



USER GUIDE FOR VALVE INTEGRITY MANAGEMENT SYSTEM (VIMS) WEB SOFTWARE

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1 INTRODUCTION

The purpose of this system is to provide a comprehensive system to handle Asset Register, IMR, Assessment, Tools with associated master modules and Reports. The system will integrate all modules for seamless user experience whilst maintaining a user-friendly interface. Users should update the information based on the given authorization. Additional features include adding, deleting, sorting, searching, and updating. Each user will have a role which consists of Facility Admin, Engineer and Viewer.

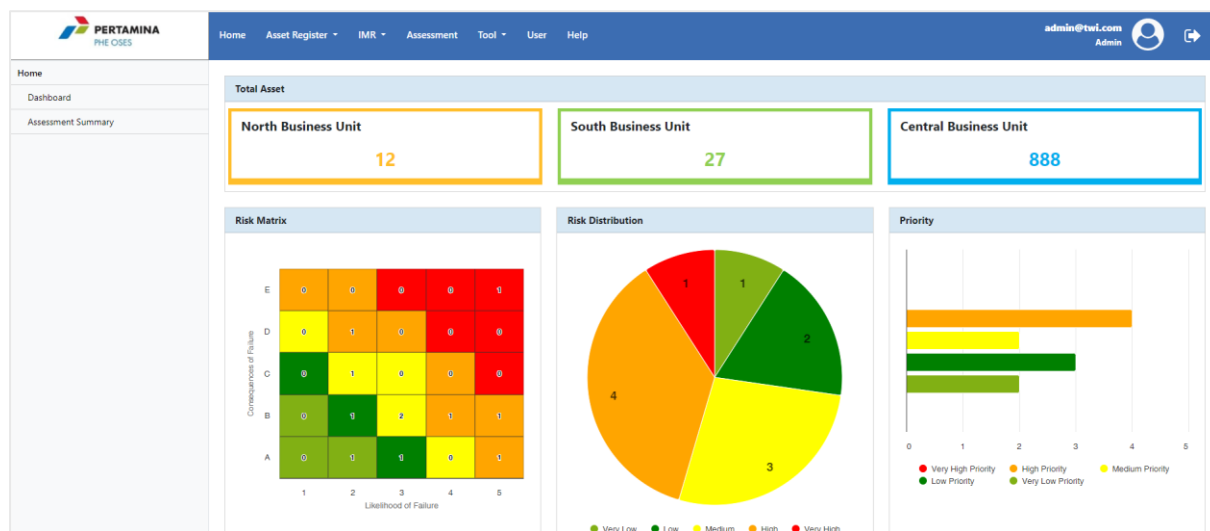


Figure 1-1 Main screen of Valve Integrity Management System (VIMS)

2 STANDARD NAVIGATION MENU

The Standard Navigation Menu consists of the following options and sub-options, arranged in a hierarchy of the menu and feature found in the Valve Integrity Management System (VIMS).

Table 2-1 Hierarchy of the menu and feature




#	Main Menu	Reference
1.0	Home	Home screen will show the dashboard with a risk distribution graph.
2.0	Asset Register	
2.1	└ Area	One time data entry of Area details will be maintained here.
2.3	└ Platform	One time data entry of Platform details will be maintained here.
2.4	└ Asset	Asset details will be stored here.

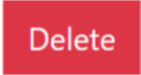


#	Main Menu	Reference
3.0	IMR	
3.1	└ Inspection	Periodical Inspection details will be stored as per the Area and Platform.
3.2	└ Maintenance	Periodical Maintenance details will be stored as per the Area and Platform.
4.0	Assessment	Formulated assessment details will be maintained here.
5.0	Tools	
5.1	└ Import Asset Register	Bulk upload option to be established to register asset details.
5.2	└ Import Inspection/Maintenance	Importing a bunch of Inspection or Maintenance data can be uploaded here.
5.3	└ Import Assessment	Import Assessment details into DB.
6.0	User	User profile can be maintained.
7.0	Help	User Manual.

3 STANDARD GRAPHICAL MENU BUTTON

The following are brief descriptions, with examples of function and illustrations, of the menu and feature buttons found in the Valve Integrity Management System (VIMS).

Table 3-1 Menu and feature buttons

Button	Description
	Name: Add Details: Allows the user to enter new information into the database.
	Name: Edit Details: Allows the user to edit existing information in the database.
	Name: Save Details: Allows the user to save the new info or update the modified information into the database.

Button	Description
	Name: Delete Details: Allows the user to delete existing information from the database.
	Name: Cancel Details: Allows the user to clear the data fields and close the popup screen.
	Name: Print Details: Allows the user to print data such as inspection, maintenance or assessment.

4 USER GUIDE

4.1 Login Page

To access the main page of the VIMS application, users are required to log in using the account that has been registered in this application. Here are the steps:

- Open the following Address in your browser: <https://dev-twi.tech/vims/>
- Enter your Email and Password
- Click the Login button

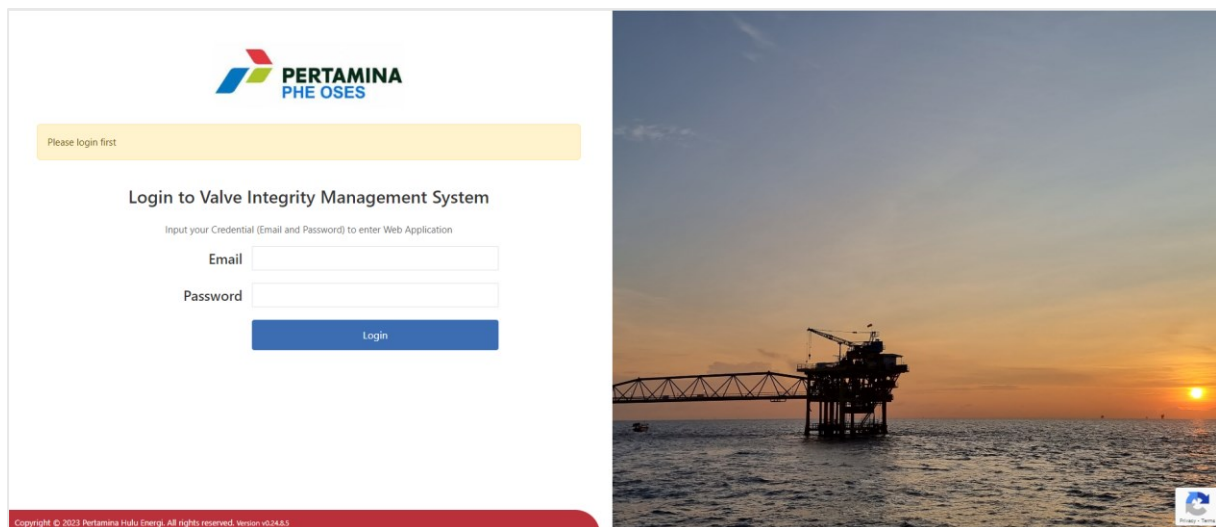


Figure 4-1 Login Page

If the Email and Password entered do not match, an Invalid email or password message will be displayed as shown below:

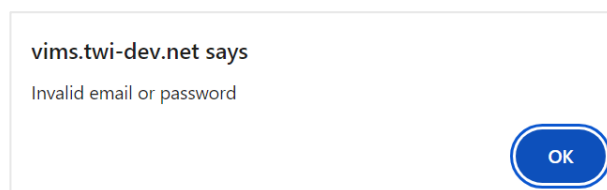


Figure 4-2 Login with Invalid Message

And if successful, it will move to the Home page as in the next point.

4.2 Layout

VIMS application uses a Layout consisting of Header, Sidebar, and Content.

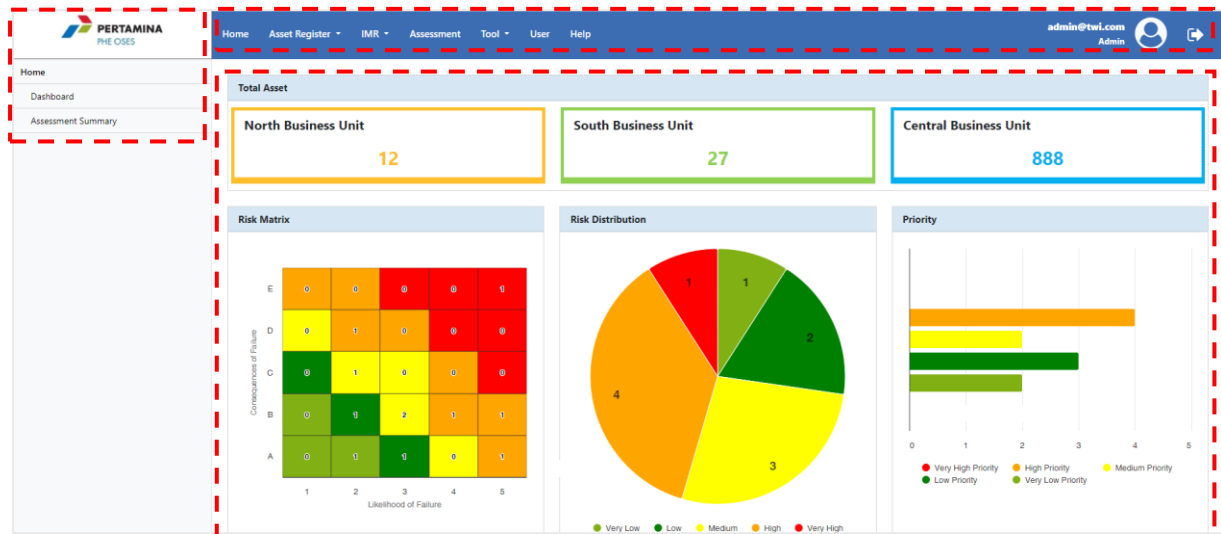


Figure 4-3 Layout VIMS

Header

This section displays the Logo, Top Menu and User Login

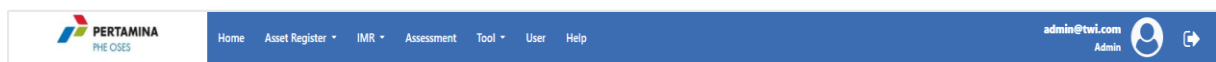


Figure 4-4 Header Layout

Sidebar

This section displays Sub from the Top Menu, or Asset Tree.

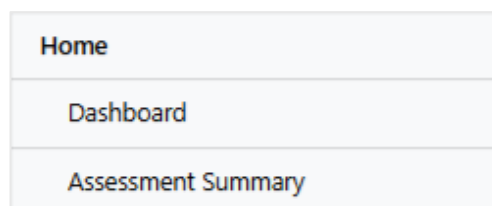


Figure 4-5 Sidebar Layout

Content

This section displays Pages based on the selected Menu, for example displaying the Dashboard.

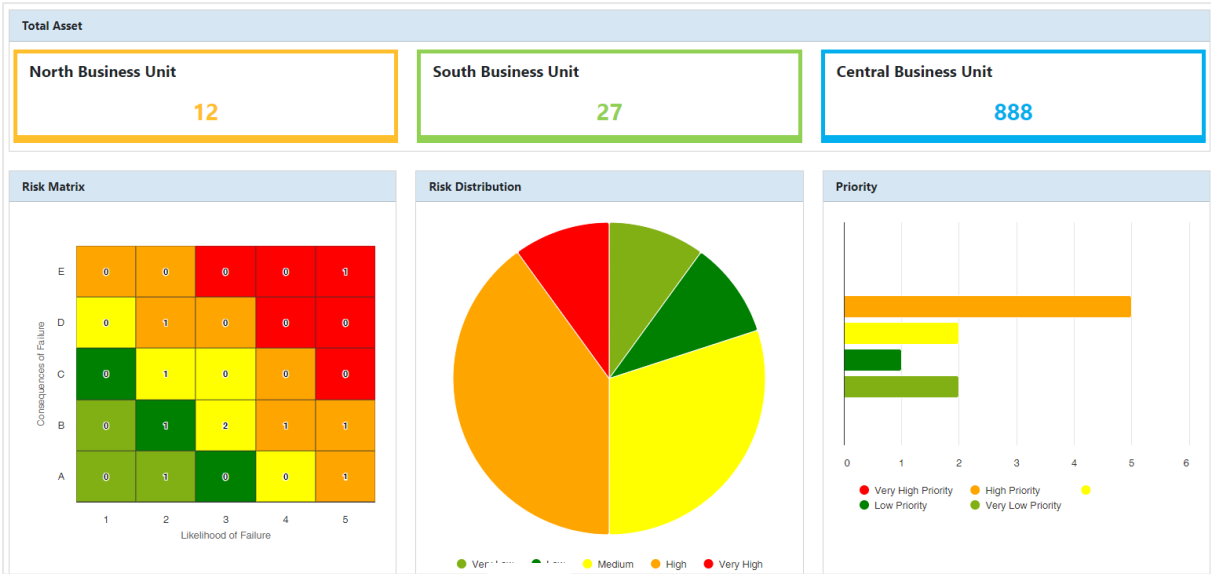


Figure 4-6 Content Layout

5 HOME

Home consists of two sub menus, namely Dashboard and Assessment Summary.



Figure 5-1 Home Submenu

5.1 Dashboard

The dashboard will display several charts including the Risk Distribution Matrix, Pie Chart Risk Distribution and Bar Chart Area Risk Status.

