific record stored in the European Admin Settings list.

Note: When you delete an existing record from the European Admin Settings list that is already mapped to an European Inspection Task, the Inspection task will not be impacted by this change.

- 1. In the module navigate menu select Admin > Application Settings > Inspection Management. The IM Admin Preferences page appears.
- 2. Select Compliance Configuration.
 - The **Compliance Strategy Templates** workspace appears.
- 3. Select the European Admin Settings tab. The European Admin Settings section appears, displaying the list of available records in the European Admin Settings tab.
- 4. Select the check box next to the record you want to delete and then, select $\widehat{\mathbb{u}}$.

A window appears, asking you to confirm that you want to delete the record.

5. Select **Yes**.

The record is deleted.

Chapter 1 ∩

Deployment and Upgrade

Topics:

- Deployment
- Upgrade

Deployment

Deployment

Refer to the deployment information here Deploy Compliance Management.

Upgrade

Upgrade

Refer to the upgrade information here Upgrade or Update Compliance Management to V5.0.5.0.0.

Chapter

11

Reference

Topics:

- General Reference
- Data Models
- Family Field Descriptions
- Family Search Configuration
- European Inspection Management Policies
- European Inspection
 Management Field Mappings
- European Inspection
 Management Annexure-1

General Reference

The MIExecution Service

The MIExecution Service is a service available in the APM server, which processes jobs in the Inspection Management, Integrity Mobile, Risk Based Inspection, and Thickness Monitoring module queues. It uses a single shared ActiveMQ queue service across APM.

Supported Job Types

- Inspection Management
- Integrity Mobile
- Risk Based Inspection
- · Thickness Monitoring

Configuration

You can configure the following parameters of the MIExecution Service:

| Parameter | Description | Default Value |
|------------------|--|---------------|
| ConcurrencyLimit | The maximum number of messages consumed concurrently. | 100 |
| Retries | The number of times the service retries to send the messages to ActiveMQ in case of a failure. | 5 |

For instructions of configuring these settings, refer to .

Compliance Queries

Compliance Folder Items

The Catalog folder \\Public\Meridium\Modules\Inspection\Compliance\Queries contains the following queries used in the Compliance workflow.

| Query | Behavior and Usage | Behavior and Usage | |
|--|---|---|--|
| Assets with Templates without Inspection Plans | Displays assets that have a Compliance Strategy Template linked. This query is used in the Assets with Templates section in the Compliance Management Overview page. The entity key of the asset must be used in the query and have the alias ASSET_ENTY_KEY. | | |
| Assets without Templates | Displays assets that do not have a Compliance Strategy Template linked. This query is used in the Assets without Templates section in the Compliance Management Overview page. The following columns in the query must be used, and the aliases must contain the following values. | | |
| | Column | Alias | |
| | MI_ENTITY.ENTY_KEY | ASSET_ENTY_KEY | |
| | [MLSUGG_COMP_TEMP]. [MLSUGG_COMP_TEMP_TMP_KEY_ N] | TEMP_KEY | |
| Compliance Template Assets | compliance category. This quer Assets section in the Complian | Displays the Compliance Strategy Templates for a given compliance category. This query is used for populating the Assets section in the Compliance Strategy Template in the Compliance Configuration section of the IM Admin Preferences page. | |
| | Important: The ASSET_ENTY_KEY must not be modified or deleted. If you are using assets that are from families other than Equipment or Functional Location, you must add the family to the query using a union. | | |
| Compliance Templates by Category | Displays the assets associated with a given Compliance Strategy Template. | | |
| | must not be removed, and the | Important: The [MI_COMP_STRAT_TEMP].ENTY_KEY column must not be removed, and the alias, ENTY_KEY, must not be modified. In the WHERE criteria, the ID of the parameter must be category. | |
| Assets with Inspection Plans | Displays the assets that are as | Displays the assets that are associated with an Inspection Plan. | |
| Compliance Management Overview Filter Parameters | This query is used in the Comp page. | This query is used in the Compliance Management Overview page. | |
| Compliance Templates | | This query is used in the Compliance Templates section in the Compliance Management Overview page. | |
| Assets with Compliance Recommendations | Displays the Compliance Recor | Displays the Compliance Recommendations count for an Asset. | |

Inspection Plan Queries

 $\label{thm:local_public_meridium_modules_Inspection_Compliance_Queries} \\ contains the following queries used in the Inspection Plan workflow. \\$

Query **Behavior and Usage** Displays Recommendations based on the Inspection Plan. Compliance Recommendations by Plan The following columns in the query must be used, and the aliases must contain the following values. Column Alias [MI_COMP_RECOMM].ENTY_ID AND REC_ENTY_ID [MI_RBIRECOM].ENTY_ID REC_ENTY_KEY [MI_COMP_RECOMM].ENTY_KEY AND [MI_RBIRECOM].ENTY_KEY [MI_TASKINSP].[MI_TASK_ID] Task ID a."SUCC_ENTY_KEY" Linked Actions [MI_TASKINSP].ENTY_KEY TASK KEY {MIR_RBICRAN}.PRED_ENTY_KEY Comp Key Note: For Compliance Recommendations, the column must be set to NULL. For RBI Consolidated Recommendations, the column must be set to 0. PRED_ENTY_KEY Analysis Key Note: For Compliance Recommendations, the column must be set to NULL. For RBI Consolidated Recommendations, the column must be set to 0. MI_SM_STATES.SMST_ID STATE_ID [MI_COMP_RECOMM].FMLY_KEY FMLY_KEY AND [MI_RBIRECOM].FMLY_KEY [MI_RBIRECOM]. NonRecurring? [MI_RBIRECOM_NONRE_FLG] Important: \\Public\Meridium\Modules \Inspection\Compliance\Queries \Compliance Superseded Recommendation Counts is a subquery and must not be removed from the parent query. In this subquery, the SUCC_ENTY_KEY column is required, and the alias must not be modified.

| Query | Behavior and Usage | |
|---|--|--|
| Compliance Recommendations to Supersede | Displays Recommendations for a given entity keys. This query is used to select the master Recommended Action while superseding Compliance Recommendations in the Recommendation section of the Inspection Plan page. | |
| | Important: The [MI_RBIRECOM].ENTY_KEY column must not be removed, and the alias REC_ENTY_KEY must not be modified. | |
| Compliance Superseded Recommendations | Displays a list of Consolidated and Superseded Recommendations. This query is used to access the linked actions in the Inspection Plan page. Note: The [MI_RBIRECOM].ENTY_KEY column must not be removed, and the alias REC_ENTY_KEY must not be modified. | |
| Inspection Tasks for Asset | Displays the Inspection Tasks for an asset. This query is used to access the Existing Tasks in the Inspection Plan page. Important: In the WHERE criteria, the ID of the parameter must be ASSET_ENTY_KEY. | |
| Compliance Superseded Recommendation Counts | Returns the count of Consolidated and Superseded Recommendations. This query is used in the Recommendation section of the Inspection Plan page. | |
| Inspection Tasks Available to Implement | Displays the Inspection Tasks available to implement for a Compliance Recommendation. This query is used to access the Inspection tasks after selecting the Implement button in the Inspection Plan page. | |
| Recommended Actions by Selected Plans | Displays unimplemented actions from a given Inspection Plan. This query is used in the Inspection Plan page. The following columns in the query must be used, and the aliases must not be changed. | |
| | Column Alias | |
| | [MI_COMP_RECOMM].ENTY_ID AND REC_ENTY_ID REC_ENTY_ID | |
| | {MIR_ASST_HAS_INSP_PLAN}.PRED ASSET_KEY _ENTY_KEY | |
| | Important: In the WHERE clause, the ID of the parameter must be ENTY_KEYS. | |

| Query | Behavior and Usage | |
|---|--|----------|
| Link Existing Task to Recommended Action | Returns an Inspection Task to link to a given Recommer based on Asset and Task Type. This query is used in the Inspection Plan page. The following columns in the que be used, and the aliases must not be changed. | |
| | Column | Alias |
| | [MI_TASKINSP].ENTY_KEY | ENTY_KEY |
| | Important: In the WHERE clause, the following parameter IDs must be provided and not modified: TASK_TYPE ASSET_KEY | |
| All Inspection Plans for Unit | Returns all Inspection Plans for the selected location in the hierarchy. This query is used to access all the Inspection plans in the Inspection Plan Management page. | |
| Active Recommendations of Plans for Unit | Returns all active recommendations for Inspection Plans for the selected location in the hierarchy. This query is used to view active recommendations in the Inspection Plan Management page. | |
| Inspection Plan Revisions | Displays the Inspection Plan Revisions for a given Inspection Plan. This query is used to retrieve the revisions for an Inspection Plan. | |
| | Important: | |
| | The column [MI_INSP_PLAN_REV]. [MI_INSP_PLAN_REV_DATE_D] must not be removed and its alias must not be changed. In the WHERE clause, the ID of the parameter must be PLAN_ENTY_KEY. | |
| Compliance Recommendation Revisions for Inspection Plan | Displays the Recommendation Revision records for a given Inspection Plan Revision. This query is used in the Inspection Plan page to view the revisions for a Recommendation. | |
| | Important: | |
| | removed and its alias mus | |
| | In the WHERE clause, the ID of the parameter must be PLAN_REV_ENTY_KEY. | |

