Issue 2022 | 11

CADISON® WORLD

EXPERIENCES & NEWS

Digital Thread for Project Data & Document Management

Enabling Integrated Plant Engineering Process with Built-in PDM Tool

Index

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https://www.xing.com/companies/itandfactorygmbh

https://www.youtube.com/user/ITandFactory

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Dear CADISON Customers,

Welcome to the CADISON International Conference 2022!

In this conference we would like to focus on showcasing CADISON as the Digital Thread enabling Integrated Engineering process, helping our Customers effectively and intelligently manage their Data and Documents across their extended enterprise. CADISON has an inherently unique CAD + PDM architecture, and those customers who are able to leverage the power of this combo, derive tremendous business benefits in terms of increased efficiency and reduced direct as well as indirect costs. We will show you many examples and offer various ideas and cues, so you can better reap the benefits of your investments in CADISON.

One of the noteworthy achievements of last year is that we successfully executed a “Scan-to-CADISON” turnkey project, where the entire plant was scanned to give a huge point cloud, which was then converted into an intelligent CADISON model by our global team. We are confident that this solution can offer a tremendous value, as many industries are accelerating their Digitalization initiatives.

Our Global Engineering services and support offers a unique cost-effective alternative to our customers. Many of you are already taking advantage of our hybrid team between Germany and India, supporting and servicing you to meet your objectives.

After the success of our standalone solution Visio P&ID Process Designer (www.visiopid.com), which is now adopted in over 25 countries, we recently launched a new standalone solution E&I Electrical Designer (www.enidesigner.com). The highlight of this solution is that it has a built-in CAD engine and no additional CAD licenses are required, making it more cost-effective solution.

Enjoy the conference!

Sincerely,
The CADISON Executive Team

Top Features of CADISON R22

The CADISON R22 is now ready for you

The CADISON R22 contains many usability enhancements based on ideas, feedback and demands received from Key Users and backed by the CADISON Core support teams, as well as issue-fixes and notes received through the CADISON Helpdesk.

It also supports several key changes in plant design in recent times and also helps to use the CADISON data to export into 3D PDF (including Object data), and with more information like DWG Neutral export with attributes for non-CADISON Users, and bringing them into a more intelligent design network.

CADISON R22 is available on AutoCAD 2023 and earlier versions

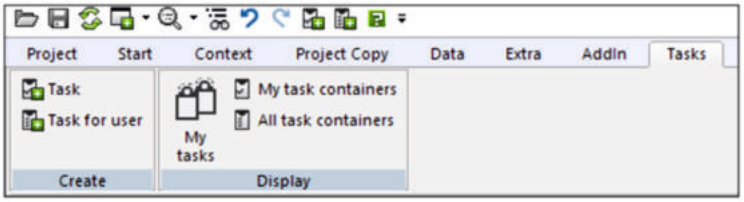
CADISON R22 is now compatible with AutoCAD 2023 on Windows 10 with 64-bit architecture. It also supports AutoCAD 2021 and AutoCAD 2022. CADISON Users who are still in migration process for AutoCAD, can also access the latest benefits of CADISON R22.

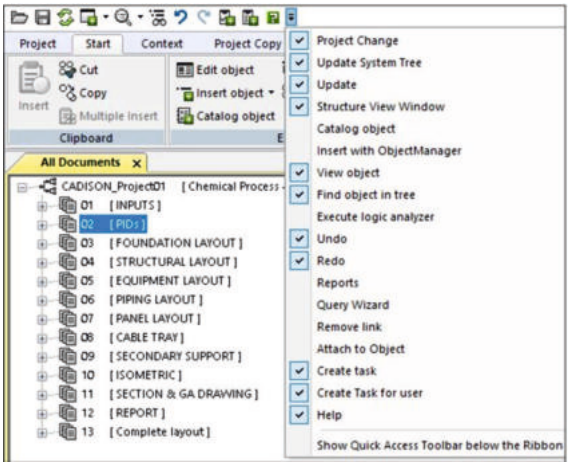
Improved performance for Multi-user environment

CADISON now works faster while multiple Users work in the same project. For a true Multi-user environment and team scalability, there have been several changes in this release to the core of the CADISON as well as the database. The object and model creation in P&ID and 3D, object linking, and search functionality have become much faster and allow more Users even from different disciplines, to connect & collaborate in the same project.

Extended Ribbon and Quick Access Toolbar in CADISON Project Engineer and CADISON Project Navigator:

To improve the ease of access and use, the User Interface for many of the CADISON modules are redesigned with new functions. The 'Quick Access Toolbar' now has more functions listed in drop-down and can be enabled by the Users while working on a project for quick access and improved productivity.