- Matrix Risk Distribution

This section displays the number of Assets based on Risk Status

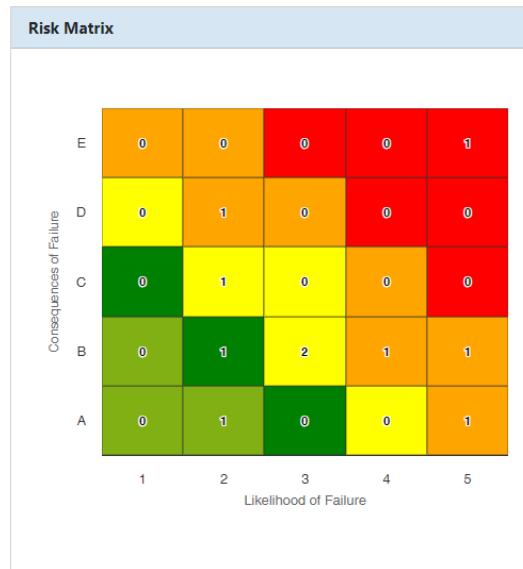


Figure 5-2 Matrix Risk Distribution

- Pie Chart Risk Distribution

This section displays the percentage of assets based on their Risk Category to the total assets.

- Area Risk Status

This section displays the number of assets per Area based on its Risk Category.

5.2 Assessment Summary

Asset Summary displays the Last Assessment Results for existing Assets.

Assessment Summary

All AreaAll PlatformFilterExport to Excel

Search

No	Business Unit Area	Platform	Valve Tag No	Equipment Name	PID No.	Valve Type	Size	Class/Rating	Installation Date (dd-mm-yyyy)	Assessment Date (dd-mm-yyyy)	Last Inspection Date (dd-mm-yyyy)	Last Maintenance Date (dd-mm-yyyy)	Time Period (Month)
	Search Business Unit Area	Search Platform	Search Valve Tag No	Search Equipment Name	Search PID No.	Search Valve Type	Search Size	Search Class/Rating	Search Installation Date	Search Assessment Date	Search Last Inspection Date	Search Last Maintenance	Search Time Period (Mo)
1	NBU	WIDUR-E	WIE-UCV-3	Level Control Valve outlet Test Separator	WIE-11001 P2	Level Control Valve	2	600	01-09-2007	13-08-2024	01-06-2024	29-12-1969	
2	CBU	FARDA-C	farc-hv-ph10-026	Manual Ball Valve WH-10	fbc-11000	Hand/Manual Valve	4	600	25-07-2002	06-12-2024	01-06-2024	01-01-1960	
3	NBU	WIDUR-E	WIE-UCV-11	Ici outlet test separator	WIE-11001 P2	Level Control Valve	4	150	01-01-2007	15-08-2024	01-06-2024		
4	NBU	WIDUR-E	WIE-UCV-2	Ici outlet test separator	WIE-11001 P2	Level Control Valve	4	150	01-01-2007	14-08-2024	01-06-2024		
5	NBU	WIDUR-E	WIE-UCV-1	Level Control Valve outlet Test Separator	WIE-11001 P2	Level Control Valve	2	600	01-01-2007	02-05-2023	26-04-2022		
6	CBU	FARDA-C	FARC-HV-PH10-027	Manual Ball Valve WH-10	FDC-11000	Hand/Manual Valve	4	600	25-07-2002	26-07-2024	01-06-2024		
7	CBU	FARDA-C	FARC-HV-PH10-028	Manual Ball Valve WH-10	FDC-11000	Hand/Manual Valve	4	600	25-07-2002	03-07-2024	01-07-2024	01-07-2024	
8	CBU	FARDA-C	FARC-HV-PH10-030	Manual Ball Valve WH-10	FDC-11000	Hand/Manual Valve	4	600	25-07-2002	02-07-2024	01-07-2024		
9	CBU	FARDA-C	FARC-HV-PH10-032	Manual Ball Valve WH-10	FDC-11000	Hand/Manual Valve	4	600	25-07-2002	15-08-2024	01-07-2024	01-07-2024	
10	SBU	WANDA-A	WANDA-LMT-1	Manual Ball Valve WH-10	FDC-11000	Hand/Manual Valve	4	600	25-07-2002	13-08-2024	01-07-2024	01-07-2024	

1210

entries per page

Showing 1 to 10 of 11 entries

Figure 5-3 Assessment Summary

There are several features in this section, including:

- Filter by Area and Platform

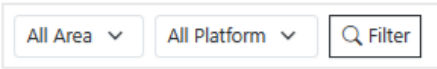


Figure 5-4 Assessment Summary Filter by Area and Platform

- Quick Search



Figure 5-5 Assessment Summary Quick Search

- Export to Excel

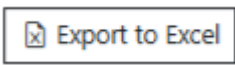


Figure 5-6 Assessment Summary Export to Excel

- Quick Access to the Assessment, Inspection, and Maintenance page for the selected Asset in the Details column.

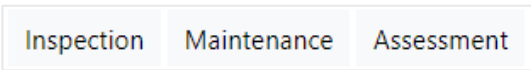


Figure 5-7 Assessment Summary Quick Access

6 ASSET REGISTER

Asset register module facilitates the initial data feeding into the database. It is able to store the Area, Platform and Asset information. These are all the one-time data entry into the database. Asset Register consists of 3 submenus, namely Area, Platform, and Asset.

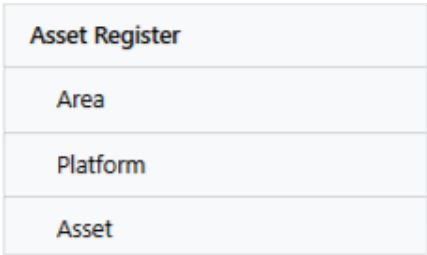


Figure 6-1 Asset Register Submenu

6.1 Area

The Area master is maintaining the unique details about the business area. This section is used to display and perform data manipulation Areas such as Add New, Edit, and Delete.

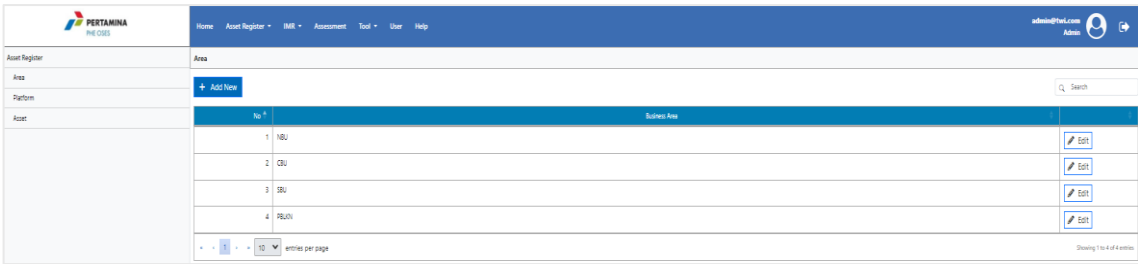


Figure 6-2 Area screen of Valve Integrity Management System (VIMS)

6.1.1 Area List

This section is used to display the Area list.

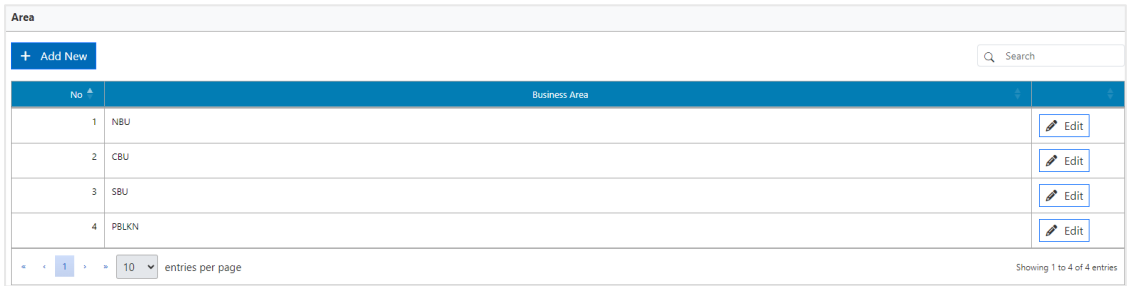


Figure 6-3 Area List

There is a Quick Search feature to find the searched area based on the query inputted.

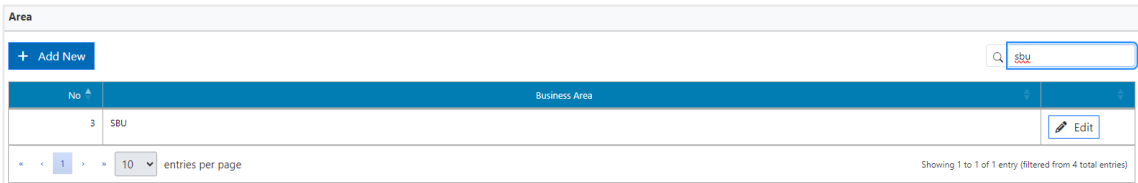


Figure 6-4 Area Quick Search

6.1.2 Add Area

This section is used to add a new area with the following steps:

- Click the Add New button.



Figure 6-5 Area Add New Button

- Input data in the dialog box that appears.

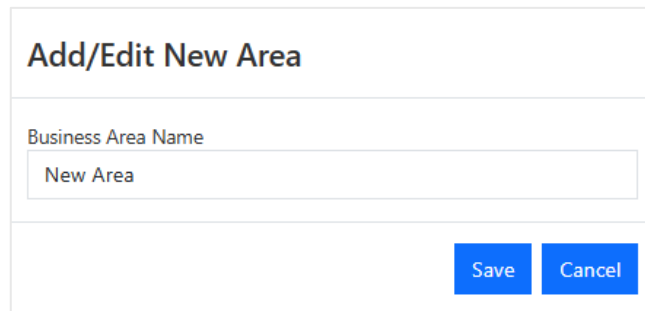
A dialog box titled "Add/Edit New Area". It contains a text input field labeled "Business Area Name" with the text "New Area" entered. At the bottom right, there are two buttons: "Save" (blue) and "Cancel" (blue).

Figure 6-6 Area Add New Form

- Click the Save button. The added data will be displayed in the area list.

6.1.3 Edit Area

This section is used to edit existing data, with the following steps:

- Click the Edit button on the data you want to change.

4	PBLKN	 Edit
---	-------	--

Figure 6-7 Area Edit Data

- In the dialog box that appears, change the data as desired.

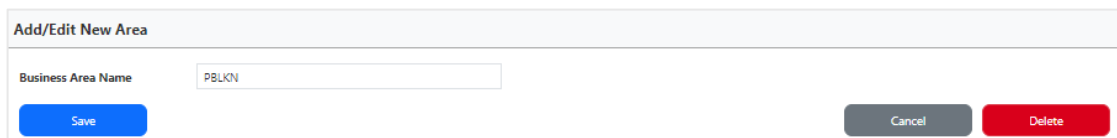
A dialog box titled "Add/Edit New Area". It contains a text input field labeled "Business Area Name" with the text "PBLKN" entered. At the bottom, there are three buttons: "Save" (blue), "Cancel" (gray), and "Delete" (red).

Figure 6-8 Area Edit Form

- Click the Save button. The changed data will be displayed in the area list.

6.1.4 Delete Area

This section is used to delete existing data, with the following steps:

- Click the Edit button on the data you want to delete.

4	PBLKN	 Edit
---	-------	--

Figure 6-9 Area Delete Data

- In the dialog box that appears, click Delete button.

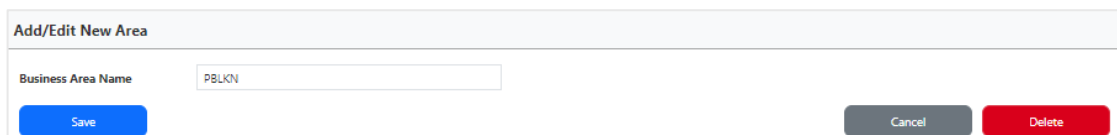
A dialog box titled "Add/Edit New Area". It contains a text input field labeled "Business Area Name" with the text "PBLKN" entered. At the bottom, there are three buttons: "Save" (blue), "Cancel" (gray), and "Delete" (red).

Figure 6-10 Area Delete Form

- A Confirmation Box will be displayed. Click the OK button to continue. Data that has been deleted will disappear from the area list.

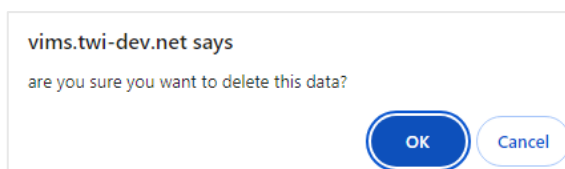


Figure 6-11 Area Delete Confirmation Box

6.2 Platform

It is able to store the Platform information. Each platform is linked with a specific Area with unique Code. One area can have multiple platforms. This section is used to display and perform data manipulation Platforms such as Add New, Edit, and Delete.

 The screenshot shows the "Platform" screen of the VIMS application. On the left is a sidebar with the PERTAMINA logo and navigation links: Asset Register, Area, Platform, and Asset. The main content area has a top navigation bar with links: Home, Asset Register, IMR, Assessment, Tool, User, and Help. Below this is a "Platform" header with an "Add New" button and a search bar. The main part of the screen is a table with 10 rows of platform data. Each row has columns for No., Business Area, Platform, and Code, followed by an "Edit" button. At the bottom, there is a pagination control showing "1" of "2" pages and "10" entries per page.