Dashboard Queries Folder Items

The Catalog folder \\Public\Meridium\Modules\MehcanicalIntegrity\Queries \Dashboard Queries contains the following items that are used in the Compliance Management Overview page.

| Query | Behavior and Usage |
|--|---|
| Compliance Recommendations with Approved Plans | This query is used in the Active Recommendation Summary section in the Compliance Management Overview page. |
| Inspection Plan States | This query is used in the Inspection Plan Summary section in the Compliance Management Overview page. |

Compliance Permissions

The following security privileges have been assigned to the <text> Dublic Meridium Modules $\$ Inspection Compliance folder.

| Role | Permissions |
|---------------------------------------|---|
| MI Inspection | ViewEditCreateDelete |
| MI Inspection Viewer | View |
| MI RBI Administrator | View |
| MI RBI Analyst | View |
| MI Thickness Monitoring Administrator | View |
| MI Thickness Monitoring Inspector | View |
| MI Thickness Monitoring User | View |

European Inspection Management Queries

The following table lists the queries for European Inspection Management.

| Name of the Query | Query Description |
|---|--|
| EU_Available_Assets_Piping_EQP | Retrieves all the piping equipment available for linking to a Compliance Strategy Template. |
| EU_Available_Assets_Piping_FLOC | Retrieves all the piping functional locations available for linking to a Compliance Strategy Template. |
| EU_Available_Assets_PressureVessel_EQP | Retrieves all the pressure vessel equipment available for linking to a Compliance Strategy Template. |
| EU_Available_Assets_PressureVessel_FLOC | Retrieves all the pressure vessel functional locations available for linking to a Compliance Strategy Template. |
| EU_Available_Assets_SPV_EQP | Retrieves all the simple pressure vessel equipment available for linking to a Compliance Strategy Template. |
| EU_Available_Assets_SPV_FLOC | Retrieves all the simple pressure vessel functional locations available for linking to a Compliance Strategy Template. |
| EU_Available_Assets_SteamBoiler_EQP | Retrieves all the steam boiler equipment available for linking to a Compliance Strategy Template. |

| Name of the Query | Query Description |
|--------------------------------------|--|
| EU_Available_Assets_SteamBoiler_FLOC | Retrieves all the steam boiler functional locations available for linking to a Compliance Strategy Template. |
| EU_Piping_Filter_EQ | Retrieves all the asset technical data records related to a piping equipment. |
| EU_Piping_Filter_FL | Retrieves all the asset technical data records related to a piping functional location. |
| EU_PresssureVessel_Filter_EQ | Retrieves all the asset technical data records related to a pressure vessel equipment. |
| EU_PresssureVessel_Filter_FL | Retrieves all the asset technical data records related to a pressure vessel functional location. |
| EU_SimplePressureVessel_Filter_EQ | Retrieves all the asset technical data records related to a simple pressure vessel equipment. |
| EU_SimplePressureVessel_Filter_FL | Retrieves all the asset technical data records related to a simple pressure vessel functional location. |
| EU_SteamBoiler_Filter_EQ | Retrieves all the asset technical data records related to a steam boiler equipment. |
| EU_SteamBoiler_Filter_FL | Retrieves all the asset technical data records related to a steam boiler functional location. |

Compliance Management URLs

There is one URL route associated with Compliance Management: cm. The following table describes the various paths that build on the route and the elements that you can specify for each.

| URL | Destination |
|---|-------------|
| cm/overviewThe Compliance Management Overview p | age. |

Compliance Strategies URLs

The following URLs in Inspection Management allow you to access Compliance Strategies administrative options.

| Element | Description | Accepted Value(s) | Notes |
|---|---|--|------------------------------|
| im-admin-preferences/compliance-configuration: Accesses the Compliance Strategies workspace. | | | |
| im-admin-preference Strategy Template. | es/compliance-conf | iguration/ <template< td=""><td>eKey>: Accesses a Compliance</td></template<> | eKey>: Accesses a Compliance |
| <templatekey></templatekey> | Specifies the entity key of the Compliance Strategy Template that you want to view. | The entity key of any Compliance Strategy Template. | None. |

Inspection Plan URLs

The following table describes the various paths that are used for the Inspection Plan workflow.

| Element | Description | Accepted Value(s) | Notes | |
|---|--|---|--|--|
| cm/asset/ <assetkey< td=""><td colspan="4">cm/asset/<assetkey>: Accesses the Inspection Plan for the specified asset.</assetkey></td></assetkey<> | cm/asset/ <assetkey>: Accesses the Inspection Plan for the specified asset.</assetkey> | | | |
| cm/plans: Accesses the Inspection Plan Management page. | | | | |
| <assetkey></assetkey> | Specifies the entity key of the asset record which you want to view. | Any asset key that is associated with an asset in the Asset Hierarchy | You should use the asset key of an asset that has an Inspection Plan created. If you select an asset that does not have an Inspection Plan, a warning message appears. | |

| URLs | |
|---------------------|---|
| Example URL | Destination |
| cm/asset/3290820029 | The Inspection Plan for the selected asset. |

Compliance Management System Code Tables

The following table lists the System Code Tables that are used by Compliance Management.

| Table ID | Table Description | Function |
|--------------------------------|-----------------------------|---|
| INSM | Inspection Interval Types | Used to populate the Desired Interval Basis list in Inspection Task records. |
| MI DEGRADATION MECHANISM TYPES | Degradation Mechanism Types | Used to populate the Degradation Mechanism list in Inspection Plan records. |

European Inspection Management System Code Tables

The following table lists the System Code Tables that are used by European Inspection Management.

| Table ID | Table Description | Function |
|------------------------|--------------------------|--|
| MI_COMPLIANCE_STANDARD | Compliance Standard | This system code table stores the certification value. The values in this field are populated from a drop-down list box. |
| MI_INTGY_FLUID_CTGY | Integrity Fluid Category | This system code table stores the fluid category list. The values in this field are populated from a drop-down list box. |

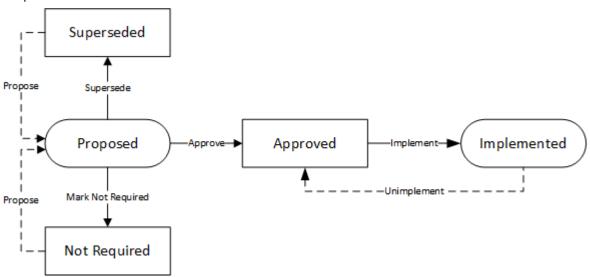
| Table ID | Table Description | Function |
|-----------------------------|----------------------------------|--|
| NR13_FLAMMABLE | NR13_FLAMMABLE | This system code table stores the type of fluid. The fluid type is either Combustible or Flammable. |
| FLUID TYPES | Fluid Types | This system code table stores the type of fluid. The fluid type is either Gas or Liquid. |
| MI_INTGY_ASSET_TYPE | Integrity Asset Type | This system code table is required to calculate certification requirements for the asset of the following types: Pressure Vessel Simple Pressure Vessel Steam Boiler Piping |
| MI_INTGY_REGULATION | Integrity Inspection Regulations | This system code table is populated with a list of European Inspection regulations to be linked to a task. This field is always disabled. |
| MI_MAPPING_REFERENCE | MI Mapping Reference | This system code table stores the references of a Compliance Recommendation Mapping record |
| MI_INTGY_FLUID_NAME | Integrity Fluid Name | This system code table stores a list of fluid names. You can choose from the baseline values, populated from a dropdown list box |
| MI_INTGY_FLUID_GROUP | Integrity Fluid Group | This system code table specifies the fluid group according to Table F: Fluid Group Table. |
| MI_INTGY_GRACE_PERIOD_BASIS | Grace Period Basis | This system code table contains the information about basis on which the Inspection Grace Date is calculated. |
| MI_CHAMBER | Chamber | This system code table information about the type of chamber. The values in this field are populated from a drop-down list box. |
| EU_INSP_INST | European Inspection Instructions | This system code table stores the value selected in the Inspection Instruction. The values in this field are populated from a drop-down list box. |

| Table ID | Table Description | Function |
|-----------------------|-------------------|---|
| MI_EN_DOC_CTGY | Inspection | This system code table stores the value selected in the Inspection Document Category. The values in this field are populated from a drop-down list box. |
| MI_EU_TASK_RESCHEDULE | Inspection | This system code table captures the information based on how the Next Date field is calculated. The field can be calculated either by the Completion Date or the Previous Next Date. This field is always disabled. |

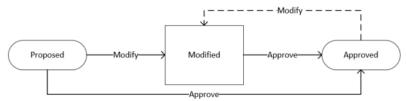
Compliance Management State Management

The following state changes can be applied to Compliance Recommendations and Inspection Plans based on user Security Roles.

The diagram below shows the workflow of the baseline State Management process as it applies to Compliance Recommendations.



The diagram below shows the workflow of the baseline State Management process as it applies to Inspection Plans.



Details

- The Proposed state is the initial state of all Compliance Recommendations.
- The Proposed state is the initial state of all Inspection Plans.
- When you change the state of an Inspection Plan from Approved to Modified, an Inspection Plan Revision History record is created.