New ribbon for handling of Task Container commands in Project Engineer

Project Engineer now also has a separate ribbon for all the Task container tools. Considering the importance of Task containers, many Users requested to bring Task container tools at one place and make it more easily accessible.

Enhancements in IFC Interface

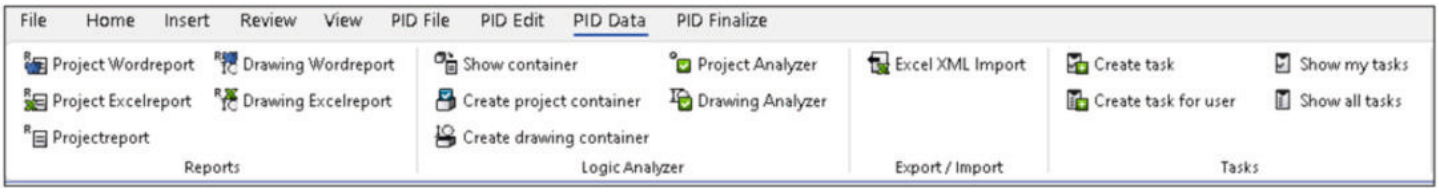
The IFC interface in CADISON R22 has been improved further. With the IFC 4.0 configuration, the extended boundary representation, the pipeline insulation and collision bodies now can also be exported to IFC format.

- Export of insulation and collision geometry during IFC Export.
- Improved graphic quality for IFC Export.

PID-Designer for Visio has Extended Ribbons in Designer:

A New ribbon “PID Data” is added showing the command buttons for Reports Creation, Logic Analyzer, Excel Import in XML format and all the tools for Task containers:

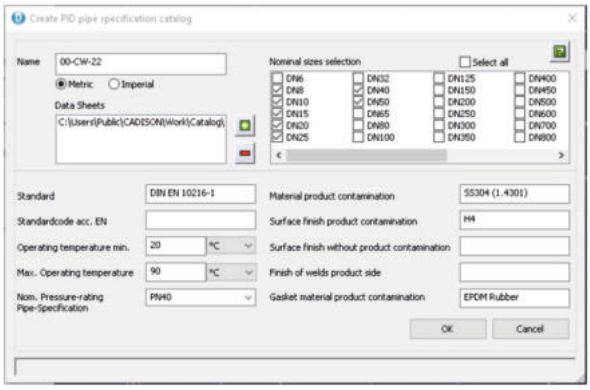
- Commands for creation of Reports (Word & Excel)
- Commands for handling of Task Containers
- Commands for handling of Logic Analyzer functions

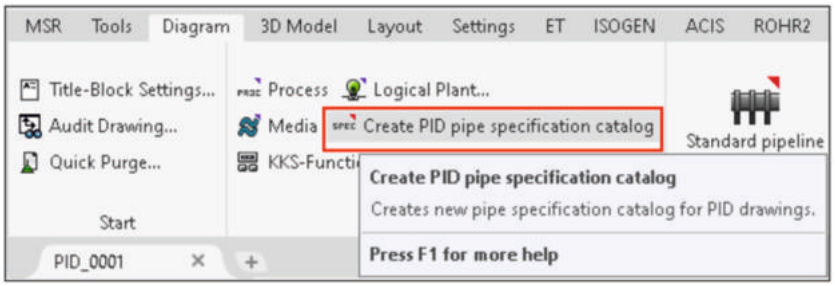


New Pipe Specification Catalog creator for P&IDs

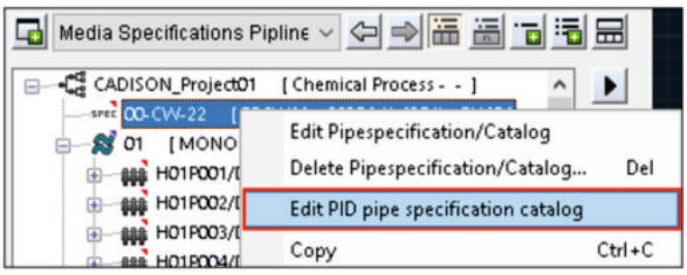
When working in P&IDs (without 3D), CADISON P&ID Designer provides a new PID Pipe spec creation tool which can create basic pipe specifications:

- Define available nominal sizes
- Provide necessary technical data like operating temperature, pressure rating, material, etc.