No.	Business Area	Platform	Code	Edit
1	CBU	ZELDA-A	ZEA	Edit
2	CBU	xx	xx	Edit
3	SBU	CINTA-P	CINP	Edit
4	SBU	RAMA-C	RAMC	Edit
5	SBU	RAMA-P	RAMP	Edit
6	SBU	CINTA-P1	CINP1	Edit
7	SBU	RAMA-I	RAMI	Edit
8	SBU	CINTA-B	CINB	Edit
9	SBU	RAMA-B	RAMB	Edit
10	SBU	RAMA-G	RAMG	Edit

Figure 6-12 Platform screen of Valve Integrity Management System (VIMS)

6.2.1 Platform List

This section is used to display the Platform list.

 This is a detailed view of the platform list table. It includes the same columns as the previous table: No., Business Area, Platform, Code, and Edit. The data is identical to the one shown in Figure 6-12. The table is presented in a clean, modern style with blue headers and edit buttons.

No.	Business Area	Platform	Code	Edit
1	CBU	ZELDA-A	ZEA	Edit
2	CBU	xx	xx	Edit
3	SBU	CINTA-P	CINP	Edit
4	SBU	RAMA-C	RAMC	Edit
5	SBU	RAMA-P	RAMP	Edit
6	SBU	CINTA-P1	CINP1	Edit
7	SBU	RAMA-I	RAMI	Edit
8	SBU	CINTA-B	CINB	Edit
9	SBU	RAMA-B	RAMB	Edit
10	SBU	RAMA-G	RAMG	Edit

Figure 6-13 Platform List

There is a Quick Search feature to find the searched platform based on the query inputted.

Platform				
<div><div>+ Add New</div><div><div>Search</div><div>farida</div></div></div>				
No	Business Area	Platform	Code	
18	CBU	FARIDA-A	FAA	<div>Edit</div>
19	CBU	FARIDA-C	FAC	<div>Edit</div>
<div><div><1></div><div>10</div> entries per page<div>Showing 1 to 2 of 2 entries (Filtered from 20 total entries)</div></div>				

Figure 6-14 Platform Quick Search

6.2.2 Add Platform

This section is used to add a new platform with the following steps:

- Click the Add New button.



Figure 6-15 Platform Add New Button

- Input data in the dialog box that appears.

Add/Edit New Platform

Business Area

PBLKN

Platform Name

New Platform

Platform Code

NP

Save

Cancel

Figure 6-16 Platform Add New Form

- Click the Save button. The added data will be displayed in the platform list.

6.2.3 Edit Platform

This section is used to edit existing data, with the following steps:

- Click the Edit button on the data you want to change.

No	Business Area	Platform	Code	
21	PBLKN	New Platform	NP	<div>Edit</div>

Figure 6-17 Platform Edit Data

- In the dialog box that appears, change the data as desired.

Add/Edit New Platform

Business Area

PBLKN

Platform Name

New Platform

Platform Code

NP

Save

Cancel

Delete

Figure 6-18 Platform Edit Form

- Click the Save button. The changed data will be displayed in the platform list.

6.2.4 Delete Platform

This section is used to delete existing data, with the following steps:

- Click the Edit button on the data you want to delete.

No	Business Area	Platform	Code	
21	PBLKN	New Platform	NP	Edit

Figure 6-19 Platform Delete Data

- In the dialog box that appears, click Delete button.

Add/Edit New Platform

Business Area: Platform Name:

Platform Code:

[Save](#) [Cancel](#) [Delete](#)

Figure 6-20 Platform Delete Form

- A Confirmation Box will be displayed. Click the OK button to continue. Data that has been deleted will disappear from the platform list.

vims.twi-dev.net says

are you sure you want to delete this data?

[OK](#) [Cancel](#)

Figure 6-21 Platform Delete Confirmation Box

6.3 Asset

It is able to store the Asset information. Each Asset is linked with a specific Platform with unique Code. One Platform can have multiple assets. The details are categorized in to three levels such as Asset Information, Material Value and Operation & Fluid details as well. This section is used to display and perform data manipulation Assets such as Add New, Edit, and Delete.

PERTAMINA PHE OSES												
Home Asset Register IMR Assessment Tool User Help												
Asset Register												
Area												
Platform												
Asset												
+ Add New Export to Excel												
No	Tag No	Business Area	Platform	Valve Type	Size (inch)	Class Rating	Parent Equipment No	Parent Equipment Description	PID Number	Sensor Fluid		
1	WB-PSV-V05A-4	SBU	RASIA-P	Level Control Valve	12	151	P123	Juvt Desc	PID 2	UNKNOWN	Edit	
2	WB-PSV-V05A-41	NBU	WIDUR-E	Air Release Valve	10	150	PU-518-A-12	COTF Line	CIC-11012	Waste Gas	Edit	
3	WB-PSV-V05A-42	NBU	AIDA-A	Air Release Valve	10	150	PU-518-A-12	COTF Line	CIC-11012	Waste Gas	Edit	
4	WB-PSV-V05A-440	NBU	AIDA-A	Air Release Valve	10	150	PU-518-A-12	COTF Line	CIC-11012	Waste Gas	Edit	
5	WIS-LCV-1	NBU	WIDUR-E	Level Control Valve	2	800	PU-102-D-4	Oil Level Control Valve outlet Test Separator V-01 (LCV-1)	WIS-11001 P2	Crude Oil	Edit	
6	WIS-LCV-3	NBU	WIDUR-E	Level Control Valve	2	800	PU-102-D-4	Oil Level Control Valve outlet Test Separator V-01 (LCV-1)	WIS-11001 P2	Crude Oil	Edit	
7	Tag_Ten_1	CBU	III	Air Release Valve	12	155	PU-102-D-4	Juvt Desc	PID 2	UNKNOWN	Edit	
8	Tag_Ten_2	CBU	III	Air Release Valve	12	155		Juvt Desc	PID 2	UNKNOWN	Edit	
9	Tag_Ten_3	CBU	III	Air Release Valve	12	155		Juvt Desc	PID 2	UNKNOWN	Edit	
10	Tag_Ten_4	CBU	III	Air Release Valve	12	155		Juvt Desc	PID 2	UNKNOWN	Edit	

Figure 6-22 Asset screen of Valve Integrity Management System (VIMS)

6.3.1 Asset List

This section is used to display the Asset list.

Asset											
+ Add New		Export to Excel		Search							
No	Tag No	Business Area	Platform	Valve Type	Size (inch)	Class Rating	Parent Equipment No	Parent Equipment Description	PID Number	Service Fluid	
	Search Tag No	Search Business Area	Search Platform	Search Valve Type	Search Size (inch)	Search Class Rating	Search Parent Equipment	Search Parent Equipment	Search PID Number	Search Service Fluid	
1	WB-PSV-V05A-4	SBU	RAMA-P	Level Control Valve	12	151	P123	Just Desc	PID 2	UNKNOWN	Edit
2	WB-PSV-V05A-41	NSU	WDUR-E	Air Release Valve	10	150	PL-S18-A-12	COTP Line	CIC-11012	Waste Gas	Edit
3	WB-PSV-V05A-43	NSU	AIDA-A	Air Release Valve	10	150	PL-S18-A-12	COTP Line	CIC-11012	Waste Gas	Edit
4	WB-PSV-V05A-440	NSU	AIDA-A	Air Release Valve	10	150	PL-S18-A-12	COTP Line	CIC-11012	Waste Gas	Edit
5	WIE-LCV-1	NSU	WDUR-E	Level Control Valve	2	600	PL-102-D-4	Oil Level Control Valve outlet Test Separator V-01 (LCV-1)	WIE-11001 P2	Crude Oil	Edit
6	WIE-LCV-3	NSU	WDUR-E	Level Control Valve	2	600	PL-102-D-4	Oil Level Control Valve outlet Test Separator V-01 (LCV-1)	WIE-11001 P2	Crude Oil	Edit
7	Tap_Test1	CBU	xx	Air Release Valve	12	155	PL-102-D-4	Just Desc	PID 2	UNKNOWN	Edit
8	Tap_Test2	CBU	xx	Air Release Valve	12	155		Just Desc	PID 2	UNKNOWN	Edit
9	Tap_Test3	CBU	xx	Air Release Valve	12	155		Just Desc	PID 2	UNKNOWN	Edit
10	Tap_Test4	CBU	xx	Air Release Valve	12	155		Just Desc	PID 2	UNKNOWN	Edit

Figure 6-23 Asset Lists

There is a Quick Search feature to find the searched asset based on the query inputted.

Asset											
+ Add New		Export to Excel		Search							
No	Tag No	Business Area	Platform	Valve Type	Size (inch)	Class Rating	Parent Equipment No	Parent Equipment Description	PID Number	Service Fluid	
	Search Tag No	Search Business Area	Search Platform	Search Valve Type	Search Size (inch)	Search Class Rating	Search Parent Equipment	Search Parent Equipment	Search PID Number	Search Service Fluid	
1	PARC-HV-PH10-026	CBU	PARDA-C	Hand/Manual Valve	4	600	WH-1014"-D-105	production header line WH-10	FD-11000	Crude Oil	Edit
2	PARC-HV-PH10-027	CBU	PARDA-C	Hand/Manual Valve	4	600	WH-1014"-D-105	Production header line WH-10	FDC-11000	Crude Oil	Edit
3	PARC-HV-PH10-028	CBU	PARDA-C	Hand/Manual Valve	4	600	WH-1014"-D-105	Production header line WH-10	FDC-11000	Crude Oil	Edit
4	PARC-HV-PH10-030	CBU	PARDA-C	Hand/Manual Valve	4	600	WH-1014"-D-105	Production header line WH-10	FDC-11000	Crude Oil	Edit
5	PARC-HV-PH10-031	CBU	PARDA-C	Hand/Manual Valve	4	600	WH-1014"-D-105	Production header line WH-10	FDC-11000	Crude Oil	Edit
6	PARC-HV-PH10-032	CBU	PARDA-C	Hand/Manual Valve	4	600	WH-1014"-D-105	Production header line WH-10	FDC-11000	Crude Oil	Edit

Figure 6-24 Asset Quick Search

6.3.2 Add Asset

This section is used to add a new asset with the following steps:

- Click the Add New button.

+ Add New

Figure 6-25 Asset Add New Button

- Input data in the dialog box that appears.
The user can create new assets with necessary fields. Asset Information is categorized as a fundamental detail of the Asset. The platform can be displayed to choose from drop down. The Tag No is to uniquely identify the asset.

Asset Information

Asset ID

Tag No

Platform

-- Select Platform --

Valve Type

-- Select Valve Type --

Size (inch)

Equipment Name

Status

-- Select Status --

Actuation

-- Select Actuation --

Class Rating

Parent Equipment No

Parent Equipment Description

Installation Date

PID Number

Cost of Replacement & Repair (USD)

Usage Type

-- Select Usage Type --

Figure 6-26 Add Asset Info Form

- The Material value will be stored as part of the Asset details. There is an option to choose the Manual Override detail from the drop down.

Material Value

Manufacturer

Body Model

Body Material

End Connection

Serial No

Manual Override

-- Select Manual Override --

Actuator Mfg

Actuator Serial No.

Actuator Type/Model

Actuator Power

Figure 6-27 Add Asset Material Value Form

Operation & Fluid

Operating Temperature (F)

Operating Pressure (Psig)

Flow Rate (m3/hr)

Service Fluid

Fluid Phase

-- Select Fluid Phase --

Toxic or Flammable Fluid

-- Select Toxic or Flammable Fluid --

Save

Cancel

Figure 6-28 Add Asset Operation & Fluid Form

- Click the Save button. The added data will be displayed in the asset list.

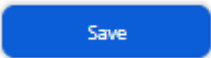


Figure 6-29 Add Asset Save Button

6.3.3 Edit Asset

This section is used to edit existing data, with the following steps:

- Click the Edit button on the data you want to change.

924	WIE-LCV-20	NBU	WIDUR-E	Check Valve	12	600	PL-102-D-4	Production header line WH-10	WIE-11001 P2	Crude Oil	
-----	------------	-----	---------	-------------	----	-----	------------	------------------------------	--------------	-----------	--

Figure 6-30 Asset Edit Data

- In the dialog box that appears, change the data as desired.

Asset Information			
Asset ID	6057	Class Rating	600
Tag No	WIE-LCV-20	Parent Equipment No	PL-102-D-4
Platform	NBU: WIDURI-E	Parent Equipment Description	Production header line WH-10
Valve Type	Check Valve	Installation Date	01-01-2010
Size (inch)	12	PID Number	WIE-11001 P2
Equipment Name	Check Valve A	Cost of Replacement & Repair (USD)	1000
Status	In-Service	Usage Type	Manual Valve
Actuation	N/A		
Material Value			
Manufacturer	FISHER	Manual Override	No
Body Model	Check Valve	Actuator Mfg	N/A
Body Material	WCB	Actuator Serial No.	N/A
End Connection	RF	Actuator Type/Model	N/A
Serial No	N/A	Actuator Power	N/A
Operation & Fluid			
Operating Temperature (F)	100	Service Fluid	Crude Oil
Operating Pressure (Psig)	1000	Fluid Phase	Liquid
Flow Rate (m3/hr)	0	Toxic or Flammable Fluid	Yes
Save		Cancel	Delete

Figure 6-31 Asset Edit Form

- Click the Save button. The changed data will be displayed in the asset list.

6.3.4 Delete Asset

This section is used to delete existing data, with the following steps:

- Click the Edit button on the data you want to delete.

924	WIE-LCV-20	NBU	WIDURI-E	Check Valve	12	600	PL-102-D-4	Production header line WH-10	WIE-11001 P2	Crude Oil	Edit
-----	------------	-----	----------	-------------	----	-----	------------	------------------------------	--------------	-----------	------

Figure 6-32 Asset Delete Data

- In the dialog box that appears, click Delete button.