• Operations in Compliance Management change the state of Compliance Recommendations or Inspection Plans. Users must have the appropriate security roles to execute these operations.

Reserved States and Operations for Compliance Recommendations

The following tables indicate whether the baseline states and operations are reserved. You cannot remove or modify reserved states or operations.

| State Caption | Reserved State | Security Role |
|---------------|----------------|---|
| Implemented | Yes | MI Compliance Analyst MI Inspection Plan Approver |
| Not Required | Yes | MI Compliance Analyst MI Inspection Plan Approver |
| Proposed | No | MI Compliance Analyst MI Inspection Plan Approver |
| Superseded | Yes | MI Compliance Analyst MI Inspection Plan Approver |

| Operation | Reserved Operation | Predecessor State | Successor State | |
|-------------------|--------------------|-------------------|-----------------|--|
| Implement | Yes | Proposed | Implemented | |
| Propose | No | Not Required | Proposed | |
| Propose | No | Superseded | Proposed | |
| Mark Not Required | Yes | Proposed | Not Required | |
| Supersede | Yes | Proposed | Superseded | |
| Unimplement | implement Yes | | Proposed | |
| Approve | prove Yes | | Approved | |

Reserved States and Operations for Inspection Plans

The following tables indicate whether the baseline states and operations are reserved. You cannot remove or modify reserved states or operations.

| State Caption | Reserved State | Security Roles |
|---------------|----------------|---|
| Approved | No | MI Inspection Plan Approver |
| Modified | Yes | MI Compliance Analyst MI Inspection Plan Approver |
| Proposed | No | MI Compliance Analyst MI Inspection Plan Approver |

| Operation ID | on ID Reserved Operation Predecessor | | Successor |
|---------------------|--------------------------------------|----------|-----------|
| MI_APPROVE | No | Proposed | Approved |
| MI_APPV_MODIFIED No | | Modified | Approved |
| MI_MODIFY | MODIFY Yes | | Modified |
| MI_PROMOTE | Yes | Proposed | Accepted |

Compliance Recommendation and Inspection Task Mappings

When you implement a Compliance Recommendation, you can create new Inspection Tasks or link existing Inspection Tasks to the Compliance Recommendation. Values from the Compliance Recommendation fields populate fields in the Inspection Task.

The following tables list the Inspection Task fields that are populated automatically from these sources.

Table 1: Link Existing Inspection Tasks to Compliance Recommendations

| Field | Value | Source |
|------------------------|--|---------------------------|
| Desired Interval | The value in the Recommended Interval Scope field. | Compliance Recommendation |
| | Note: This field is populated with the value of the Recommended Interval Scope field only if the value in the Override Interval field is False. | |
| Desired Interval Basis | Compliance Recommendation Note: This field is populated with the value of the Recommended Interval Scope field only if the value in the Override Interval field is False. | Compliance Recommendation |
| Task Details | The value in the Recommended Inspection Scope field. | Compliance Recommendation |
| Task Type | The value in the Task Type field. | Compliance Recommendation |

Table 2: Link New Tasks to Compliance Recommendations

| Field | Value | Source |
|------------------------|---|---------------------------|
| Desired Interval | The value in the Recommended Interval Scope field. | Compliance Recommendation |
| Desired Interval Basis | Compliance Recommendation | Compliance Recommendation |
| Override Interval | False | Compliance Recommendation |
| Task Details | The value in the Recommended Inspection Scope field. | Compliance Recommendation |
| Task ID | The values in the Damage Mechanism and Task Type fields in the following format: <damage mechanism=""><task type="">.</task></damage> | Compliance Recommendation |

| Field | Value | Source |
|-----------|--|---------------------------|
| Task Type | The value from the Task Type field. | Compliance Recommendation |
| Asset Key | The key of the asset that the recommendation is linked to. | Compliance Recommendation |
| Last Date | User provided input. Default value is current date. | Compliance Recommendation |

European Inspection Management Security Groups

The following table lists the baseline Security Groups available for users within this module, as well as the baseline Roles to which those Security Groups are assigned.

Important: Assigning a Security User to a Role grants that user the privileges associated with all of the Security Groups that are assigned to that Role. To avoid granting a Security User unintended privileges, before assigning a Security User to a Role, be sure to review all of the privileges associated with the Security Groups assigned to that Role. Also, be aware that additional Roles, as well as Security Groups assigned to existing Roles, can be added via Security Manager.

| Security Group | Roles | | |
|---------------------------------------|---------------------------------------|--|--|
| RBI Security Groups | | | |
| MI RBI Administrator | MI Mechanical Integrity Administrator | | |
| MI RBI Analyst | MI Mechanical Integrity Administrator | | |
| | MI Mechanical Integrity Power | | |
| MI RBI Viewer | MI APM Viewer | | |
| | MI Mechanical Integrity Viewer | | |
| TM Security Groups | | | |
| MI Thickness Monitoring Viewer | MI APM Viewer | | |
| | MI Mechanical Integrity Viewer | | |
| MI Thickness Monitoring User | MI Mechanical Integrity Administrator | | |
| | MI Mechanical Integrity Power | | |
| | MI Mechanical Integrity User | | |
| MI Thickness Monitoring Inspector | MI Mechanical Integrity Administrator | | |
| | MI Mechanical Integrity Power | | |
| | MI Mechanical Integrity User | | |
| MI Thickness Monitoring Administrator | MI Mechanical Integrity Administrator | | |
| Inspection Management Security Groups | | | |

| Security Group | Roles | |
|----------------------|---------------------------------------|--|
| MI Inspection | MI Mechanical Integrity Administrator | |
| | MI Mechanical Integrity Power | |
| | MI Mechanical Integrity User | |
| MI Inspection Viewer | MI Mechanical Integrity Viewer | |
| | MI APM Viewer | |

The following table provides a list of the baseline family-level privileges that exist for the MI RBI Administrator, MI RBI Analyst, and MI RBI Viewer Security Groups.

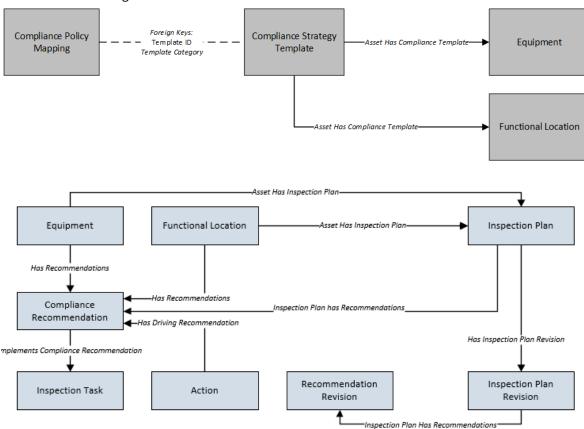
The baseline family-level privileges that exist for these Security Groups are summarized in the following table.

| Family | MI RBI Administr ator | MI RBI Analyst | MI RBI Viewer | MI Thickness Monitorin g Viewer | MI Thickness Monitorin g User | MI Thickness Monitorin g Inspector | MI Thickness Monitorin g Administr ator | MI Inspectio n | MI Inspectio n Viewer |
|-------------------------------------|---------------------------------------|---------------------------------------|------------------|--|--|--|--|---------------------------------------|-----------------------------|
| Fluid Data | View, Update, Insert, Delete | View, Update, Insert, Delete | View | View | View | View | View, Update, Insert, Delete | View, Update, Insert, Delete | View |
| Asset Technical Data | View, Update, Insert, Delete | View, Update, Insert, Delete | View | View | View | View | View, Update, Insert, Delete | View, Update, Insert, Delete | View |
| Complianc e Recomme ndation Mapping | View, Update, Insert, Delete | View, Update, Insert, Delete | View | View | View | View | View, Update, Insert, Delete | View, Update, Insert, Delete | View |
| Inspection Summary Reference | None | None | View | None | None | View | None | View, Update, Insert, Delete | View |
| European Admin Settings | None | None | View | None | None | View | None | View, Update, Insert, Delete | View |

Data Models

Compliance Management Data Model

The following diagram illustrates how families are related within the Compliance Management data models. In the following images, boxes represent entity families, and arrows represent relationship families that are configured in the baseline database.



Asset Has Inspection Plan Relationship

The Asset Has Inspection Plan family links an asset to an Inspection Plan.

The table below provides a description of the relationship definitions that exist for the Asset Has Inspection Plan Relationships family.

| Predecessor | Successor | Cardinality |
|---------------------|-----------------|-------------|
| Equipment | Inspection Plan | One to One |
| Functional Location | Inspection Plan | One to One |

Inspection Plan Has Recommendations Relationship

The Inspection Plan Has Recommendations family links Compliance Recommendations to Inspection Plans. This family also links the Recommendation Revision and the Inspection Plan revision.

The table below provides a description of the relationship definitions that exist for the Inspection Plan Has Recommendations family.

This family is not enabled for site filtering, which means that records in this family can be accessed by any user with the appropriate license and family privileges. For more information, refer to the Sites section of the documentation.

| Predecessor | Successor | Cardinality |
|--------------------------|---------------------------|-------------|
| Inspection Plan | Compliance Recommendation | One to Many |
| Inspection Plan Revision | Recommendation Revision | One to Many |

Has Inspection Plan Revision Relationship

The Has Inspection Plan Revision family is a relationship family that links the Inspection Plan to the Inspection Plan revision.