P&ID Pipe specs can also be edited by selecting them in the CADISON Tree with the Right mouse click, when “Media Specifications Pipeline” or “Media and Pipe Specifications” Structure view is selected. The P&ID Pipe Specs can be edited, deleted, copied to create a new spec, and you user can add more pipe sizes or update other fields.

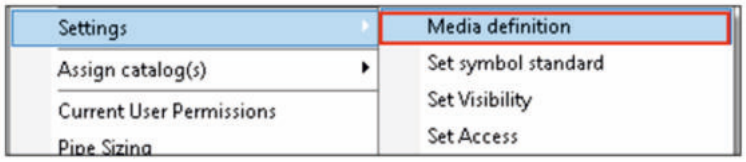


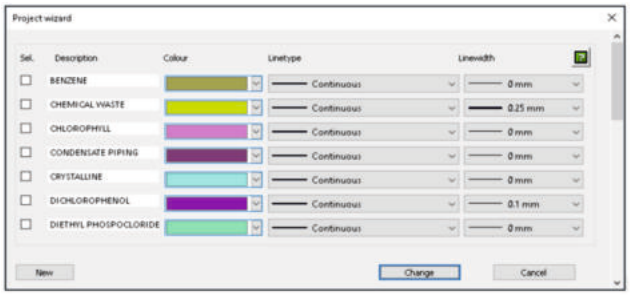
New dialog for the creation of new media in the project

Define color and line types for media: CADISON R22 has a new dialog interface to create new media in the project. In the CADISON Design Tree, User can Right mouse click and select “Settings > Media definition” to define and add new media objects in the project.

Top Features of CADISON R22

The User can easily add new media object & description, and select Colour, Linetype and Linewidth from the drop-down lists. The User can also select the Check box to edit and Change the media in this interface.

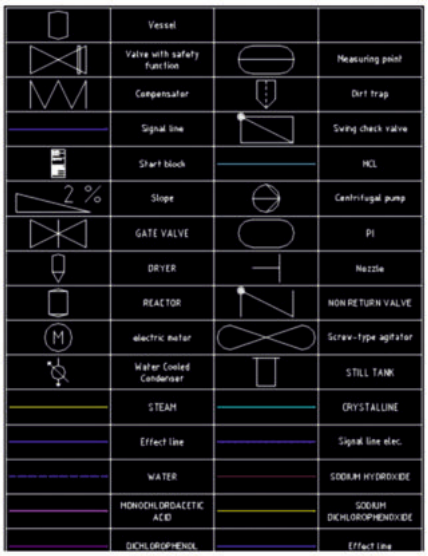




Project wide legend drawings

CADISON now supports project wide legend drawings which can show the legend of any number of 2D drawings. If there are multiple drawings inside a document group or in a project, then it is possible to create a single Legend table for all the drawings under that document group or the project.

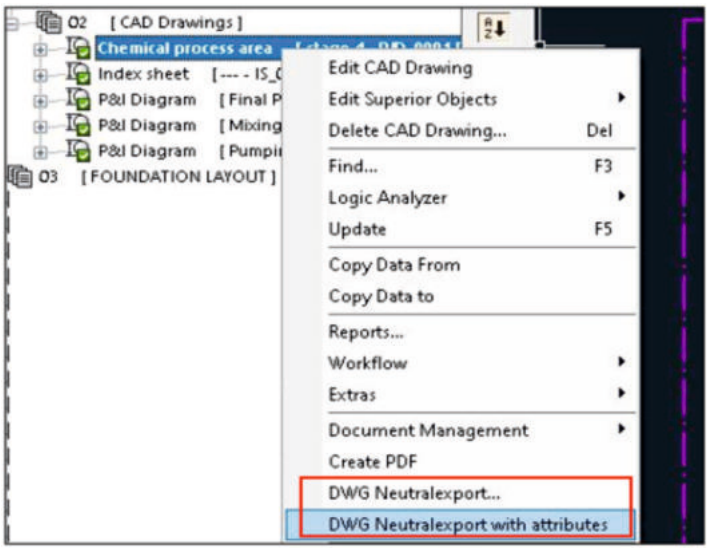
The content of the legend will be automatically calculated according to the symbols used on the drawing. It can be positioned as per the user requirement.
To update a Legend drawing, the “Update Legend Drawing” command is available in the Tools menu.