Asset Information			
Asset ID	6057	Class Rating	600
Tag No	WIE-LCV-20	Parent Equipment No	PL-102-D-4
Platform	NBU: WIDURI-E	Parent Equipment Description	Production header line WH-10
Valve Type	Check Valve	Installation Date	01-01-2010
Size (inch)	12	PID Number	WIE-11001 P2
Equipment Name	Check Valve A	Cost of Replacement & Repair (USD)	1000
Status	In-Service	Usage Type	Manual Valve
Actuation	N/A		
Material Value			
Manufacturer	FISHER	Manual Override	No
Body Model	Check Valve	Actuator Mfg	N/A
Body Material	WCB	Actuator Serial No.	N/A
End Connection	RF	Actuator Type/Model	N/A
Serial No	N/A	Actuator Power	N/A
Operation & Fluid			
Operating Temperature (F)	100	Service Fluid	Crude Oil
Operating Pressure (Psig)	1000	Fluid Phase	Liquid
Flow Rate (m3/hr)	0	Toxic or Flammable Fluid	Yes
Save		Cancel	Delete

Figure 6-33 Asset Delete Form

- A Confirmation Box will be displayed. Click the OK button to continue. Data that has been deleted will disappear from the asset list.

vims.twi-dev.net says
are you sure you want to delete this data?

OK
Cancel

Figure 6-34 Asset Delete Confirmation Box

7 INSPECTION MAINTENANCE RECORD (IMR)

IMR menu is handling the Inspection and Maintenance details of Assets. Each detail is directly connected with Risk Assessment and Risk matrix. IMR consists of 2 submenus, namely Inspection and Maintenance.

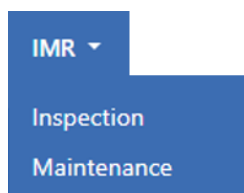


Figure 7-1 IMR Submenus

7.1 Inspection

This section is used to display and perform data manipulation Inspections such as Add New, Edit, and Delete. From the IMR menu item, Click the Inspection link to open the module.

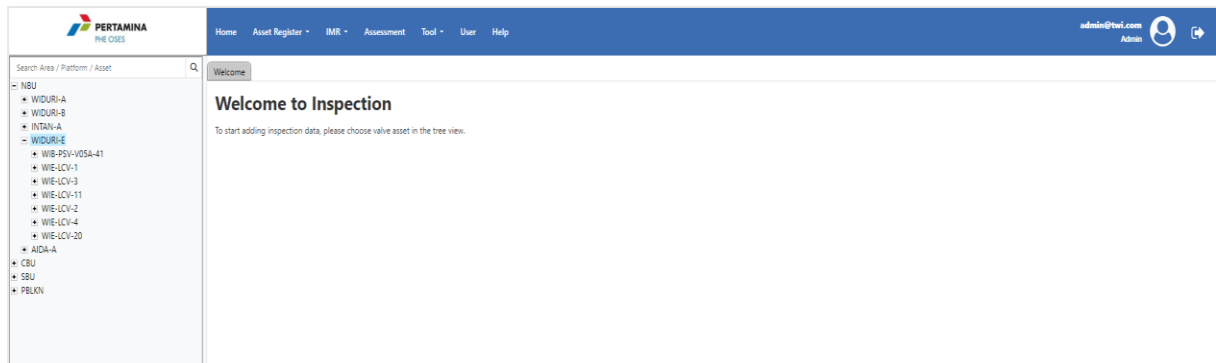


Figure 7-2 Inspection Screen

7.1.1 Inspection List

Inspection data is displayed in a Tree List.

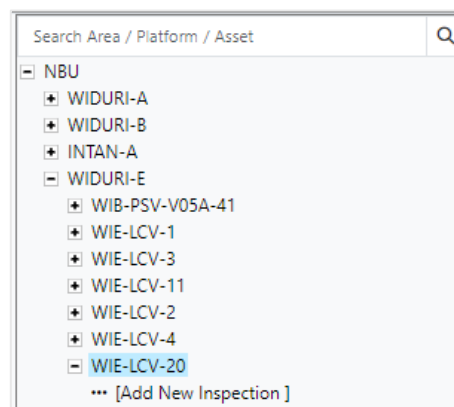


Figure 7-3 Inspection Tree List

7.1.2 Add Inspection

This section is used to add a new inspection with the following steps:

- Open Tree Asset and find the Asset to be added, or input the Query Asset you are looking for in the Search Area / Platform / Asset column and click [Add New Inspection] on the Asset Tree.

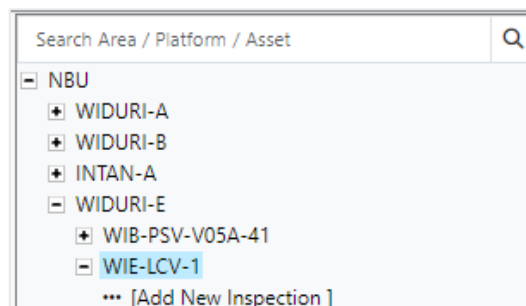


Figure 7-4 Add New Inspection

- There are two portions of details listed in the inspection module. The top portion is related to Asset Information which is not editable. The bottom portion is related to inspection information. **New Inspection WIE-LCV-1** - Tab name shown to enter new inspection data associated with WIE-LCV-1 assets. The form will be displayed in tabbed form. Fill in the form then click the Save button.

Asset Information			
Asset ID	54	Valve Type	Level Control Valve
Tag No	WIE-LCV-1	Manufacturer	FISHER
Body Material	WCB	Business Area	NBU
Body Model	Globe	Platform	WIDURI-E
End Connection	RF	Parent Equipment No.	PL-102-D-4
Serial No.	N/A	Parent Equipment Description	Oil Level Control Valve outlet Test Separator V-01 (LCV-1
Installation Date	01-01-2007	Size (Inch)	2
PID No	WIE-11001 P2	Class Rating	600

Figure 7-5 Asset Information Form Inspection (Top Portion)

Inspection Information	
Valve Tag No WIE-LCV-1	Current Condition Leakage to Atmosphere -- Select Current Condition --
Inspection Date	Current Condition Failure of Function -- Select Current Condition --
Inspection Method -- Select Inspection Method --	Current Condition Passing Across Valve -- Select Current Condition --
Inspection Effectiveness -- Select Inspection Effectiveness --	Function Condition
Inspection Description	Test Pressure if Any
	Inspection Image
<button>Save</button>	

Figure 7-6 Add New Inspection Form (Bottom Portion)

- Valve Tag No.: Will be an un-editable field. It represents the Asset with unique number.
- Inspection Method: can be chosen from drop down as Visual Inspection/Ultrasonic Testing Inspection/Radiography Test.
- Inspection Effectiveness is having the option to choose as Highly Effective/Usually Effective/Fairly Effective/Ineffective.
- Current Condition Leakage to Atmosphere is having option to choose Good/Fair/Poor.
- Current Condition Failure of function can be chosen from drop down as Good/Fair/Poor.

- Current Condition Passing Across Valve is choosing as Good/Fair/Poor.
 - Inspection Images can be uploaded into system as much as possible.
- A successfully saved data message is displayed.

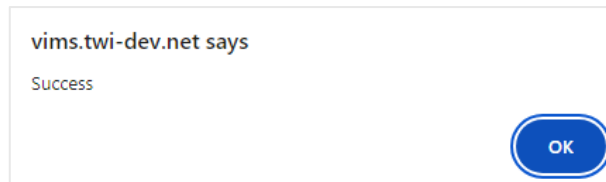


Figure 7-7 Inspection Added Successfully Message

- The new data will be displayed in the inspection tree.



Figure 7-8 Saved Data in Inspection Tree

7.1.3 Edit Inspection

This section is used to edit existing data, with the following steps:

- Open Tree Asset and find the Asset to be edit, or input the Query Asset you are looking for in the Search Area / Platform / Asset column and click Inspection Date on the Asset Tree.

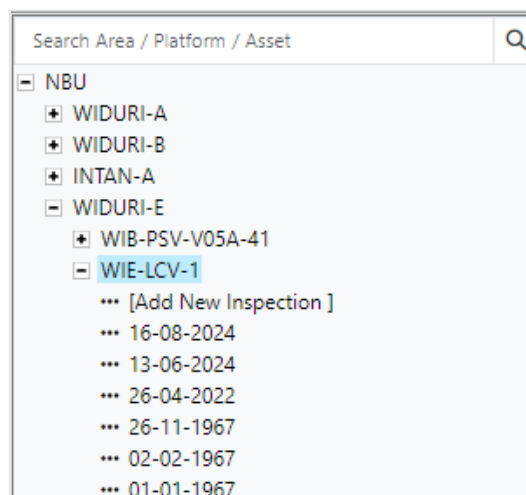


Figure 7-9 Edit Inspection

- The form will be displayed in tab then change the data as desired then click the Save button.

Figure 7-10 Edit Inspection Form

- A successfully saved data message is displayed.

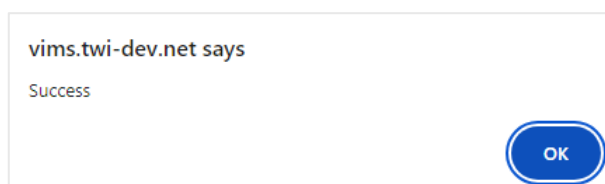


Figure 7-11 Inspection Update Successfully Message

- The changed data will be displayed in the inspection tree.

7.1.4 Delete Inspection

This section is used to delete existing data, with the following steps:

- Open Tree Asset and find the Asset to be edit, or input the Query Asset you are looking for in the Search Area / Platform / Asset column and click Inspection Date on the Asset Tree.

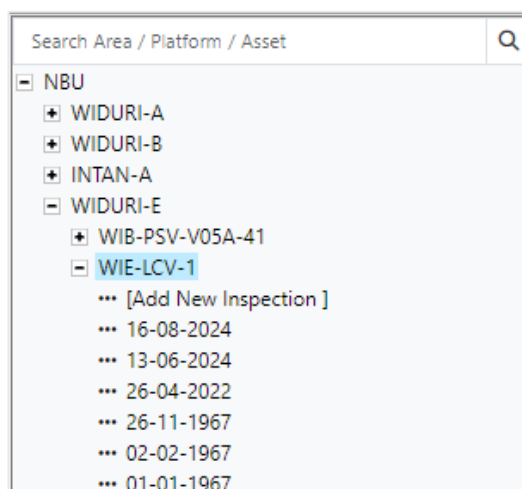


Figure 7-12 Delete Inspection

- The form will be displayed in tab then click the Delete button.

WelcomeWIE-LCV-1 16-08-2024 X

Asset Information

Asset ID	S2	Valve Type	Level Control Valve
Tag No	WIE-LCV-1	Manufacturer	FISHER
Body Material	WCB	Business Area	NBU
Body Model	Globe	Platform	WIDURI-E
End Connection	RF	Parent Equipment No.	PL-102-D-4
Serial No.	N/A	Parent Equipment Description	Oil Level Control Valve outlet Test Separator V-01 (LCV)
Installation Date	01-01-2007	Size (inch)	2
PID No	WIE-11001 P2	Class Rating	800

Inspection Information

Valve Tag No	WIE-LCV-1	Current Condition Leakage to Atmosphere	Fair
Inspection Date	18-08-2024	Current Condition Failure of Function	Fair
Inspection Method	Visual Inspection	Current Condition Passing Across Valve	Fair
Inspection Effectiveness	Ineffective	Function Condition	Good
Inspection Description	test	Test Pressure if Any	No
		Inspection Image	

SavePrintDelete

Figure 7-13 Delete Inspection Form

- A Confirmation Box will be displayed. Click the OK button to continue.

vims.twi-dev.net says

Are you sure you want to delete this data?

OK

Cancel

Figure 7-14 Delete Inspection Confirmation Box

- A successfully deleted data message is displayed.

vims.twi-dev.net says

Inspection deleted successfully

OK

Figure 7-15 Delete Inspection Successfully Message

- The data will be removed from the inspection tree.

7.1.5 Print Inspection

The user can print the Inspection by clicking the date link in the tree view based on Area/Platform and Asset. Then click the print button, the inspection information will show up on the new window.



Figure 7-16 Print Inspection Button

Valve Inspection			
Tag Number	WIE-LCV-1	Inspection Date	13-06-2024
Business Area	NBU		
Platform	WIDURI-E	Valve Type	Level Control Valve
VALVE INFORMATION		PROCESS INFORMATION	
P&ID Number	WIE-11001 P2	Operating Pressure (Pig)	1440
Parent Equipment No.	PL-102-Q-4	Operating Temperature (F)	100
Parent Equipment Desc.	Oil Level Control Valve outlet Test Separator V-01 (LCV-1)	Service Fluid	Crude Oil
Size (Inch)	2	Fluid Phase	Liquid
Class Rating	600	Toxic or Flammable Fluid	Yes
Installation Date	01-01-2007		
Manufacturer	FISHER	Actuation	<input checked="" type="checkbox"/> Pneumatic <input type="checkbox"/> Hydraulic <input type="checkbox"/> Manual Override
Body Material	WCB		
Approx. cost of replacement and repair (USD)	90		
VALVE INSPECTION		Usage Type	
Inspection Method	Radiography Test	Manual valve	<input type="checkbox"/>
Inspection Effectiveness	Highly Effective	Auto On-Off Valve	<input type="checkbox"/>
Inspection Description	Test	Control Valve	<input type="checkbox"/>
Functional Condition	Good	PSV/IRV	<input checked="" type="checkbox"/>
Test Pressure if Any	N/A		
Current Condition Leakage To Atmosphere	Good	In-service	<input checked="" type="checkbox"/>
Current Condition Failure of Function	Good	Waiting For Refurbishment	<input type="checkbox"/>
Current Condition Passing Across Valve	Good	Spere	<input type="checkbox"/>
Inspection image			

Figure 7-17 Print Inspection Information

7.2 Maintenance

This section is used to display and perform data manipulation Maintenances such as Add New, Edit, and Delete. From the IMR menu item, Click the Maintenance link to open the module.