The table below provides a description of the relationship definitions that exist for the Has Inspection Plan Revision family.

This family is not enabled for site filtering, which means that records in this family can be accessed by any user with the appropriate license and family privileges. For more information, refer to the Sites section of the documentation.

| Predecessor | Successor | Cardinality | Foreign Key |
|-----------------|--------------------------|-------------|--|
| Inspection Plan | Inspection Plan Revision | One to Many | FK_HAIN_PR_INPL_INPL_R_N on the Inspection Plan Revision record. |

Implements Compliance Recommendation Relationship

The Implements Compliance Recommendation family links Compliance Recommendations to Inspection Tasks.

The table below provides a description of the relationship definitions that exist for the Implements Compliance Recommendation family.

This family is not enabled for site filtering, which means that records in this family can be accessed by any user with the appropriate license and family privileges. For more information, refer to the Sites section of the documentation.

| Predecessor | Successor | Cardinality |
|-----------------|---------------------------|-------------|
| Inspection Task | Compliance Recommendation | One to One |

Has Driving Recommendation Relationship

The Has Driving Recommendation family links Compliance Recommendations to Actions.

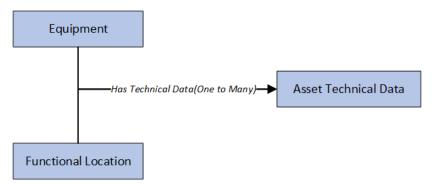
The table below provides a description of the relationship definitions that exist for the Has Driving Recommendation family.

This family is not enabled for site filtering, which means that records in this family can be accessed by any user with the appropriate license and family privileges. For more information, refer to the Sites section of the documentation.

| Predecessor | Successor | Cardinality |
|-------------|---------------------------|-------------|
| Action | Compliance Recommendation | One to One |

European Inspection Management Data Model

The following diagram shows how the families are related within the European Inspection Management Data Models.



Note: In the diagram, boxes represent entity families and arrows represent relationship families that are configured in the baseline database.

Has Technical Data Relationship

This relationship family is used to link Asset Technical Data to an Equipment or Functional Location.

Family Field Descriptions

Compliance Policy Mapping Records

The Compliance Policy Mapping family stores information related to the Compliance policy that is mapped to the Compliance Strategy Template.

The table below provides an alphabetical list and description of the fields that exist for the Compliance Policy Mapping family. The information in the table reflects the baseline state and behavior of these fields. This list is not comprehensive.

| Field | Data Type | Description | Behavior and Usage |
|--------------------------------|-----------|---|---|
| Family | Character | Defines the asset entity family to be mapped to the policy. | This field is required. This field is disabled and populated with the value of the asset family from Compliance Strategy Template records. |
| FK_COTE_HM_COST_T_COPO_ M_N | Character | The Foreign Key field that is used to relate the mapping to the Compliance Strategy Template. | This field is disabled. This field does not appear in the datasheet. |
| Policy Node | Character | Defines the policy input node into which the defined entity will be mapped. | This field is user-defined. This field contains the node name of the input node in the mapped policy. |
| Template ID | Character | Stores the Template ID to which the mapping is related. | This field is populated with the Strategy Template ID field value. |
| Template Category | Character | Stores the Template Category to which the mapping record is related. | This field is populated with the Strategy Template Category field value.This field does not appear in the datasheet. |

Compliance Recommendation Records

The Compliance Recommendation family stores details related to Compliance Recommendations.

The table below provides an alphabetical list and description of the fields that exist for the Compliance Recommendation family. The information in the table reflects the baseline state and behavior of these fields. This list is not comprehensive.

This family is enabled for site filtering, which means that records in this family can be assigned to a specific site and will only be accessible to users who are assigned to the same site and have the appropriate license and family privileges. For more information, refer to the Sites section of the documentation.

| Field | Data Type | Description | Behavior and Usage |
|------------------------|-----------------|---|---|
| Applicable Regulation | Character (255) | Stores the regulation type that is applicable to a task. | This field is populated from the Asset Technical Data. It contains a list of regulations which are linked to a task. This field is populated with a description of system codes stored in MI_INTGY_REGULATION system code table. This field is always disabled. |
| Certification | Character (255) | Stores the certification value. | The values in this field are populated from a drop-down list box and contains a list of system codes that exist in the MI_COMPLIANCE_STANDARDS system code table. In baseline, the Certification field populates the values which are referenced by MI_INTGY_REGULATION system code table. By default, it shows ZUS and BP. |
| Chamber | Character (255) | Stores information about the type of chamber. | This field contains a list of system codes that exist in the MI_CHAMBER system code table. The values in this field are populated from a dropdown list box. Note: The values are copied from Asset Technical Data. |
| Comments | Character (255) | Stores the reason that a Compliance Recommendation is marked as Not Required. | When a Compliance Recommendation is marked Not Required, this field stores the reason that is entered by the user. This field is disabled when the Compliance Recommendation is in the Implemented state. |
| Damage Mechanism | Character (50) | Stores the Damage Mechanism from the Compliance Strategy record. | This field is disabled. |
| Inspection Strategy ID | Character (255) | Stores the ID of the Compliance Strategy record that generated the recommendation. | This field is disabled. |

| Field | Data Type | Description | Behavior and Usage |
|---------------------------------|------------------|--|---|
| Recommendation ID | Character (255) | The unique ID assigned to the recommendation. | This field is populated automatically by business rules. This field is disabled. |
| Recommended Interval Scope | Numeric (Months) | Stores the Interval Scope value from the Compliance Strategy record. | This field is disabled when the Compliance Recommendation is in the Implemented state. |
| Recommended Inspection Scope | Text | Stores the Inspection Scope from the Compliance Strategy record. | This field is disabled when the Compliance Recommendation is in the Implemented state. |
| Source | Character | Stores the entity key of the source Compliance Strategy Template. | This field is populated with the Compliance Strategy Template name. This field is disabled. |
| Task Type | Character (50) | Stores the Task Type from the Compliance Strategy record. | This field is disabled when the Compliance Recommendation is in the Implemented state. |

Compliance Strategy Records

The Compliance Strategy family stores information related to a compliance-based regulation or specification. The Compliance Strategy ID of these records are returned by policies to create Compliance Recommendations when creating or updating an Inspection Plan.

The table below provides an alphabetical list and description of the fields that exist for the Compliance Strategy family. The information in the table reflects the baseline state and behavior of these fields. This list is not comprehensive.

| Field | Data Type | Description | Behavior and Usage |
|---------------------------------|-----------|--|--|
| Compliance Strategy Description | Character | Stores the description of the Compliance Strategy record. | This value in this field is user-defined. |
| Compliance Strategy ID | Character | Stores the ID of the Compliance Strategy record. | The value in this field must be unique. This field is required. This field is disabled after saving. |
| Degradation Mechanism | Character | Stores the Degradation Mechanism associated with the Compliance Strategy record. | This field is populated by the MI_DEGRADATION_MECHANIS M_TYPES system code table. |

| Field | Data Type | Description | Behavior and Usage |
|---------------------------------------|------------------|--|--|
| Inspection Task Type | Character | Stores the Task Type of the Tasks contained in the Compliance Strategy record. | This field is populated by a list of values from the Task Type ID field of the Task Types family where the reference field is INSPECTION_STRATEGY. |
| Recommendation Inspection Interval | Numeric (Months) | Stores the Inspection Interval of the Compliance Strategy Record. | This field can be overridden by the user. |
| Recommended Inspection Scope | Text | Stores the Inspection Scope of the Compliance Strategy record. | None |

Compliance Strategy Template Records

The Compliance Strategy Template family stores information related to Compliance Strategy Templates that are created by the user. When linked to an asset, these records indicate which policy to execute to generate an Inspection Plan.

The table below provides an alphabetical list and description of the fields that exist for the Compliance Strategy Template family. The information in the table reflects the baseline state and behavior of these fields. This list is not comprehensive.

| Field | Data Type | Description | Behavior and Usage |
|--------------------|-----------|---|---|
| Asset Family | Character | Lists families that are included in the Asset Has Compliance Template relationship. | This field is populated by a list of families that are included in the Asset Has Compliance Template relationship. The value in this field is used to enforce asset records that are linked to that template. When a new record is created, this field is enabled. When the record is saved, this field is disabled. |
| Asset Lookup Query | Character | Stores the catalog path for the query to look up assets. | This field is disabled and populated automatically when you select a catalog query for a Compliance Strategy Template. |

| Field | Data Type | Description | Behavior and Usage |
|-------------|-----------|---|--|
| Category | Character | Stores the name of the compliance category. | This field is populated by a list of all available Compliance Strategy Template Categories. Users can add new categories using the Add Caption field. After the user saves the Compliance Strategy Template, this field is disabled. This field is required. |
| Description | Text | Contains the user-defined description for a Compliance Strategy Template. | By default, this field does not contain a value. Optionally, you can enter a value in this field. |
| Name | Character | Defines the name of a specific template. | This field is required. This field is populated by the user-defined name of the Compliance Strategy Template. The value in this field must be unique. |
| Policy Name | Character | Contains the name of the policy that is selected for the strategy. | This field is required. This field is populated by a list of all available policies in APM. The value in this field is the policy name of the selected policy record. |
| Policy Link | Character | Contains the text "View Policy". | This field is formatted to provide the hyperlink that navigates to the Policy Designer page for the selected policy. |

Inspection Plan Records

The Inspection Plan family stores details of Inspection Plans. This family stores the states of recommendations that are on the Inspection Plans.