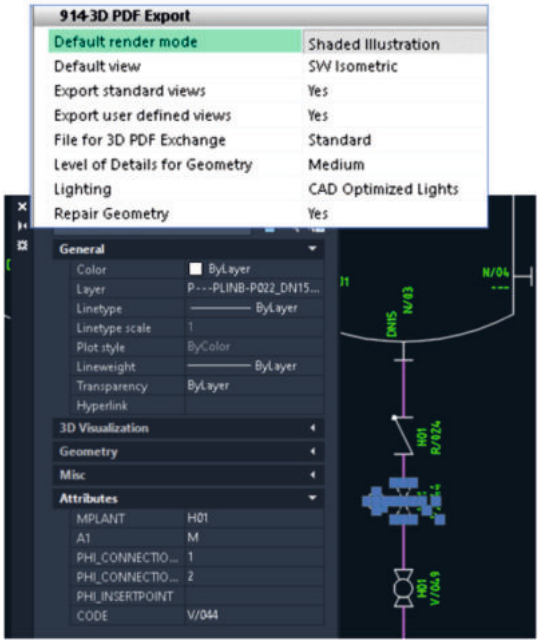


Enhancement with addition of new Export Functionalities

DWG Neutralexport with attributes

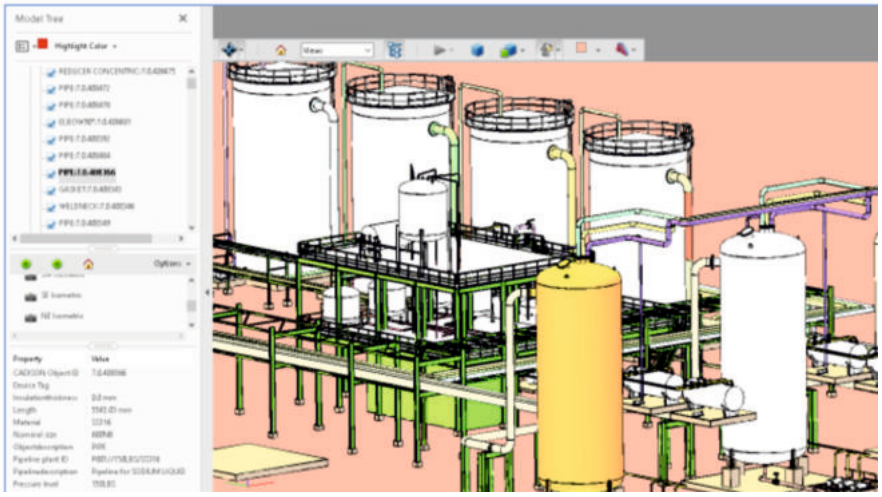
The User now export a CADISON drawing as a neutral AutoCAD DWG file where all CADISON objects are converted to blocks with attributes to export the graphics, including the data for non-CADISON Users. The exported properties can be viewed in the Properties dialog or in the Drawing Block window.





New 3D PDF Export

With the 3D PDF Export command, you can export the 3D Layout drawings in PDF file format. After exporting a 3D drawing as 3D PDF, Users can have a closer look at the components in 3D without any need to install the CADISON. This 3D PDF output is read only format and no changes can be made to the existing drawing. To use the 3D PDF Export command in CADISON, the User needs to enable the ITF-3DPDF module in CADISON Config Manager. Then, in the Project settings, in 914-3D PDF Export, User can set the necessary parameters for the 3D PDF export.