Figure 7-18 Maintenance Screen

7.2.1 Maintenance List

Maintenance data is displayed in a Tree List.

Figure 7-19 Maintenance Tree List

7.2.2 Add Maintenance

This section is used to add a new maintenance with the following steps:

- Open Tree Asset and find the Asset to be added, or input the Query Asset you are looking for in the Search Area / Platform / Asset column and click [Add New Maintenance] on the Asset Tree.

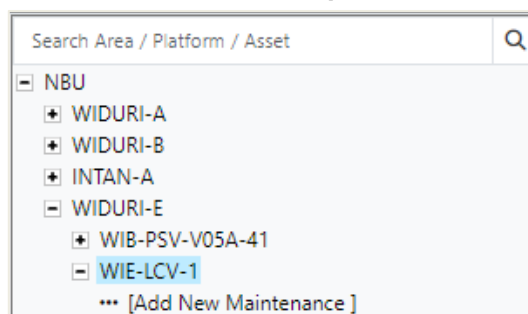


Figure 7-20 Add New Maintenance

- There are two portions of details listed in the Maintenance module. The top portion is related to Asset Information which is not editable. The bottom portion is related to Maintenance information. **New Maintenance WIE-LCV-1** - Tab name shown to enter New Maintenance data associated with WIE-LCV-1 assets. **WIE-LCV-1 04-28-2024** - Previously stored Maintenance data on 04-28-2024 associated with WIE-LCV-1 assets. The form will be displayed in tabbed form. Fill in the form then click Save button.

The screenshot shows the 'Asset Information' form with the following data:

Asset ID	52	Valve Type	Level Control Valve
Tag No	WIE-LCV-1	Manufacturer	FISHER
Body Material	WC8	Business Area	NBU
Body Model	Globe	Platform	WIDURI-E
End Connection	RF	Parent Equipment No.	PL-102-D-4
Serial No.	N/A	Parent Equipment Description	Oil Level Control Valve outlet Test Separator V-01 (LCV-1)
Installation Date	01-01-2007	Size (inch)	2
PID No	WIE-11001 P2	Class Rating	600

Figure 7-21 Asset Information from Maintenance (Top Portion)

The screenshot shows the 'Maintenance Information' form with the following data:

Maintenance Date		Is Valve Repaired	-- Select Is Valve Repaired --
Maintenance Description		Maintenance Image	

At the bottom of the form is a blue 'Save' button.

Figure 7-22 Maintenance Information Form Maintenance (Bottom Portion)

- Maintenance Date.: The date of Maintenance will be updated to represent the maintenance data.
 - Is Valve Repaired: can be chosen from drop down as Yes/No
 - Maintenance Description can be entered here.
 - Maintenance Images can be uploaded into system as much as possible.
- A successfully saved data message is displayed.

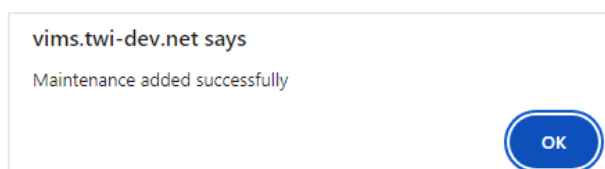


Figure 7-23 Maintenance Added Successfully Message

- The new data will be displayed in the maintenance tree.

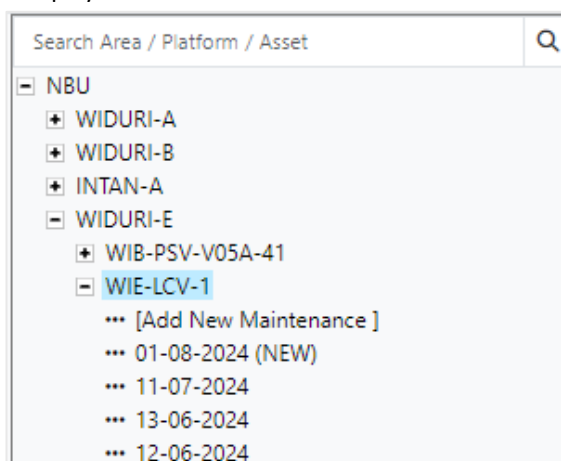


Figure 7-24 Saved Data in Maintenance Tree

7.2.3 Edit Maintenance

This section is used to edit existing data, with the following steps:

- Open Tree Asset and find the Asset to be edit, or input the Query Asset you are looking for in the Seach Area / Platform / Asset column and click Maintenance Date on the Asset Tree.

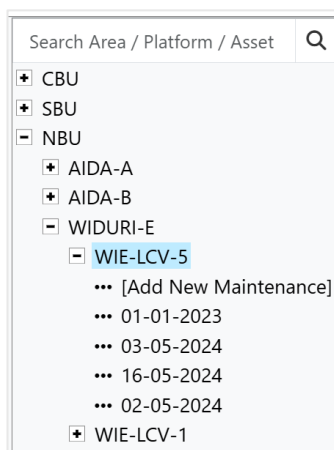


Figure 7-25 Edit Maintenance

- The form will be displayed in tab then change the data as desired then click the Save button.

Figure 7-26 Edit Maintenance Form

- A successfully saved data message is displayed.

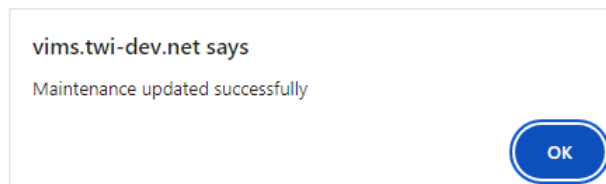


Figure 7-27 Maintenance Updated Successfully Message

- The changed data will be displayed in the inspection tree.

7.2.4 Delete Maintenance

This section is used to delete existing data, with the following steps:

- Open Tree Asset and find the Asset to be edit, or input the Query Asset you are looking for in the Search Area / Platform / Asset column and click Maintenance Date on the Asset Tree.

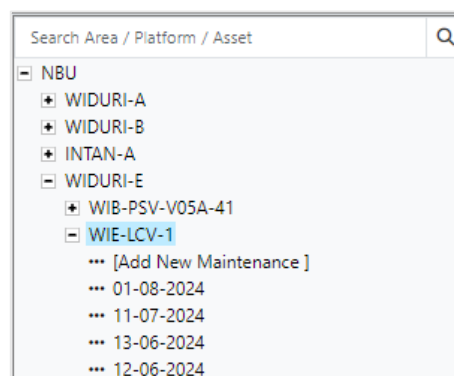


Figure 7-28 Delete Maintenance

- The form will be displayed in tab then click the Delete button.

Welcome

WIE-LCV-1 01-08-2024 ✕

Asset Information

Asset ID	S2	Valve Type	Level Control Valve
Tag No	WIE-LCV-1	Manufacturer	FISHER
Body Material	VCB	Business Area	NBU
Body Model	Globe	Platform	WDUR-E
End Connection	RF	Parent Equipment No.	PL-102 Q-4
Serial No.	N/A	Parent Equipment Description	Oil Level Control Valve outlet Test Separator V-01 (LCV-1)
Installation Date	01-01-2007	Size (inch)	2
PID No	WIE-11001 P2	Class Rating	600

Maintenance Information

Maintenance Date	01-08-2024	Is Valve Repaired	No
Maintenance Description	Test maintenance		
	Maintenance Image		
	<div><div></div><div></div></div>		

Save

Print

Delete

Figure 7-29 Delete Maintenance Form

- A Confirmation Box will be displayed. Click the OK button to continue.

vims.twi-dev.net says

Are you sure you want to delete this data?

OK

Cancel

Figure 7-30 Delete Maintenance Confirmation Box

- A successfully deleted data message is displayed.

vims.twi-dev.net says

Maintenance deleted successfully

OK

Figure 7-31 Maintenance Delete Successfully Message

- The data will be removed from the inspection tree.

7.2.5 Print Maintenance

The user can print the Maintenance by clicking the date link in the tree view based on Area/Platform and Asset. Then click the print button, the maintenance information will show up on the new window.



Figure 7-32 Print Maintenance Button


Valve Maintenance			
Tag Number	WIE-LCV-1	Maintenance Date	08-09-2024
Business Area	NBU		
Platform	WIDURI-E	Valve Type	Level Control Valve
VALVE INFORMATION		PROCESS INFORMATION	
PSID Number	WIS-11001 P2	Operating Pressure (Pig)	1440
Parent Equipment No.	PL-102-D-4	Operating Temperature (P)	100
Parent Equipment Desc	Oil Level Control Valve outlet Test Separator V-01 (LCV-1)	Service Fluid	Crude Oil
Size (inch)	2	Fluid Phase	LIQUID
Class Rating	602	Test or Flammable Fluid	Yes
Installation Date	01-01-2007	Action	
Manufacturer	ISHIBI	Pneumatic	<input type="checkbox"/>
Body Material	WCB	Hydraulic	<input type="checkbox"/>
Approx. cost of replacement and repair (USD)	\$0	Manual Override	<input type="checkbox"/>
VALVE MAINTENANCE		Usage Type	
Is Valve Repaired	No	Manual valve	<input type="checkbox"/>
Maintenance Description	Test 1	Auto On-Off Valve	<input type="checkbox"/>
		Control Valve	<input type="checkbox"/>
		PSV/Relly	<input checked="" type="checkbox"/>
Maintenance Image		Status	
		In-service	<input checked="" type="checkbox"/>
		Waiting For Refurbishment	<input type="checkbox"/>
		Scrap	<input type="checkbox"/>

Figure 7-33 Print Maintenance Information

8 ASSESSMENT

Assessment module facilitates the Risk Assessment and Risk matrix for Inspection and Maintenance data. The user can click the link from the menu. This section is used to display and perform data manipulation Assessments such as Add New, Edit, and Delete. Once clicked the tree view data will be loaded as below.

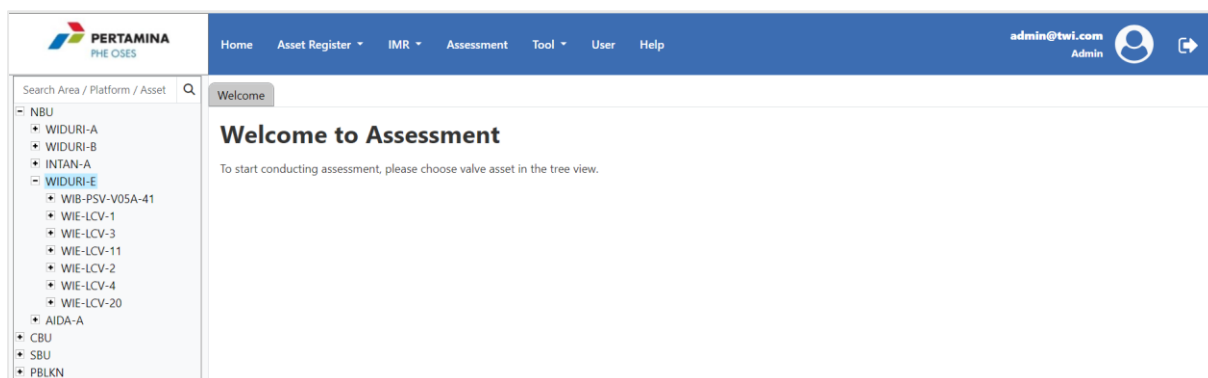


Figure 8-1 Assessment Screen of VIMS

It is able to store the Risk Assessment data related to Area, Platform and Asset information.

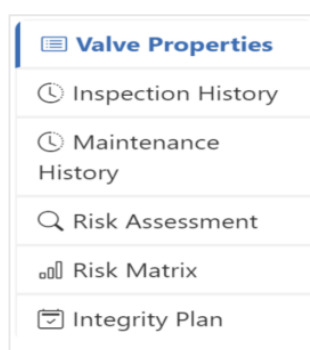


Figure 8-2 Assessment Submenus

In the assessment menu there is 6 submenus as shown above, the detail of the submenus is as follow:

- **Valve Properties:** Will show the details about the Asset.
- **Inspection History:** Will display the stored inspection data.
- **Maintenance History:** The list of Maintenance data will be displayed

- Risk Assessment: is the key function of VIMS
- Risk Matrix: Risk matrix is used to show the graphical report to the management.
- Integrity Plan: The integrity plan will be stored as per the Assessment.

8.1 Assessment List

Assessment data is displayed in a Tree List. Choose the area, platform and valve tag to start the assessment or click **ASSESSMENT with AutoNumber** link to view the existing Assessment data. For example, here **ASSESSMENT-2-WIE-LCV-1** is an auto running number. Whenever the user stores the assessment, the auto running number will be added to it.