The table below provides an alphabetical list and description of the fields that exist for the Inspection Plan family. The information in the table reflects the baseline state and behavior of these fields. This list is not comprehensive.

This family is enabled for site filtering, which means that records in this family can be assigned to a specific site and will only be accessible to users who are assigned to the same site and have the appropriate license and family privileges. For more information, refer to the Sites section of the documentation.

| Field | Data Type | Description | Behavior and Usage |
|------------------------|-----------|---|---|
| MI_SM_STATE_ENTERED_D | Date | Stores the date of the Inspection Plan state change. | This field is populated automatically. |
| MI_SM_STATE_ID_C | Character | Stores the ID of the current state of the Inspection Plan. | This field is populated automatically. |
| MI_SM_STATE_KEY_N | Numeric | Stores the key of the current state of the Inspection Plan. | This field is populated automatically. |
| MI_SM_STATE_OWNER_ID_C | Character | Stores the ID of the user who has been assigned to the state. | This field is populated only if a user assigns the state to another user. |

Inspection Plan States

The following values are used to define the states of Inspection Plans.

| State ID | Caption | Initial State? |
|-------------|----------|----------------|
| MI_PROPOSED | Proposed | True |
| MI_APPROVED | Approved | False |
| MI_MODIFIED | Modified | False |

Inspection Plan State Operations

The following operations can be performed on Inspection Plans to change the states.

| Operation ID | Caption | Predecessor State | Successor State | Is Reserved |
|------------------|---------|-------------------|-----------------|-------------|
| MI_APPROVE | Approve | Proposed | Approved | False |
| MI_APPV_MODIFIED | Approve | Modified | Approved | False |
| MI_MODIFY | Modify | Approved | Modified | True |

Inspection Plan Revision Records

The Inspection Plan Revision family stores information regarding revisions of Inspection Plan.

The table below provides an alphabetical list and description of the fields that exist for the Inspection Plan Revision family. The information in the table reflects the baseline state and behavior of these fields. This list is not comprehensive.

| Field | Data Type | Description | Behavior and Usage |
|--------------------------|-----------|--|--|
| Basis for Revision | Text | Stores the text that is entered by the user when updating an Approved Inspection Plan. | This field is populated by entering a reason for Revision in the dialog box that appears when updating an Inspection Plan that is in the Approved state. |
| | | | This field is disabled in the datasheet. |
| FK_HAIN_PR_INPL_INPL_R_N | Character | Foreign Key field that stores | This field is disabled. |
| | | the entity key of the Inspection Plan, | This field does not appear in the datasheet. |
| Revised By | Character | Stores the entity key of the user who modified the Inspection Plan. | This field is populated by the name of the user who modified the Inspection Plan. This field is disabled. |
| Revision Date | Date | Stores the Revision Date of the Inspection Plan. | This field is disabled. |
| RBI Date | Date | Stores the RBI Date of the Inspection Plan. | This field is disabled. |
| Plan Date | Date | Stores the Plan Date of the Inspection Plan. | This field is disabled. |
| Inspection Plan ID | Character | Stores the Inspection Plan ID of the Inspection Plan. | This field is disabled. |
| RBI Risk Category | Character | Stores the RBI Risk Category of the Inspection Plan. | This field is disabled. |
| Comments | Text | Stores the Comments of the Inspection Plan. | This field is disabled. |
| Unanalyzed RBI Data | Flag | Stores the Unanalyzed RBI Data of the Inspection Plan. | This field is disabled. |
| Asset Info | Text | Stores the Asset Info value of the Inspection Plan. | This field is disabled. |
| RBI Driving Component | Text | Stores the RBI Driving Component value of the Inspection Plan. | This field is disabled. |

Suggested Compliance Templates Records

The Suggested Compliance Template family stores information related to assets and their suggested Compliance Strategy Templates.

The table below provides an alphabetical list and description of the fields that exist for the Suggested Compliance Templates family. The information in the table reflects the baseline state and behavior of these fields. This list is not comprehensive.

This family is not enabled for site filtering, which means that records in this family can be accessed by any user with the appropriate license and family privileges. For more information, refer to the Sites section of the documentation.

| Field | Data Type | Description | Behavior and Usage |
|------------------------|-----------|---|--|
| Asset Key | Character | The entity key of an asset for which Compliance Strategy Templates are suggested. | This field does not appear in the datasheet. |
| Suggested Template Key | Character | The entity key of the suggested Compliance Strategy Template. | This field does not appear in the datasheet. |

Recommendation Revision Records

The Recommendation Revision family stores information from the related RBI and Compliance Recommendation records and their related Inspection Tasks. These records store information when an Inspection Plan that is in the Approved state is moved to the Modified state.

This topic provides an alphabetical list and description of the fields that exist for the Recommendation Revision family and appear in the Recommendation Revision datasheet unless otherwise specified. This list is not comprehensive.

This family is enabled for site filtering, which means that records in this family can be assigned to a specific site and will only be accessible to users who are assigned to the same site and have the appropriate license and family privileges. For more information, refer to the Sites section of the documentation.

| Field | Data Type | Description | Behavior and Usage |
|-----------------------------------|-----------------|--|--|
| Damage Mechanism | Character (50) | Stores the Damage Mechanism of the original Recommendation. | This field is disabled. |
| Inspection Strategy ID | Character (255) | Stores the ID of the Inspection Strategy record from which the original Recommendation was generated. | This field is disabled. |
| Inspection Task Type | Character (255) | Stores the Task Type from the related Inspection Task. | This field is disabled. |
| Non Recurring? | Boolean | Indicates whether the Recommendation is to recur. | This field is disabled. |
| RBI Recommendation Methodology | Character (255) | Indicates the methodology used to create the Recommendation. | For RBI Recommendations, the value in this field can be RBI 580 or RBI 581. For Compliance, the value in this field is set to the name of the Compliance Strategy Template. |

| Field | Data Type | Description | Behavior and Usage |
|---------------------------------|------------------|---|--|
| Recommendation ID | Character (255) | Indicates the unique ID that is assigned to the Recommendation. | This field is populated by automatically by business rules. |
| | | | This field is disabled. |
| Recommended Inspection Scope | Text | Stores the Inspection Scope that populated the original Recommendation. | This field is disabled. |
| State | Character (255) | Stores the State ID of the original Recommendation. | This field is populated by the caption of the state. |
| | | | The field is disabled and does not appear in the datasheet. |
| Task Description | Text | Stores the description from the related Inspection Task. | This field is disabled. |
| Task Desired Interval | Numeric | Stores the Desired Interval field value from the related Inspection Task. | This field is disabled. |
| Task Desired Interval Basis | Character (1000) | Stores the Desired Interval Basis from the related Inspection Task. | The value in this field is the description of the corresponding system code from the INSM System Code Table. |
| | | | The field is disabled. |
| Task Desired Interval UOM | Character (50) | Stores the Desired Interval UOM from the related Inspection Task. | This field is disabled. |
| Task Details | Text | Stores the details from the related Inspection Task. | This field is disabled. |
| Task ID | Character (255) | Stores the Task ID from the related Inspection Task. | This field is disabled. |
| Task Last Date | Date | Stores the Last Date from the related Inspection Task. | This field is disabled. |
| Task Override Interval | Boolean | Stores the Override Interval from the related Inspection Task. | This field is disabled. |
| Task Next Date | Date | Stores the Next Date from the related Inspection Task. | This field is disabled. |
| Task Reoccurring | Boolean | Stores the Reoccurring flag value from the related Inspection Task. | This field is disabled. |

Asset Technical Data Records

Asset Technical Data records store asset-related information required for certification calculation. This topic provides an alphabetical list and description of the fields that exist for the Asset Technical Data family. The information in the table reflects the baseline state and behavior of these fields.

This family is not enabled for site filtering, which means that records in this family can be accessed by any user with the appropriate license and family privileges. For more information, refer to the Sites section of the documentation.