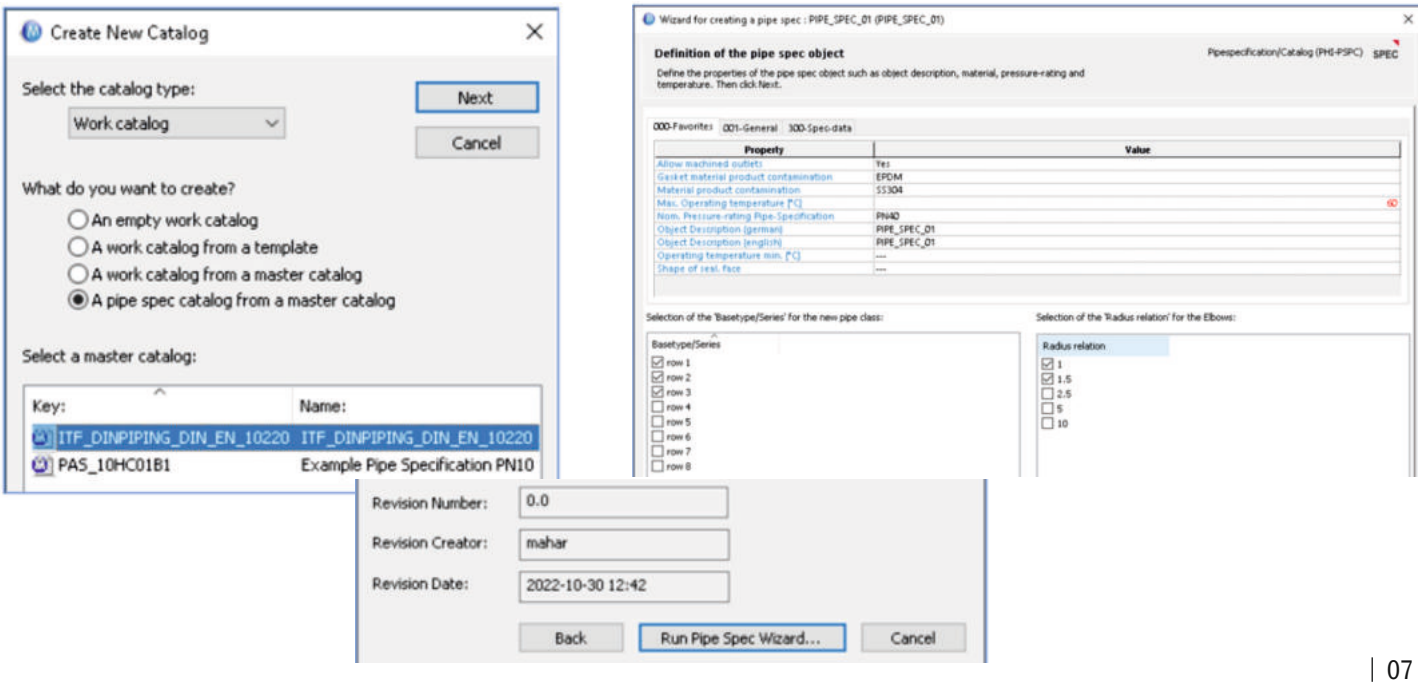


***Note**: User may have to "Enable playing of Multimedia and 3D content" and "Enable 3D content for trusted content" in "Multimedia and 3D Options" in "Preferences" in Acrobat Reader to view the 3D content.*

MATPIPE Pipe Specification Wizard

CADISON R22 has a new wizard in MATPIPE to create detailed Standard Pipe Specification catalogs, based on a Template or a Master catalog. The wizard has an easy-to-use function to create standard Pipe Specification catalogs, which can be used in 3D Designer to draw 3D pipelines.

For this, you can start dialog "Create New Catalog" and select "A pipe spec catalog from a master catalog" option and later, select the "Run Pipe Spec Wizard" button to start the wizard. Later User can select the required components like Pipe, Elbow, Reducer and other fittings and their required sizes as per the design requirements. The Master catalog used should be available in the Master catalogs folder with all the necessary components.