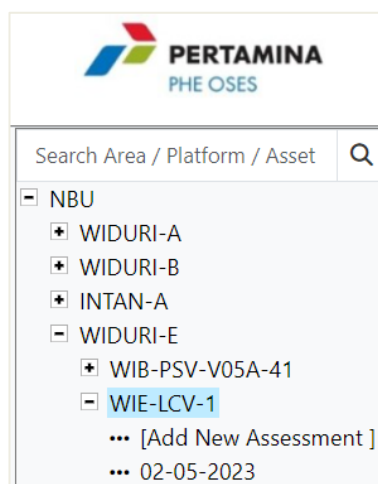


Figure 8-3 Assessment Tree List

Assessment Information			
Assessment No	ASSESSMENT-2-WIE-LCV-1	Time to Limit State Leakage to atmosphere (Month)	25
Assessment Date	21-08-2024	Time to Limit State Failure of function (Month)	24
Time Period (Month)	12	Time to Limit State Passing accros valve (Month)	23

Figure 8-4 Assessment No. Generate Automatically

8.2 Add Assessment

This section is used to add a new assessment with the following steps:

- Open Tree Asset and find the Asset to be added, or input the Query Asset you are looking for in the Seach Area / Platform / Asset column and click [Add New Assessment] on the Asset Tree.

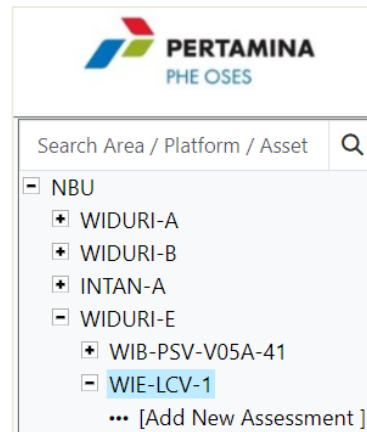


Figure 8-5 Add New Assessment from Tree List

- b. The form will be displayed in tabbed form with properties section. Fill in the form then click the Save button.

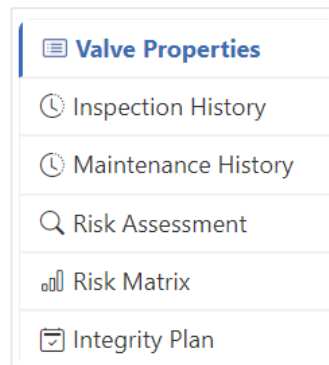


Figure 8-6 Assessment Properties Submenus

- c. Click Valve Properties then fill the form.

Top portion of valve properties will show the existing Valve details with Assessment information. The Asset Information data will be un-editable, The Assessment Information only editable. The user can enter the required fields, then save the details.

Asset Information			
Asset ID	52	Size (inch)	2
Tag No	WIE-LCV-1	Class Rating	600
Equipment Name	Level Control Valve outlet Test Separator	Service Fluid	Crude Oil
Business Area	NBU	Fluid Phase	Liquid
Platform	WIDURI-E	Flow Rate (m3/hr)	90
Parent Equipment No.	PL-102-D-4	Operating Temperature (F)	100
Parent Equipment Description	Oil Level Control Valve outlet Test Separator V-01 (LCV-1)	Operating Pressure (Psig)	1440
Installation Date	01-01-2007	Toxic or Flammable Liquid	Yes
PID No	WIE-11001 P2	Cost of replacement and repair (USD)	90
Valve Type	Level Control Valve	Actuator Intg	FISHER
Manufacturer	FISHER	Actuator Serial No.	N/A
Body Material	WCB	Actuator Type/Model	667
Body Model	Globe	Actuator Power	N/A
End Connection	RF	Manual Override	No
Serial No	N/A	Status	In-service
Usage Type	PSV/PRV	Actuation	Pneumatic
Assessment Information			
Assessment No	--- Auto Generated ---	Time to Limit State Leakage to atmosphere (Months)	25
Assessment Date	19-08-2024	Time to Limit State Failure of function (Months)	25
Time Period (Months)	12	Time to Limit State Passing across valve (Months)	25

Figure 8-7 Assessment Valve Properties

- d. Click Inspection History then click Add Inspection Data button

The list of Inspection data will be displayed, so the user can choose a single or multiple history for assessment. The system will pick up the latest date record if the user chose more than one record.

- Upon proceeding the assessment, the user should choose the inspection data as displayed below.
- The Risk Assessment and Risk Matrix will be calculated as per the data selection.
- Then press the save button.
- The data will be stored into a database based on the auto generated assessment number.

Add Inspection Data

Figure 8-8 Assessment Add Inspection Data

- e. Select Inspection Data to be added then click Confirm Button.

No	Inspection Date	Inspection Method	Inspection Description	Function Condition	Test Pressure (if any)	Select
1	26-04-2022	Visual Inspection	Packing: Leak	Packing Leak	N/A	<input type="checkbox"/>
2	13-06-2024	Radiography Test	Test	Good	N/A	<input type="checkbox"/>
3	01-01-1967	Visual Inspection	1	1	@@o1UVN	<input type="checkbox"/>
4	02-02-1967	Passing Test	1	1	@@FWgP	<input type="checkbox"/>
5	26-11-1967	Passing Test	1	1	1	<input type="checkbox"/>

Showing 1 to 5 of 5 entries

Confirm

Figure 8-9 Assessment Select Inspection Data

- f. The selected Inspection Data shown as follow.

Welcome New Assessment WIE-LCV-1 X		Inspection History																		
<ul style="list-style-type: none"> Valve Properties Inspection History Maintenance History Risk Assessment Risk Matrix Integrity Plan 		<p>Add Inspection Data</p> <table> <tr> <th>No</th><th>Inspection Date</th><th>Inspection Method</th><th>Inspection Description</th><th>Function Condition</th><th>Test Pressure (if any)</th><th>Action</th></tr> <tr> <td>1</td><td>26-04-2022</td><td>Visual Inspection</td><td>Packing: Leak</td><td>Packing Leak</td><td>N/A</td><td>Detail Delete</td></tr> </table> <p>1 entries per page</p> <p>Showing 1 to 1 of 1 entry</p>					No	Inspection Date	Inspection Method	Inspection Description	Function Condition	Test Pressure (if any)	Action	1	26-04-2022	Visual Inspection	Packing: Leak	Packing Leak	N/A	Detail Delete
No	Inspection Date	Inspection Method	Inspection Description	Function Condition	Test Pressure (if any)	Action														
1	26-04-2022	Visual Inspection	Packing: Leak	Packing Leak	N/A	Detail Delete														
Save																				

Figure 8-10 Assessment Inspection Data selected

- g. Click Maintenance History then click Add Maintenance Data.

The list of Maintenance data will be displayed, so the user can choose a single or multiple history for assessment. The system will pick up the latest date record if the user chose more than one record.

- Upon proceeding the assessment, the user should choose the maintenance data as displayed below.
- The Risk Assessment and Risk Matrix will be calculated as per the data selection.
- Then press the save button.
- The data will be stored into a database based on the auto generated assessment number.

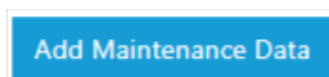


Figure 8-11 Assessment Add Maintenance Data

- h. Select Maintenance Data to be added then click Confirm Button.

No	Maintenance Date	Is Valve Repaired?	Maintenance Description	Select
1	08-05-2024	No	Test 1	<input type="checkbox"/>
2	12-06-2024	No	Test 2	<input type="checkbox"/>
3	13-06-2024	No	Test 3	<input type="checkbox"/>
4	01-01-1967	No	@@86Ukg	<input type="checkbox"/>
5	11-07-2024	Yes		<input type="checkbox"/>
6	02-02-1967	No	1	<input type="checkbox"/>
7	29-12-1963	No	1	<input type="checkbox"/>
8	26-11-1967	No	1	<input type="checkbox"/>
9	27-12-1965	No	1	<input type="checkbox"/>
10	28-12-1964	No	1	<input type="checkbox"/>

Showing 1 to 10 of 10 entries

Confirm

Figure 8-12 Assessment Select Maintenance Data

- i. The selected Maintenance Data shown as follow.

WelcomeNew Assessment WIE-LCV-1 X

Valve Properties

Inspection History

Maintenance History

Risk Assessment

Risk Matrix

Integrity Plan

Save

Maintenance History

Add Maintenance Data

No	Maintenance Date	Is Valve Repaired?	Maintenance Description	Action
1	08-05-2024	No	Test 1	<div>DetailDelete</div>

1

entries per page

Showing 1 to 1 of 1 entry

Figure 8-13 Assessment Maintenance Data Selected

- j. Click Risk Assessment then fill the form.

As per the Assessment on the Inspection and Maintenance data. The system will store automatically the assessment values such as LF1 to LF7.

- LF1 & LF3 - Will be automatically filled as per the Inspection data.
- LF2 - is calculated from the Time period against Leakage to atmosphere, Failure of Function and passing across valve.
- LF4, LF5 & LF6 - are allowed to feed the manual entries.
- LF7 - is derived from Maintenance data.
- Consequence of Failure will be measured as per the calculation.

Welcome

New Assessment WIE-LCV-1

Valve Properties

Inspection History

Maintenance History

Risk Assessment

Risk Matrix

Integrity Plan

Save

Likelihood of Failure

LF1 - Current Condition

Leakage to atmosphere

Failure of Function

Passing across valve

TP1

TP2

TP3

LF2 - Time To Limit State

Leakage to atmosphere

Failure of Function

Passing across valve

LF3 - Inspection Effectiveness

LF4 - Impact of Internal Fluid Impurities

LF5 - Impact of Operating Envelopes

LF6 - Used within ODM Specification

LF7 - Repaired

Consequence of Failure

Product loss definition (Silo)

HSE Definition

Poor

Good

Good

Improbable

Improbable

Improbable

Doubtful

Doubtful

Doubtful

Expected

Expected

Expected

Ineffective

No Expected Effect

No Expected Effect

Significantly Below Specification

No

10

Slight Injury or Health Effect

Figure 8-14 Assessment Risk Assessment

k. Click Risk Matrix to see the results of the Risk Assessment calculation.

The Risk matrix will be automatically calculated, according to the Risk assessment. The time period duration has been validated against Leakage to atmosphere, Failure of Function and Passing across valve. The TP values will be plotted into the graph based on the Consequence of failure and Likelihood of failure as below.

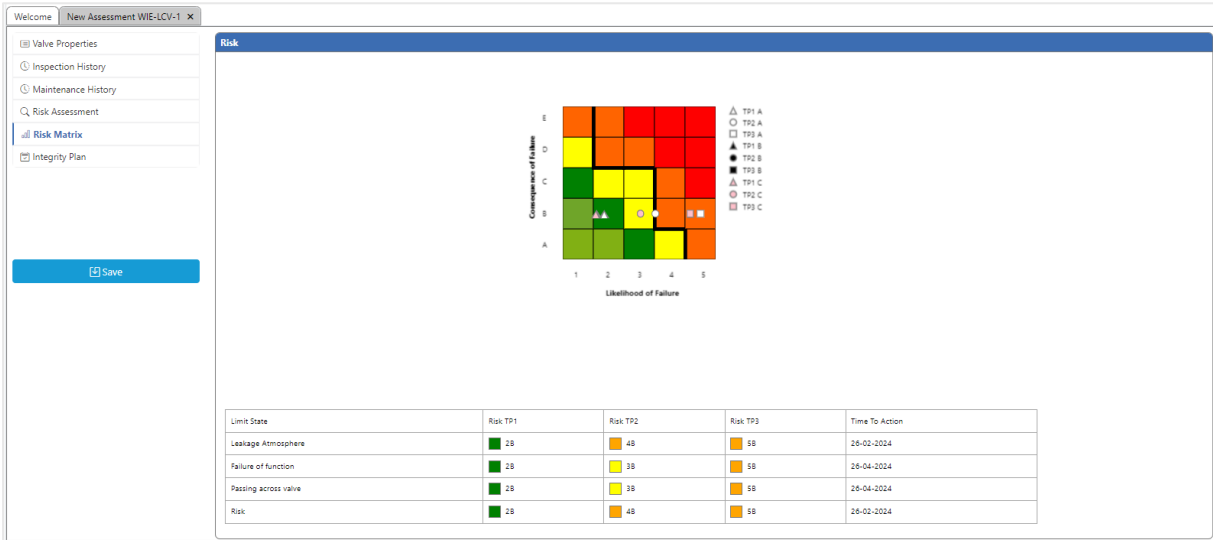


Figure 8-15 Assessment Risk Matrix

l. Click Integrity Plan then fill the form.

At last, the Integrity plan will be stored as per the assessment.

- Integrity Status - Can be selected from dropdown box by Very High Priority/High Priority/Medium Priority/Low Priority/Very Low Priority
- Summary can be filled in the text area.
- Time to Taken can be filled by date.
- Recommendation Action can be chosen by Inspection/Repair/Replace
- Detailed Recommendation will be final data for the assessment.

Figure 8-16 Assessment Integrity Plan

- m. Click Save button to save the Assessment Calculation.



Figure 8-17 Assessment Save Button

- n. A successfully inserted data message is displayed.

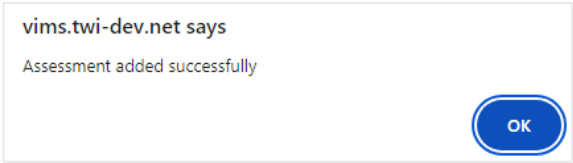


Figure 8-18 Assessment Pop Up Message

8.3 Detail Assessment

This section is used to edit existing data, with the following steps:

- a. Open Tree Asset and find the Asset to see detail, or input the Query Asset you are looking for in the Seach Area / Platform / Asset column and click Assessment Date on the Asset Tree.