Note: You can access the Asset Technical Data datasheet for any asset using the Search (\bigcirc) button.

| Field | Data Type | Description | Behavior and Usage |
|-----------------------|-----------------|--|---|
| Applicable Regulation | Character (255) | Stores the regulation type that is applicable to an asset. | This field is populated with a list of regulations to be linked to an asset. This field is populated with a description of system codes stored in MI_INTGY_REGULATION system code table. For European Inspection Management, Applicable Regulation is listed as an European Inspection Regulation. |
| | | | This field is required to calculate certification requirements for the asset of the following types: Pressure Vessel Simple Pressure Vessel Steam Boiler Piping |
| Asset ID | Character (255) | Stores the ID of an asset. | This field is populated with the Equipment Record ID or with the Functional Location ID. |

| Field | Data Type | Description | Behavior and Usage |
|-----------------|-----------------|---|---|
| Asset Type | Character (255) | Stores the type of asset. | This field is populated with descriptions of the system codes that are stored in the MI_INTGY_ASSET_TYPE system code table. This field is required to calculate certification requirements for the asset of the following types: Pressure Vessel Simple Pressure Vessel Steam Boiler Piping |
| Certification | Character (255) | Stores the certification value. | The values in this field are populated from a drop-down list box and contains a list of system codes that exist in the MI_COMPLIANCE_STANDARDS system code table. In baseline, the Certification field populates the values which are referenced by MI_INTGY_REGULATION system code table. By default, it shows ZUS and BP. |
| Chamber | Character (255) | Stores information about the type of chamber. | This field contains a list of system codes that exist in the MI_CHAMBER system code table. You can choose from the baseline values. The values in this field are populated from a drop-down list box. Refer to the System Code Table for details regarding the type of chamber. |
| Cryogenic | Boolean | Mentions whether the asset is operated under cryogenic conditions. | This field records additional information regarding the asset. Select the checkbox if the asset operates under the cryogenic conditions. |
| External Access | Boolean | Mentions whether the physical access for the asset is available externally. | This field records additional information regarding the asset. Select the checkbox if external access is available for the asset inspection. |

| Field | Data Type | Description | Behavior and Usage |
|----------------------------|-----------------|---|---|
| Fluid | Character (255) | Specifies the name of the fluid which is stored within an asset. | This field is required to calculate certification requirements for the asset of the following types: Pressure Vessel Simple Pressure Vessel Piping |
| Fluid Group | Character (255) | Stores the fluid group. | This field is populated automatically when you select a fluid. The Fluid Group is Group 1 or Group 2. |
| Fluid Phase | Character (255) | Specifies the fluid phase. | This field is populated with relevant values from a dropdown list box when you select a fluid. The values in this field exist in the system code table. The Fluid Phase is liquid or gas. |
| Fluid Type | Character (255) | Stores the fluid type. | This field is populated automatically when you select a fluid. The Fluid Type is Flammable or Combustible. |
| Insulated | Boolean | Mentions whether the asset is insulated. | This field can be used to record additional information about the asset. Select the check box if the asset is insulated. |
| Internal Access | Boolean | Mentions whether internal access is available for an asset. | This field can be used to record additional information about the asset. Select the check box if internal access is available to inspect an asset. |
| Internal Filling | Boolean | Mentions whether the fluid is filled internally. | This field can be used to record additional information about the asset. Select the check box if the asset is filled internally. |
| Internal Inspection Access | Boolean | Mentions whether an asset is inspected internally. | This field can be used to record additional information about the asset. Select the check box if there is access available to inspect an asset internally. |
| Nominal Thickness | Numeric | Specifies the manufactured or the estimated thickness used as a base measurement. | This field is populated automatically based on a specified piping nominal diameter value and schedule. |

| Field | Data Type | Description | Behavior and Usage |
|------------------------|-----------|---|--|
| Operating Pressure | Numeric | Specifies the pressure of an asset during normal operation. It is measured in pounds per square inch gauge. | The value for this field can be specified manually using the datasheet. |
| Operating Temperature | Numeric | Specifies the temperature of an asset during a normal operation. It is measured in degrees Fahrenheit. | The value for this field can be specified manually using the datasheet. |
| Operational Start Date | Date | Mentions the operational start date for an asset. | Select for the Operation start date. |
| Outer Diameter | Numeric | Specifies the diameter of a piping asset from the outer wall surface. It is measured in inches. | This field is populated automatically based on a specified Piping Nominal Diameter value and Schedule. This field is required to calculate certification requirements for the Asset Type Piping. |
| Override Certification | Boolean | Specifies whether the calculated certification is to be overridden. | If you select the Override Certification checkbox, you can override the certification field, and then select the value for the Override Certification field from a drop-down list box. |
| PDN | Numeric | Mentions the value of Protected Pressure x Outer Diameter. It is measured in inches. | This field is populated automatically from the multiplication of Protected Pressure and Outer Diameter. |

| Field | Data Type | Description | Behavior and Usage |
|----------------------------------|-----------|---|--|
| Piping Nominal Diameter - DN | Numeric | Specifies a nominal diameter for piping. It is measured in inches. | This field populates Piping Nominal Diameter as per ISO specifications. The values in Piping Nominal Diameter field is populated by a drop-down list box. This field will be disabled if Piping is not selected as the Asset Type. When a value is selected for the Piping Nominal Diameter - NPS or the Piping Nominal Diameter - DN fields: • A list of possible values are generated for the |
| | | | Schedule field. • After a value is selected for the Schedule field, the Pipe Properties reference table populates the Nominal Thickness and the Outside Diameter fields. |
| Piping Nominal Diameter - NPS | Numeric | Specifies a nominal pipe size for piping. It is measured in inches. | The field populates Piping Nominal Diameter according to the ASME specifications. The values in the Piping Nominal Diameter field will be populated by a drop-down list box. This field will be disabled if Piping is not selected as the Asset Type. When a value is selected for the Piping Nominal Diameter - NPS or the Piping Nominal Diameter - DN fields: |
| | | | A list of possible values is generated for the Schedule field After a value is selected for the Schedule field, the Pipe Properties reference table populates the Nominal Thickness and the Outside Diameter fields. |

| Field | Data Type | Description | Behavior and Usage |
|--------------------|-----------------|--|---|
| Protected Pressure | Numeric | Stores the protected pressure of the asset. It is measured in pounds per square inch gauge. | Value for this field can be specified manually using the datasheet. This field is required to calculate certification requirements for the asset of the following types: Pressure Vessel Simple Pressure Vessel Steam Boiler Piping |
| PV | Numeric | Mentions the value of Protected Pressure x Volume. It is measured in pounds per square inch gauge. | This field is populated automatically from the multiplication of Protected Pressure and Volume. |
| Schedule | Character (255) | Specifies the schedule number corresponding to the wall thickness of the pipe. | When a value is selected for either the Piping Nominal Diameter - NPS or the Piping Nominal Diameter - DN fields, a list of possible values is generated for the Schedule field in a drop-down list box. This field will be disabled and blank if Asset Type is not selected as Piping. |
| Volume | Numeric | Specifies the amount of fluid stored within an asset. It is measured in Gallons. | The value for this field can be specified manually using the datasheet. Value for this field can be specified manually using the datasheet. This field is required to calculate certification requirements for the asset of the following types: Pressure Vessel Simple Pressure Vessel Steam Boiler |

Fluid Data Records

Fluid Data records store fluid-related information required for the certification calculation. This topic provides an alphabetical list and description of the fields that exist for the Fluid Data family. The information in the table reflects the baseline state and behavior of these fields.

| Field | Data Type | Description | Behavior and Usage |
|------------------------------------|-----------------|--|--|
| Category | Character (255) | Stores the fluid category list according to Table - F. | This field contains a list of system codes which exist in the MI_INTGY_FLUID_CTGY system code table. The values in this field are populated from a drop-down list box. |
| Description | Character (255) | Stores the fluid description. | This field is populated automatically from the selected fluid name. |
| Flash Point | Numeric | Stores the flash point of the fluid. | The value for this field can be specified manually using the datasheet. |
| Group | Character (255) | Specifies the fluid group according to Table - F. | This field is populated automatically according to the rules in Table - F. This field contains a list of system codes that exist in MI_INTGY_FLUID_GROUP system code table. |
| Maximum Permissible Temperature | Numeric | Stores the maximum permissible temperature of the fluid. It is measured in degrees Fahrenheit. | Specify the value for this field manually using the datasheet. |
| Name | Character (255) | Stores the name of the fluid. | This field contains a list of system codes that exist in the MI_INTGY_FLUID_NAME system code table. You can choose from the baseline values, populated from a dropdown list box. |
| Туре | Character (255) | Stores the type of fluid. | This field contains a list of system codes that exist in the FLUID TYPES system code table. The fluid type is Combustible or Flammable. |

Mechanical Integrity Mapping Records

Mechanical Integrity Mapping records store details related to mapping Mechanical Integrity records to other Mechanical Integrity records. This topic provides an alphabetical list and description of the fields that exist for the Mechanical Integrity Mapping family. The information in the table reflects the baseline state and behavior of these fields.

| Field | Data Type | Description | Behavior and Usage |
|---------------|-----------------|---|---|
| Reference | Character (255) | Specifies the reference to the system code. | This field stores the references of a mapping record which exist in the MI_MAPPING_REFERENCE system code table. |
| Source Family | Character (255) | Stores the ID of the family from which it is mapped. | This field contains the ID of the source family from which it is mapped. |
| Source Field | Character (255) | Stores the ID of the field from which it is mapped. | This field contains the ID of the source field from which it is mapped. |
| Target Family | Character (255) | Stores the ID of the target family from which it is mapped. | This field contains the target ID of the family to which it is mapped. |
| Target Field | Character (255) | Stores the ID of the target field from which it is mapped. | This field contains the target ID of the family to which it is mapped. |

Inspection Summary Reference Records

Inspection Summary Reference records store inspection related information required for generating an Inspection Summary Reference record. This topic provides an alphabetical list and description of the fields that exist for the Inspection Summary Reference family. The information in the table reflects the baseline state and behavior of these fields.