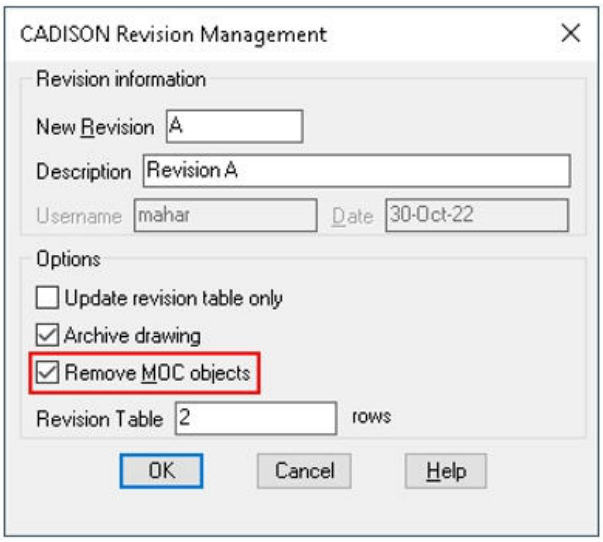
Top Features of CADISON R22

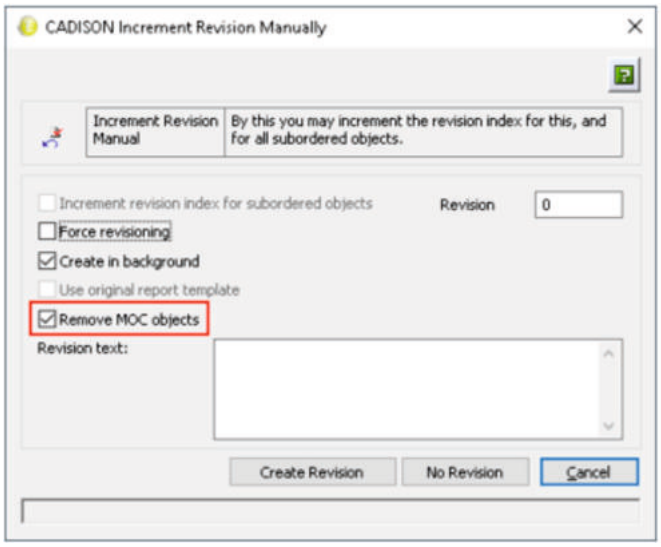
Enhancements in 'Modification Tracing Extension' module

CADISON Modification Tracing Extension (also known as 'Management of Change' or MOC) extends the CADISON object model to the properties, which serves to completely log the modification history of an object, has been updated with a new Structure view and object filters for a better result.

The new view in the Project Engineer for viewing recorded change notifications can also 'Filter' the change notifications based on:

- Creation date (Creation date, created until, Created by)
- Change type (Property changed like Catalog attached or Catalog detached, Object created, Link created, Link removed, and object Deleted).
- View of change notifications in 'Search & Edit' mode in Project Engineer.
- Automated clean-up of change notifications while creating the new drawing revisions or creating a revision of a report, document or any object.





Automated Report Update

Now automatic update is also possible while creating the new drawing revisions or any report which is attached to the drawing. This is very useful when Users create reports based on a drawing (like a drawing valve list). When a drawing revision is created and the setting to 'Update report on drawing revision creation' in the Project setting in '804-Cmn. Settings' sheet is set as 'Automatically'. CADISON extracts the reports which had been created based on the drawing and updates them with the latest revision data.

Enhancements in the Input Forms

Many use the CADISON input form functionality for editing objects and for viewing the object data. Few Users have also designed their input forms as a kind of data sheet, so the User form can provide all relevant object data. To enhance this functionality further, the new Command buttons are added in the Form Designer to:

- Call AddIns and Macros from input forms
- Create reports from input forms

CADISON R22 has many new features, enhancements and fixes based on the User's feedback and demands, improving the overall productivity of Plant Design Process and thus making it more productive and easier to use than ever before.

Digital Thread for Project Data & Document Management in the Process Industry

The future advancement of digital transformation in the Process & Manufacturing Industry is already in motion at a rapid pace and is a top priority these days. The process manufacturers are realizing the necessity of optimizing the cross collaboration and seamless exchange of data between different engineering phases and multiple disciplines in Plant Engineering. The plant scale or size is becoming irrelevant, and every business, irrespective of its plant scale is considering digital transformation of their processes and transition of engineering data into a connected information flow. This is the very reason that the Process Industry is adopting this new concept of 'Digital Thread' – a process to digitally interconnect the design and engineering data from different phases of a plant lifecycle.

Let's understand what is this 'Digital Thread' & why it is so important for the Process Industry:

The Digital Thread is a series of design engineering data and information that can connect siloed elements in the Process or Manufacturing industries and provides an integrated/overall view of an asset throughout the plant lifecycle. Using Digital Thread, one can harness the abundance of data and provide intelligent insights throughout the plant lifecycle. The web of information using this digital thread gives an accurate representation of how data and processes are connected to each other at various stages in plant engineering.

The digital thread represents a new vision with Project Data & Document Management (PDM) system. To construct the digital thread, engineers generally fetch the "digital definitions data" from the PDM system. To implement the digital thread concept into Plant Engineering, one needs a holistic Plant Engineering tool with built-in PDM and tracking capability. With a built-in PDM system one can harness the benefits of Digital Thread, e.g., for quick creation and tracking of projects & documents, and prompt implementation of revision & change management, etc.

Advantages of Adopting the Digital Thread as new Digital Transformation in Plant Engineering:

- Data-centric design engineering solution with a single source of information
- Create a digital engineering backbone & streamline all the Revision & Change Management
- Improving Cross-discipline Collaboration for data information & insights
- Enable seamless collaboration of engineering processes and avoid time-consuming document exchange with Excel files moving between organization and systems

With CADISON make your Plant Data work for you, and enable data consistency, collaboration and alignment across the plant engineering lifecycle.