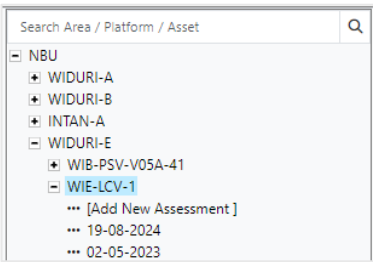


Figure 8-19 Edit Assessment

- b. The form will be displayed in tabbed form with properties section. Fill in the form then click the Save button.



Figure 8-20 Assessment Properties Submenus

c. Click Valve Properties then Detail will be displayed.

WelcomeWIE-LCV-1 19-08-2024

Valve Properties

Inspection History

Maintenance History

Risk Assessment

Risk Matrix

Integrity Plan

Save

Print

Delete

Asset Information

Asset ID	S2	Size (Inch)	2
Tag No	WIE-LCV-1	Class Rating	600
Equipment Name	Level Control Valve outlet Test Separator	Service Fluid	Crude Oil
Business Area	NBU	Fluid Phase	Liquid
Platform	WIDURI-E	Flow Rate (m3/hr)	90
Parent Equipment No.	PL-102-Q-4	Operating Temperature (F)	100
Parent Equipment Description	Oil Level Control Valve outlet Test Separator V-01 (LCV-1)	Operating Pressure (Psi)	1440
Installation Date	01-01-2007	Toxic or Flammable Liquid	Yes
PID No	WIE-11001 P2	Cost of replacement and repair (USD)	90
Valve Type	Level Control Valve	Actuator Mtg	FISHER
Manufacturer	FISHER	Actuator Serial No.	N/A
Body Material	WC6	Actuator Type/Model	667
Body Model	Globe	Actuator Power	N/A
End Connection	RF	Manual Override	No
Serial No	N/A	Status	In-service
Usage Type	PSV/PRV	Actuation	Pneumatic

Assessment Information

Assessment No	ASSESSMENT-1-WIE-LCV-1	Time to Limit State Leakage to atmosphere (Months)	25
Assessment Date	19-08-2024	Time to Limit State Failure of function (Months)	25
Time Period (Months)	12	Time to Limit State Passing across valve (Months)	25

Figure 8-21 Assessment Valve Properties

d. Click Inspection History then click Detail button.

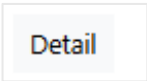



Figure 8-22 Assessment Inspection History Detail Button

e. Inspection Data Detail will be displayed.

Asset Information			
Asset ID	52	Valve Type	Level Control Valve
Tag No	WIE-LCV-1	Manufacturer	FISHER
Body Material	WCB	Business Area	NBU
Body Model	Globe	Platform	WIDURI-E
End Connection	RF	Parent Equipment No.	PL-102-D-4
Serial No.	N/A	Parent Equipment Description	Oil Level Control Valve outlet Test Separator V-01 (LCV-1)
Installation Date	01-01-2007	Size (inch)	2
PID No	WIE-11001 P2	Class Rating	600

Inspection Information	
Valve Tag No	WIE-LCV-1
Inspection Date	26-04-2022
Inspection Method	Visual Inspection
Inspection Effectiveness	Ineffective
Inspection Description	Packing: Leak
Current Condition Leakage to Atmosphere	Poor
Current Condition Failure of Function	Good
Current Condition Passing Across Valve	Good
Function Condition	Packing Leak
Test Pressure if Any	N/A
Inspection Image	

Close

Figure 8-23 Assessment Inspection Data Detail

- f. Click Maintenance History then click Detail.

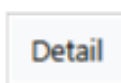


Figure 8-24 Assessment Maintenance Data Detail Button

- g. Maintenance Data will be displayed.

Asset Information			
Asset ID	52	Valve Type	Level Control Valve
Tag No	WIE-LCV-1	Manufacturer	FISHER
Body Material	WCB	Business Area	NBU
Body Model	Globe	Platform	WIDURI-E
End Connection	RF	Parent Equipment No.	PL-102-D-4
Serial No.	N/A	Parent Equipment Description	Oil Level Control Valve outlet Test Separator V-01 (LCV-1
Installation Date	01-01-2007	Size (inch)	2
PID No	WIE-11001 P2	Class Rating	600


Maintenance Information	
Maintenance Date	Is Valve Repaired
08-05-2024	No
Maintenance Description	Maintenance Image
Test 1	
<div>Close</div>	

Figure 8-25 Assessment Maintenance Data Detail

- h. Click Risk Assessment then Detail will be displayed.

Note as for LF2 – time to limit state, is the time to limit state at three future time periods (TP) from the last inspection of the valve is evaluated to determine whether limit state would occur (i.e., limit state A leakage to atmosphere). For new or uninspected valves, the installation date shall be used. The time to limit state is estimated over three time periods, allowing for any future nonlinear degradation e.g., vibration.

The time periods are labelled TP1, TP2, TP3 and are of the same frequency i.e. if frequency between their duration e.g., if the frequency was 18 months, then TP1 = 1.5 years, TP2 = 3 years, TP3 = 4.5 years. The frequency duration can be set to any value, but a duration between 18 months and 3 years is recommended. For each TP a time to limit state option will be assigned i.e., improbable, doubtful and expected, where:

- Improbable indicates that the time to the limit state is twice the time period.
- Doubtful indicates that the time to the limit state is greater than the time period but less than twice the time period.
- Expected indicates that the time to the limit state is equal to or less than the time period.

Likelihood of Failure		
LF1 - Current Condition		
Leakage to atmosphere	Poor	
Failure of Function	Good	
Passing across valve	Good	
LF2 - Time To Limit State		
	TP1	TP2
Leakage to atmosphere	Improbable	Doubtful
Failure of Function	Improbable	Expected
Passing across valve	Improbable	Expected
LF3 - Inspection Effectiveness		
	Ineffective	
LF4 - Impact of Internal Fluid Impurities	No Expected Effect	
LF5 - Impact of Operating Envelopes	No Expected Effect	
LF6 - Used within OEM Specification	Significantly Below Specification	
LF7 - Repaired	No	
Consequence of Failure		
Product loss definition (bb1c)	10	
HSSE Definition	Slight Injury or Health Effect	

Figure 8-26 Assessment Risk Assessment

- i. Click Risk Matrix to see the results of the Risk Assessment calculation.

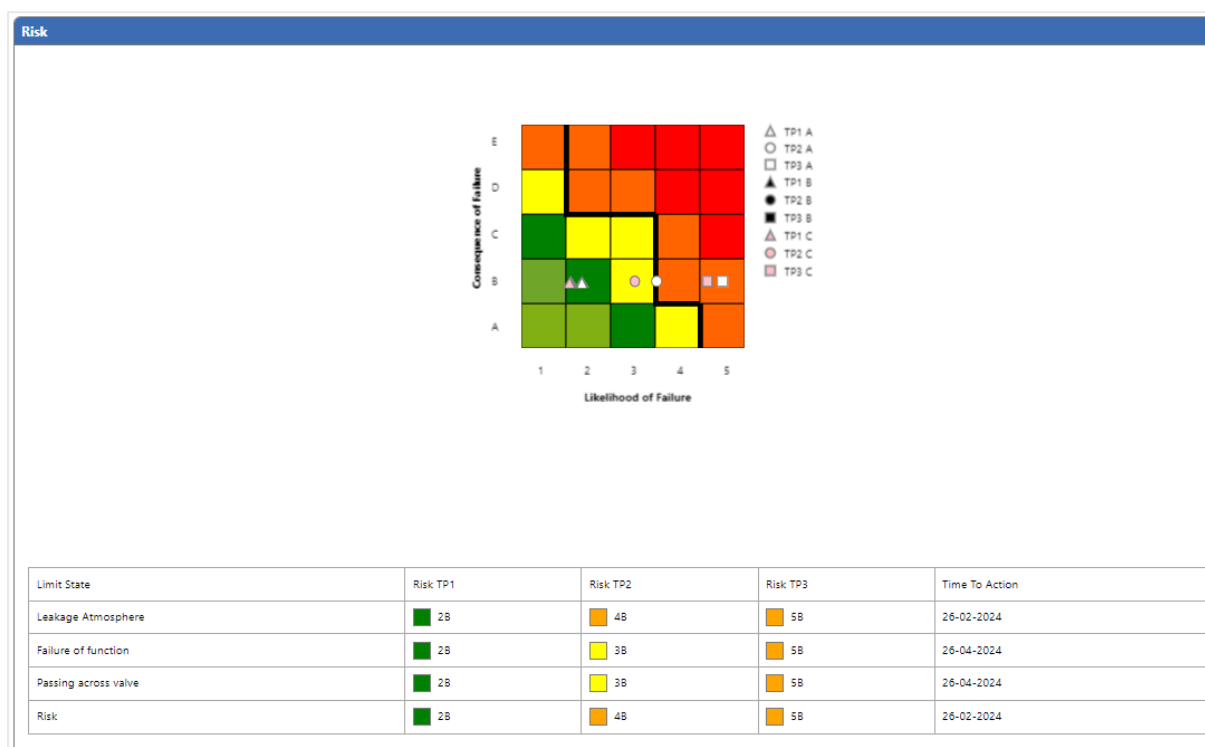


Figure 8-27 Assessment Risk Calculation Result

- j. Click Integrity Plan, Then Detail will be displayed.

Integrity Plan

Integrity Status

Low Priority

Time To Action

26-02-2024

Summary

Valve integrity low, as per inspection valve still on good condition.

Recommendation Action

Inspection

Detailed Recommendation

- Continue regular greasing of valve

- Conduct inspection before time to action

Figure 8-28 Assessment Integrity Plan

8.4 Print Assessment

This section is used to delete existing data, with the following steps:

- a. Open Tree Asset and find the Asset to be printed, or input the Query Asset you are looking for in the Seach Area / Platform / Asset column and click Assessment Date on the Asset Tree.

Search Area / Platform / Asset

NBU

WIDURI-A

WIDURI-B

INTAN-A

WIDURI-E

WIB-PSV-V05A-41

WIE-LCV-1

[Add New Assessment]

19-08-2024

02-05-2023

Figure 8-29 Print Assessment

- b. Click Print button. The print option to produce the consolidated report of assessment.

Print

Figure 8-30 Assessment Print Button

- c. The new tabbed will open. Use print feature from the browser to print the valve passport.


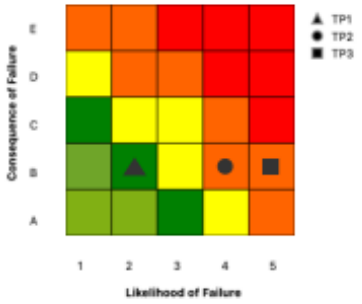


Valve Passport					
Valve Tag Number :	WIE-LCV-1	Assessment Date :	19-08-2024		
Business Area :	NBU	Assessment UID :	ASSESSMENT-1-WIE-LCV-1		
Platform :	WIDURI-E	Valve Type :	Level Control Valve		
INTEGRITY STATUS AND PLAN					
Priority :	Low Priority				
Current Status :	In-service				
RISK	TP1	TP2	TP3		
Risk for Most Severe Limit State :	2B	4B	5B		
INTEGRITY ACTION, RECOMMENDATION AND DATE					
Date for Integrity Recommendation :	26-04-2023				
Inspection - Continue regular greasing of valve - Conduct inspection before time to action					
MAINTENANCE HISTORY					
MAINTENANCE DATE	IS VALVE REPAIRED?	MAINTENANCE DESCRIPTION			
08-05-2024	No	Test 1			
MAINTENANCE IMAGE					
					
INSPECTION HISTORY					
INSPECTION DATE	INSPECTION METHOD	INSPECTION DESCRIPTION	TEST PRESSURE	FUNCTION CONDITION	
26-04-2022	Visual Inspection	Packing: Leak	N/A	Packing Leak	
INSPECTION IMAGE					
					

Figure 8-31 Assessment Print Form

8.5 Delete Assessment

This section is used to delete existing data, with the following steps:

- a. Open Tree Asset and find the Asset to be deleted, or input the Query Asset you are looking for in the Search Area / Platform / Asset column and click Assessment Date on the Asset Tree.

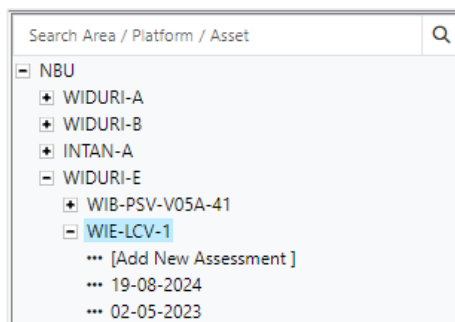


Figure 8-32 Delete Assessment

- b. The Delete functionality has been provided to delete the unwanted Assessment data by clicking the Delete button.



Figure 8-33 Delete Assessment Button

- c. Confirm dialog will be displayed.

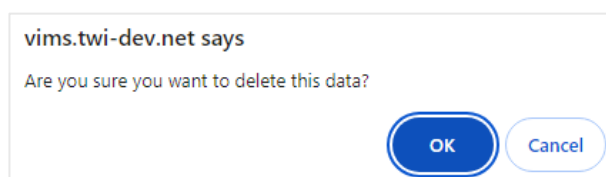


Figure 8-34 Assessment Delete Confirmation Box

- d. Click Ok to Continue
- e. A successfully deleted data message is displayed.

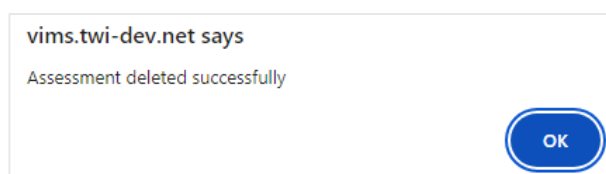


Figure 8-35 Assessment Delete Successfully Message

9 TOOL

Tool module facilitates the manual uploading into the database. There are three modules of data can be imported such as Asset Register, Inspection/Maintenance and Assessment.