| Field | Data Type | Description | Behavior and Usage |
|------------------------|-----------|---|---|
| Inspection Category | Character | Stores the Inspection Category required for generating a report for the EU Inspection Report datasheet. | This field is populated with a list of inspection categories to be linked to an asset. This field is populated with the description of system codes stored in the MI_EN_DOC_CTGY system code table. |
| Inspection Instruction | Character | Stores Inspection Instruction required for generating a report for the EU Inspection Report datasheet. | This field is populated with a list of Inspection instructions to be linked to an asset. This field is populated with the description of system codes stored in the EU_INSP_INST system code table. |
| Inspection Summary | Text | Stores the summary of observations that the Inspector enters for a European Inspection Event. | In the EU Inspection report, based on the values selected in the Inspection Category and Inspection Instruction boxes, the summary will be auto populated with the value entered in this field. |

European Admin Settings Records

European Admin Settings records store site-specific Compliance related information required for generating a European inspection task. This topic provides an alphabetical list and description of the fields that exist for the European Admin Settings family. The information in the table reflects the type and behavior of these fields.

| Field | Data Type | Description | Behavior and Usage |
|------------------------------------|-----------------|---|--|
| Site | Character (255) | User defines the site that should have the values specified in Compliance Window and Inspection Documentation Window when a new Inspection Task is created for an asset belonging to the site. The user can access only those sites that he has the access. | This field contains a list of sites that are available to the user, setting up the European Admin Settings. This is a required field. Note: After a record is created for a site, you cannot create another record for the same site. |
| Applicable Regulation | Character (255) | Stores the regulation type that is applicable to a task. | This field is populated with a list of regulations to be linked to a task. This field is populated with a description of system codes stored in MI_INTGY_REGULATION system code table. This field is always disabled. |
| Compliance Window | Numeric | Stores the value for Compliance Window in months. | This field stores the duration in months and is copied to the Inspection Task when a new Inspection Task is created. The value for this field is specified manually. |
| Inspection Documentation Window | Numeric | Stores the value for Inspection Documentation Window. The UOM is measured in Months. | This field stores the duration in months is copied to the Inspection Task when a new Inspection Task is created. The value for this field is specified manually. |

Family Search Configuration

Family Search Configuration

The following families for Compliance Management are included in the Global Search:

- · Compliance Policy Mapping
- Compliance Recommendation
- Compliance Recommendation Mapping
- Compliance Strategy
- Compliance Strategy Template
- · Inspection Plan

By default, the search results for all other families for Compliance Management are excluded from Global Search.

Note: You can configure a family to be included or excluded from the Global Search using the Search Configuration.

European Inspection Management Policies

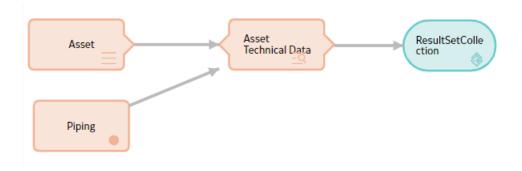
European Inspection Management Policies

APM provides eight Policies for the European Inspection Compliance. You can use these Policies in the Compliance Strategy Templates to generate the Compliance Recommendations in intervals specified in the Inspection Requirements for European Regulation. The following table lists the names of the Policies along with the IDs of the corresponding Compliance Strategies:

| Policy Name | Description | Compliance Strategy ID |
|--------------|--|---|
| EU_PIPE_EQPT | Generates European Compliance Recommendations for Piping with respect to the Asset family. | EU_PIPE_EV_STRAT_008 EU_PIPE_IV_STRAT_004 EU_PIPE_STR_STRAT_012 |
| EU_PIPE_FLOC | Generates European Compliance Recommendations for Piping with respect to the Functional Location family. | EU_PIPE_EV_STRAT_008 EU_PIPE_IV_STRAT_004 EU_PIPE_STR_STRAT_012 |
| EU_PV_EQPT | Generates European Compliance Recommendations for Pressure Vessel with respect to the Asset family. | EU_PV_EV_STRAT_005 EU_PV_IV_STRAT_001 EU_PV_STR_STRAT_009 |
| EU_PV_FLOC | Generates European Compliance Recommendations for Pressure Vessel with respect to the Functional Location. | EU_PV_EV_STRAT_005 EU_PV_IV_STRAT_001 EU_PV_STR_STRAT_009 |
| EU_SB_EQPT | Generates European Compliance Recommendations for Steam Boiler with respect to the Asset family. | EU_SB_EV_STRAT_007 EU_SB_IV_STRAT_003 EU_SB_STR_STRAT_011 |
| EU_SB_FLOC | Generates European Compliance Recommendations for Steam Boiler with respect to the Functional Location family. | EU_SB_EV_STRAT_007 EU_SB_IV_STRAT_003 EU_SB_STR_STRAT_011 |
| EU_SPV_EQPT | Generates European Compliance Recommendations for Simple Pressure Vessel with respect to the Asset family. | EU_SPV_EV_STRAT_006 EU_SPV_IV_STRAT_002 EU_SPV_STR_STRAT_010 |
| EU_SPV_FLOC | Generates European Compliance Recommendations for Simple Pressure Vessel with respect to the Functional Location family. | EU_SPV_EV_STRAT_006 EU_SPV_IV_STRAT_002 EU_SPV_STR_STRAT_010 |

EU_PIPE_EQPT

This Policy is used in the Compliance Strategies to generate European Compliance Recommendations for Piping with respect to the Asset family. The following image illustrates the model of the EU_PIPE_EQPT policy:



This policy uses two input nodes:

- · Asset: This is an entity node which represents the Equipment family.
- Piping: This is a constant node of string Piping.

The node, Asset Technical Data Filter is a Query node that runs the EU_Piping_Filter_EQ query. The Asset Technical Data Filter node uses the Entity Key of the Asset represented by the Asset node and the string represented by the Piping node as prompts for the EU_Piping_Filter_EQ query. When the Policy is executed, it generates a result set that contains the following information:

- The Entity Key of the Asset Technical Data related to the Asset represented by the Asset node.
- The Family ID of Asset Technical Data related to the Asset represented by the Asset node.
- The Strategy ID used to generate the Compliance Recommendation.

The policy then uses this information in the result set to generate the Compliance Recommendations and map the data to it, using the Compliance Recommendation Mapping family.

European Inspection Management Field Mappings

European Technical Data and Compliance Recommendation Mappings

When you create an Inspection Plan for an Asset that has related Asset Technical Data, following field values are mapped to the Compliance Recommendation from the Asset Technical Data family.

The following table lists the Compliance Recommendations fields that are populated automatically from these sources.

| Family | Asset Technical Data | Compliance Recommendation |
|--------|-----------------------|---------------------------|
| Fields | Chamber | Chamber |
| | Certification | Certification |
| | Applicable Regulation | Applicable Regulation |

The following table lists the mappings from Compliance Recommendation to the Inspection Task.

| Family | Compliance Recommendation | Inspection Task |
|--------|---------------------------|-----------------------|
| Fields | Certification | Certification |
| | Applicable Regulation | Applicable Regulation |

Inspection Task and Inspection Event Mappings

When you generate an Inspection Report from an Inspection Task, following field values are mapped to the Inspection Event family from the Inspection Task family.

The following table lists the Inspection Event fields that are populated automatically.

| Family | Inspection Task | Inspection Event |
|--------|-----------------------|-----------------------|
| Fields | Certification | Certification |
| | Applicable Regulation | Applicable Regulation |

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Table F: Fluid Group Table

The following table lists the specific conditions for the different fluid categories used for European Inspection Management:

| Fluid Category | Conditions | | Fluid Group | |
|-------------------------------------|----------------|--|-------------|--|
| Explosive | Not Applicable | Not Applicable | 1 | |
| Flammable Category 1 | Not Applicable | Not Applicable | 1 | |
| Flammable Category 2 | Not Applicable | Not Applicable | 1 | |
| Flammable Category 3 | TB > FP | FP<=55 degree Celsius (131 degree Fahrenheit) | 1 | |
| Pyrophoric | Not Applicable | Not Applicable | 1 | |
| Acute Toxic Category 1 | Not Applicable | Not Applicable | 1 | |
| Acute Toxic Category 2 | Not Applicable | Not Applicable | 1 | |
| Oxidising | Not Applicable | Not Applicable | 1 | |
| Corrosive | Not Applicable | Not Applicable | 2 | |
| Flammable Category 3 | TB <= FP | Not Applicable | 2 | |
| Others | Not Applicable | Not Applicable | 2 | |
| * TB : Max. Permissible Temperature | | | | |
| * FP : Flash Point | | | | |

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Table R: Reference Table Chart

The following table lists the reference table charts for the equipment categories:

| Asset Type | Physical State | Fluid Group | Table |
|------------------------|----------------|--------------|-------|
| Boiler | Not Relevant | Not Relevant | 2 |
| Pressure Vessel | Gas | 1 | 3 |
| Pressure Vessel | Gas | 2 | 4 |
| Pressure Vessel | Liquid | 1 | 5 |
| Pressure Vessel | Liquid | 2 | 6 |
| Simple Pressure Vessel | Gas | 2 | 7 |
| Piping | Gas | 1 | 8 |
| Piping | Gas | 2 | 9 |
| Piping | Liquid | 1 | 10 |
| Piping | Liquid | 2 | 11 |