Mitsubishi Chemical adopts CADISON P&ID Designer for Visio: a Smart Design Solution to bring True Integration and Intelligence across all Disciplines

Mitsubishi Chemical (wholly owned subsidiary of Mitsubishi Chemical Corporation, headquartered in Tokyo, Japan) is a leading chemical manufacturer company of a broad variety of chemicals, industrial materials, and performance products, serving the need of global customers in all major business fields all over the world. Mitsubishi Chemical Corporation is one of the world's largest producers of Methacrylates – the building block of all acrylics.

What made CADISON P&ID Designer for Visio – a smart solution for Mitsubishi Chemical:

Mitsubishi Chemical UK, with its growing business was trying to upscale its design processes with an integrated solution which is advanced and digitally smart. They were looking for a well-developed and industry-proven software to easily fit in the existing workflow and the search ended with CADISON for a complete Integrated Digital Plant Solution.

The key features that Mitsubishi was looking in the new solution:

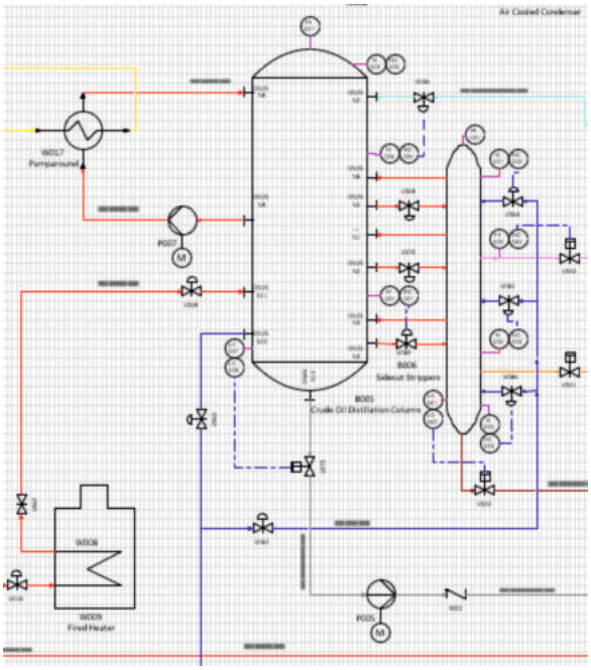
- An effective solution using which the Process Engineer team can use to efficiently plan and design the projects during the front-end development phase and can also easily create and read the P&IDs.
- Easy-to-use tool with Import & Export functionality for CAD drawings in the Visio environment, to DWG and PDF files. Also, intelligent feature like the import/export of engineering data allows to mass update the designs using technical information available in Excel format - such as specifications, manufacturer & supplier data.
- The capability to update the process parameters in the P&ID at any point in the design cycle, allows the User to update the design at any point of time in the database itself.
- Another major advantage for adopting CADISON P&ID Designer for Visio is its cost effectiveness and interface with other modules for the complete project lifecycle management. The solution comes with standalone and network licensing, which makes it a useful tool for small as well as large User groups. The licenses can be accessed between the teams along with the centralized database.

Increasing the project efficiency is always the key focus for every engineering team, and that is why just using Visio as tool for P&ID creation was not enough. Mitsubishi Chemical UK needed an advanced and intelligent solution and hence selected CADISON P&ID Designer for Visio, which enhances the overall project efficiency, reduce timeline & costs, and at the same time be easy to use & adapt in the existing workflow.

"We suggest CADISON for all users who face lack of time to do planning and want to reuse the designs, do modifications at plant sites where you face unexpected issues. If you are looking for an innovative tool which is easy-to-use, easy-to-learn and easy-to-adapt in the organization, then CADISON is the right choice."

Mitsubishi UK Team

Key benefits harnessed by Mitsubishi Chemical:



- Planning and design became faster, and it was much easier to make smart P&IDs for plant planners and design staff team.
- Standardized P&ID preparation with integrated report generation feature decreased the overall design cycle time and thus efficiency of the project increased.
- CADISON P&ID Designer for Visio brought the intelligence and integration with other disciplines when integrated with 3D, Electrical and CADISON interfaces for future requirements of a project.
- Design process standardization was achieved at the project level for creation of instrumentation data sheets, control logic symbols, inline fittings, valves and other equipment.
- It was easy to learn so that in no time, the Users became well adapted to the solution in a short period of time.
- Capability to update the data or associated process parameters of the P&IDs at any given stage in the database itself was easily achievable.

CADISON Support Team – pillar for long-term partnership:

In the whole process of CADISON Implementation, the CADISON Global Support Team was very perceptive for a seamless implementation and training experience to assist the smooth transition to a new solution. Mitsubishi Chemical UK team members acquainted themselves with CADISON in a short stretch of time and explored the distinctive features of incorporating customization & standardization into their business and project workflow. Mitsubishi team was satisfied with the introduction of other CADISON modules and the support from CADISON team.