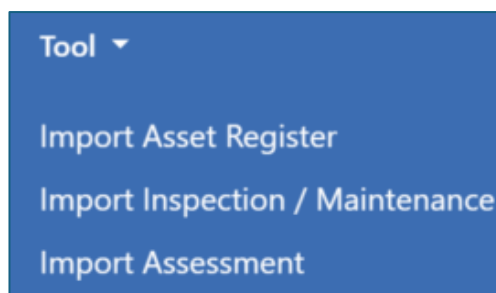


Figure 9-1 Tool Menu of VIMS

9.1 Import Asset Register

The VIMS is providing the option to upload the multiple asset data at a time of clicking the import button. There will be a standard template to fill in the asset data as per the database structure.

here'. Then there is a file selection area with 'File:' label, 'Choose File' button, and 'No file chosen' text. At the bottom is a large 'Import File' button." data-bbox="210 319 780 403"/>

Figure 9-2 Import Asset Register from Tools Module of VIMS

9.2 Import Inspection / Maintenance

The VIMS is providing the option to upload the multiple Inspection and Maintenance data at a time of clicking the import button. There will be a standard template to fill in the Inspection and Maintenance data as per the database structure.

here'. Then there is a file selection area with 'File:' label, 'Choose File' button, and 'No file chosen' text. At the bottom is a large 'Import File' button." data-bbox="210 529 780 612"/>

Figure 9-3 Import Inspection from Tools Module of VIMS

here'. Then there is a file selection area with 'File:' label, 'Choose File' button, and 'No file chosen' text. At the bottom is a large 'Import File' button." data-bbox="210 654 780 739"/>

Figure 9-4 Import Maintenance from Tools Module of VIMS

9.3 Import Assessment

The VIMS is providing the option to upload the multiple Assessment data at a time of clicking the import button. There will be a standard template to fill in the Assessment data as per the database structure. Click here for download template if user never use this feature, after template downloaded fill all information

regarding assessment and save. Click chose file and select import assessment file, then click import file the system will begin working to import data.

Import Assessment

Download the template file [here](#)

File: No file chosen

Figure 9-5 Import Assessment from Tools Module of VIMS

After import assessment has done the risk will not generate automatically, user should select the inspection and maintenance data on the assessment by click add inspection data and click add maintenance data respectively shown in Figure 9-6 & Figure 9-7.

Welcome | WIE-LCV-1 02-05-2023

Valve Properties

Inspection History

Maintenance History

Risk Assessment

Risk Matrix

Integrity Plan

Inspection History

No	Inspection Date	Inspection Method	Inspection Description	Function Condition	Test Pressure (if any)	Action
No data available in table						

Showing 0 to 0 of 0 entries

Figure 9-6 Select Inspection Data for Assessment

Welcome | WIE-LCV-1 02-05-2023

Valve Properties

Inspection History

Maintenance History

Risk Assessment

Risk Matrix

Integrity Plan

Maintenance History

No	Maintenance Date	Is Valve Repaired?	Maintenance Description	Action
No data available in table				

Showing 0 to 0 of 0 entries

Figure 9-7 Select Maintenance Data for Assessment

After user select inspection and maintenance data for assessment, then the system will calculate the risk. The risk can be seen in the risk matrix sub-menu as shown in Figure 9-8.

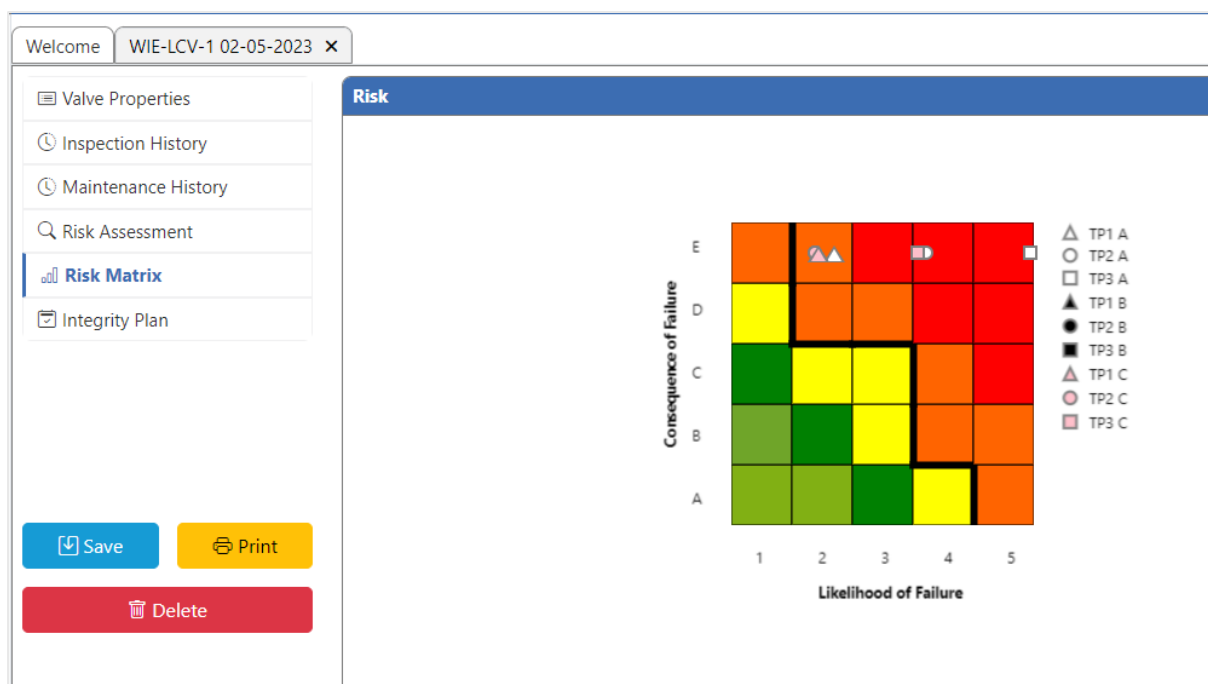


Figure 9-8 Risk Matrix

After the risk matrix was generated, user should input manually for integrity plan and click save as shown in the Figure 9-9. Process assessment using the import feature has been finished, now user should click save before print the assessment using print button.

Integrity Status	Time To Action
Very Low Priority	26-04-2022

Summary: Leakage found on packing valve

Recommendation Action: Replace

Detailed Recommendation: Conduct overhaul valve due to leakage

Figure 9-9 Integrity Plan Screen

10 USER

This section is used to display and perform data manipulation Users such as Add New, Edit, and Delete. The user module is to create the user profile and provide permission to access the modules. The list of roles is Admin/Engineer/Viewer.

User						
<div> <div>+ Add New</div> <div>Search</div> </div>						
No.	Email	Role Name	Admin	Engineer	Viewer	
1	engineer@twi.com	Engineer		✓	✓	Edit
2	test@twi.com	Tester	✓	✓		Edit
3	admin@twi.com	Admin	✓	✓	✓	Edit
4	testing@example.com		✓	✓	✓	Edit
5	viewer@twi.com	Viewer			✓	Edit
6	noone@twi.com	no one				Edit
7	twi@twi.com	Admin	✓	✓	✓	Edit
8	123@mail.myid	test123			✓	Edit
9	123@mail.myid	admin test	✓			Edit
10	test@test.com	testot				Edit

Showing 1 to 10 of 11 entries

Figure 10-1 User Management Module of VIMS

There is a Quick Search feature to find the searched user based on the query inputted.

User						
<div> <div>+ Add New</div> <div>Search twi</div> </div>						
No.	Email	Role Name	Admin	Engineer	Viewer	
1	engineer@twi.com	Engineer		✓	✓	Edit
2	test@twi.com	Tester	✓	✓		Edit
3	admin@twi.com	Admin	✓	✓	✓	Edit
5	viewer@twi.com	Viewer			✓	Edit
6	noone@twi.com	no one				Edit
7	twi@twi.com	Admin	✓	✓	✓	Edit

Showing 1 to 6 of 6 entries (filtered from 11 total entries)

Figure 10-2 User Quick Search

10.1 RACI

PHE OSES give general overview of organizational for VIMS responsible, accountable, consulted and informed (RACI) in the table below.

Table 10-1 Table RACI

Tasks	Responsible	Accountable	Consulted	Informed
Updating asset register, Inspection and Maintenance data	Operator, Chief Operator, Senior Supervisor	Superintendent Production	Superintendent Production and Maintenance Engineer	Manager
Risk assessment	Operator, Chief Operator, Senior Supervisor	Superintendent Production	Superintendent Production and Maintenance Engineer	Manager

Tasks	Responsible	Accountable	Consulted	Informed
Integrity management plan production	Operator, Chief Operator, Senior Supervisor	Superintendent Production	Superintendent Production and Maintenance Engineer	Manager
Production of spares estimate	Operator, Chief Operator, Senior Supervisor	Superintendent Production	Superintendent Production and Maintenance Engineer	Manager
Condition assessment	Operator, Chief Operator, Senior Supervisor	Superintendent Production	Superintendent Production and Maintenance Engineer	Manager
Corrective actions	Operator, Chief Operator, Senior Supervisor	Superintendent Production	Superintendent Production and Maintenance Engineer	Manager

10.2 Add New User

This section is used to add a new user with the following steps:

- a. The admin user can add user by clicking the Add New button on the User screen.



Figure 10-3 Add New User Button

- b. Input data in the dialog box that appears.

Add/Edit New user

Email	<input type="text"/>	Admin	<input type="checkbox"/>
Password	<input type="password"/>	Engineer	<input type="checkbox"/>
Role Name	<input type="text"/>	Viewer	<input type="checkbox"/>

Figure 10-4 Add New User Form

- c. Click the Save button. The added data will be displayed in the user list.

10.3 Edit User

This section is used to edit existing data, with the following steps:

- a. Click the Edit button on the data you want to change.

2	test@twi.com	Tester	✓	✓	
---	--------------	--------	---	---	---

Figure 10-5 Edit User Button

- b. In the dialog box that appears, change the data as desired.

Add/Edit New user

Email	<input type="text" value="test@twi.com"/>	Admin	<input checked="" type="checkbox"/>
Password	<input type="text" value="Leave blank if you don't want to change the password"/>	Engineer	<input checked="" type="checkbox"/>
Role Name	<input type="text" value="Tester"/>	Viewer	<input type="checkbox"/>

Figure 10-6 Edit User Form

- c. Click the Save button. The changed data will be displayed in the user list.

10.4 Delete User

This section is used to delete existing data, with the following steps:

- a. The admin user can delete the user by clicking the edit button on the User screen. There will be a pop-up screen to do the delete activity.


6	noone@twi.com	no one			
---	---------------	--------	--	--	--

Figure 10-7 User Delete Data

- b. In the dialog box that appears, click Delete button.

Add/Edit New user

Email	<input type="text" value="noone@twi.com"/>	Admin	<input type="checkbox"/>
Password	<input type="text" value="Leave blank if you don't want to change the password"/>	Engineer	<input type="checkbox"/>
Role Name	<input type="text" value="no one"/>	Viewer	<input type="checkbox"/>

Figure 10-8 User Delete Form

- c. A Confirmation Box will be displayed. Click the OK button to continue. Data that has been deleted will disappear from the user list.

vims.twi-dev.net says
Are you sure you want to delete this user?

Figure 10-9 User Delete Confirmation Box

11 HELP

The Help menu is consisting with this user manual or user guide document, this document is to help users in using the VIMS application. To access the manual document user can click help menu in VIMS application.



Figure 11-1 Help User Guide Button

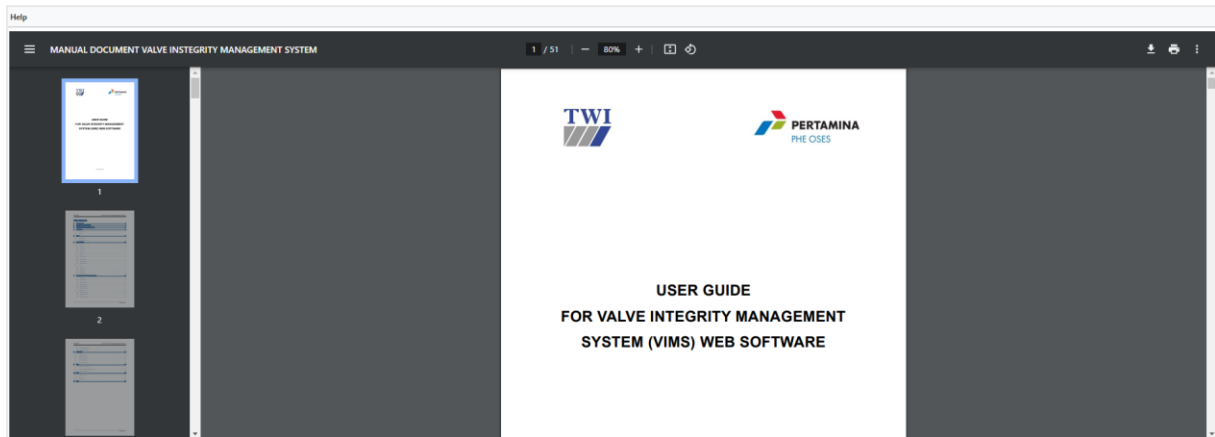


Figure 11-2 Help Screen