Table - 1: Inspection Interval for Asset Types

The following table lists the Inspection interval for the asset types used for European Inspection Management:

| Asset Type | External Examination | Internal Examination | Strength Test |
|---|----------------------|----------------------|---------------|
| Steam Boiler in Table 2 | 1 Year | 3 Years | 9 Years |
| Pressure Vessel in Table 3, Table 4, Table 5, and Table 6 | 2 Years | 5 Years | 10 Years |
| Simple Pressure Vessel in Table 7 | Not Applicable | 5 Years | 10 Years |
| Piping in Table 8, Table 9, Table 10, and Table 11 | 5 Years | Not Applicable | 5 Years |

Table - 2: Boiler Equipment Category

The following table lists the test responsibilities for the Boiler equipment category:

| V [Litre] | PS [Bar] | PS.V [Bar-Litre] | Non-Recurring Inspection | Recurring Inspection |
|-----------|----------------|------------------|-----------------------------|----------------------|
| >2 | 0.5< PS <=32 | <=200 | bP | bP |
| <=1000 | 0.5 < PS <= 32 | 200< PS.V<= 1000 | züs | bP |
| >1000 | 0.5 < PS <= 32 | Not Applicable | züs | züs |

| V [Litre] | PS [Bar] | PS.V [Bar-Litre] | Non-Recurring Inspection | Recurring Inspection |
|-----------|----------------|------------------|-----------------------------|----------------------|
| <= 1000 | 0.5 < PS <= 32 | >1000 | züs | züs |
| > 2 | >32 | Not Applicable | züs | züs |

Table - 3: Pressure Vessels with Gas for the Fluid Group - 1

The following table lists the test responsibilities for the pressure vessels with gas for the Fluid Group - 1:

| V [Litre] | PS [Bar] | PS.V [Bar-Litre] | Non-Recurring Inspection | Recurring Inspection |
|--|---|--|-----------------------------|----------------------|
| 1 <v<=200< td=""><td>>0.5</td><td>25<ps.v <="200</td"><td>bP</td><td>bP</td></ps.v></td></v<=200<> | >0.5 | 25 <ps.v <="200</td"><td>bP</td><td>bP</td></ps.v> | bP | bP |
| >200 | 0.5 <ps<=1< td=""><td>Not Applicable</td><td>bP</td><td>bP</td></ps<=1<> | Not Applicable | bP | bP |
| <=1 | 200 <ps<=1000< td=""><td>Not Applicable</td><td>züs</td><td>bP</td></ps<=1000<> | Not Applicable | züs | bP |
| >1 | >1 | 200 <ps.v<=1000< td=""><td>züs</td><td>bP</td></ps.v<=1000<> | züs | bP |
| <=1 | >1000 | Not Applicable | züs | züs |
| >1 | >1 | >1000 | züs | züs |

Table - 4: Pressure Vessels with Gas for Fluid Group - 2

The following table lists the test responsibilities for the pressure vessels with gas for Fluid Group - 2:

| V [Litre] | PS [Bar] | PS.V [Bar-Litre] | Non-Recurring Inspection | Recurring Inspection |
|---|--|--|-----------------------------|----------------------|
| 1 <v<=200< td=""><td>>0.5</td><td>50<ps.v<=200< td=""><td>bP</td><td>bP</td></ps.v<=200<></td></v<=200<> | >0.5 | 50 <ps.v<=200< td=""><td>bP</td><td>bP</td></ps.v<=200<> | bP | bP |
| >200 | 0.5 <ps<=1< td=""><td>Not Applicable</td><td>bP</td><td>bP</td></ps<=1<> | Not Applicable | bP | bP |
| >1 | >1 | 200 <ps.v<=1000< td=""><td>züs</td><td>bP</td></ps.v<=1000<> | züs | bP |
| <=1 | >1000 | Not Applicable | züs | züs |
| >1 | >1 | >1000 | Not Applicable | Not Applicable |

Table - 5: Pressure Vessels with Liquids for Fluid Group - 1

The following table lists the test responsibilities for the pressure vessels with liquids for Fluid Group - 1:

| V [Litre] | PS [Bar] | PS.V [Bar-Litre] | Non-Recurring Inspection | Recurring Inspection |
|----------------|---|---|-----------------------------|----------------------|
| Not Applicable | 0.5 <ps<=10< td=""><td>>200</td><td>bP</td><td>bP</td></ps<=10<> | >200 | bP | bP |
| <=1 | >500 | <=1000 | bP | bP |
| <=1 | >500 | 1000 <ps.v<=10000< td=""><td>züs</td><td>bP</td></ps.v<=10000<> | züs | bP |
| >1 | >500 | <=10000 | züs | bP |

| V [Litre] | PS [Bar] | PS.V [Bar-Litre] | Non-Recurring Inspection | Recurring Inspection |
|----------------|---|------------------|-----------------------------|----------------------|
| >1 | 10 <ps<=500< td=""><td>>200</td><td>züs</td><td>bP</td></ps<=500<> | >200 | züs | bP |
| Not Applicable | >500 | >10000 | züs | züs |

Table - 6: Pressure Vessels with Liquids for Fluid Group - 2

The following table lists the test responsibilities for the pressure vessels with liquids for Fluid Group - 2:

| V [Litre] | PS [Bar] | PS.V [Bar-Litre] | Non-Recurring Inspection | Recurring Inspection |
|----------------|---|---|-----------------------------|----------------------|
| <=1 | >1000 | <=1000 | bP | bP |
| <=10 | >1000 | 1000 <ps.v<=10000< td=""><td>züs</td><td>bP</td></ps.v<=10000<> | züs | bP |
| Not Applicable | 10 <ps<=500< td=""><td>>10000</td><td>züs</td><td>bP</td></ps<=500<> | >10000 | züs | bP |
| Not Applicable | >500 | >10000 | züs | züs |

Table - 7: Simple Pressure Vessels

The following table lists the test responsibilities for Simple Pressure Vessels:

| V [Litre] | PS [Bar] | PS.V [Bar-Litre] | Non-Recurring Inspection | Recurring Inspection |
|----------------|---|--|-----------------------------|----------------------|
| Not Applicable | 0.5 <ps<=30< td=""><td>50<ps.v<=200< td=""><td>bP</td><td>bP</td></ps.v<=200<></td></ps<=30<> | 50 <ps.v<=200< td=""><td>bP</td><td>bP</td></ps.v<=200<> | bP | bP |
| Not Applicable | 0.5 <ps<=1< td=""><td>200<ps.v<=10000< td=""><td>bP</td><td>bP</td></ps.v<=10000<></td></ps<=1<> | 200 <ps.v<=10000< td=""><td>bP</td><td>bP</td></ps.v<=10000<> | bP | bP |
| Not Applicable | 1 <ps<=30< td=""><td>200<ps.v<=1000< td=""><td>züs</td><td>bP</td></ps.v<=1000<></td></ps<=30<> | 200 <ps.v<=1000< td=""><td>züs</td><td>bP</td></ps.v<=1000<> | züs | bP |
| Not Applicable | 1 <ps<=30< td=""><td>1000<ps.v<=10000< td=""><td>züs</td><td>züs</td></ps.v<=10000<></td></ps<=30<> | 1000 <ps.v<=10000< td=""><td>züs</td><td>züs</td></ps.v<=10000<> | züs | züs |

Table - 8: Piping with Gases for Fluid Group Table - 1

The following table lists the test responsibilities for Piping with gases for Fluid Group - 1:

| SI. No. | DN[Millimeter] | PS[Bar] | PS.DN[Bar-mm] | Non-Recurring Inspection | Recurring Inspection |
|---------|----------------|---------|---------------|-----------------------------|-------------------------|
| 1 | >25 | >0.5 | <=2000 | bP | bP |
| 2 | >25 | >0.5 | >2000 | züs | züs |

Table - 9: Piping with Gases for Fluid Group Table - 2

The following table lists the test responsibilities for Piping with gases for Fluid Group - 2:

| DN[Millimeter] | PS[Bar] | PS.DN[Bar-mm] | Non-Recurring Inspection | Recurring Inspection |
|----------------|---------|--|-----------------------------|----------------------|
| >32 | >0.5 | 1000 <ps.dn<=2000< td=""><td>bP</td><td>bP</td></ps.dn<=2000<> | bP | bP |
| >32 | >0.5 | >2000 | züs | züs |

Table - 10: Piping with liquids for Fluid Group Table - 1

The following table lists the test responsibilities for Piping with liquids for Fluid Group - 1:

| DN[Millimeter] | PS[Bar] | PS.DN[Bar-mm] | Non-Recurring Inspection | Recurring Inspection |
|----------------|---------|---------------|-----------------------------|----------------------|
| >25 | >0.5 | >2000 | züs | züs |

Table - 11: Piping with liquids for Fluid Group Table - 2

The following table lists the test responsibilities for Piping with liquids for Fluid Group - 2:

| DN[Millimeter] | PS[Bar] | PS.DN[Bar-mm] | Non-Recurring Inspection | Recurring Inspection |
|----------------|---------|---------------|-----------------------------|----------------------|
| >200 | >10 | >5000 | züs | züs |