Plant Design & Equipment Engineering Solution

CADISON® Project Engineer: A non–CAD solution for Project Planning, Cost Estimation, Engineering Information & Document Management, Workflow & Change management throughout the Plant Design Life Cycle. It enables managers / leads to plan conceptual engineering, generate bidding proposals and schedule tasks with or without MS Project. This helps to track and monitor the complete project data / information from Concept-to-Commissioning.
CADISON® PED add-in enables classification of the pipelines and equipments into the corresponding category of the Pressure Equipment Directive (RL 2014/68/EU) - including determination of the necessary assessment modules.

CADISON® P&ID Designer: A comprehensive spec-driven module for the 'creation of Intelligent PFDs / P&IDs' and 'Instrumentations (measurements & hook-ups)'. It can perform Pipeline Sizing and Utility Pump Sizing Calculations for optimum selection of equipment at the P&ID stage. It supports various standards (DIN, EN, ISO 10628, ISA 5.1, ANSI, etc.) and can be easily adapted to the company standards and reporting formats. Preconfigured-design rule-based checks for Data and Drawing Validation, built-in capabilities such as Symbols and Construction sets creation, Auto Legend and Auto Tagging, etc. significantly reduce the drafting efforts. The **Process Documentor**' feature enables the documentation of each Process steps, e.g., to define starting, cleaning or shut down of equipments / open and close of valves for operation & maintenance or to show media separation ways.

CADISON® 3D Designer: A complete 3D plant design module for Plant Layout, Pipe Routing, Equipment Modeling, General Arrangement & Isometric Drawing creation and Report Generation (BOMs, MTO & Datasheets). It provides the users with various time-saving wizard and design assistant such as Section Box for GA drawing creation, 'Tank Assistant' & 'Nozzle Assistant' for creating 3D vessels and tanks. Data export and import in neutral CAD formats and 'PCF import' of existing isometrics brings 3D Designer to the core of the Plant design. The unique ability to graphically synchronize and validate the 3D Plant information with P&IDs caters to Process design consistency and operational safety at all design stages.

CADISON® Electrical Designer: A comprehensive solution for Electrical Engineering Design, Documentation and Management. It is a unique combination of tools for 2D Schematics & Controls Designs; Sizing Calculations (Cables, Earthing, Transformers & UPS); with 3D Conduits & Trenches, 3D Cable Tray & Panel Layouts. Productivity tools such as automatic generation of Terminal Drawings, Contact Sets, PLC I/O Board Drawings and Reports Generation (BOMs, MTO & lists) reduce the drafting time significantly.

CADISON® Steel Layout: A wizard-driven module for planning and creating 3D Steel Structures like Ladders, Staircases, Platforms, Handrails, Trusses, Water Tanks and custom assemblies such as Pipe supports, Spiral staircases, etc. It's SDNF export interface enables the users to export steel structure data to Tekla and Advance Steel for detailing. It is configurable to adapt design standard and custom guidelines for validation of parameters and steel profiles for improved designs.

CADISON® MATPIPE: A Parametric Catalog Engine for creation and management of Pipe Classes, 3D Catalog Objects and integration of Manufacturer's Catalog with the import & export functionality for maintenance. Database of Templates, Piping Component Libraries from Design Standards and an extensive list of Catalogs from prominent vendors are also available. User Management with Revisions of Master & Working Catalogs enable to standardize and maintain versions (replica and extended replicas) of catalogs at the organization level. The '**Catalog2Cloud**' feature enables a central Catalog Management System over the intranet or Internet for multi-site catalog management.

CADISON® Pipe Support Modeler: An intelligent wizard for Standard Pipe Supports to the Users to create and edit different types of pre-defined Secondary supports in an easy and intuitive manner. Users can also quickly create non-standard pipe supports manually. Automatic hook-ups (production drawings) creation and Reports generation reduces the documentation efforts. It can further be used for Electrical Cable Trays, HVAC Ducting Systems and Bus-ducts Supports as well.

CADISON® Project Navigator: A navigation tool to access engineering data of a project with a user interface similar to the Project Engineer module. It can be used for project review and also for further processing of project data during the plant operation and maintenance, which also serves as a paperless documentation platform.

CADISON® P&ID Designer for Visio: A spec-driven process engineering solution for Conceptual & Detailed Engineering that can be used for Proposal Generation. This is an easy and quick to use tool to create intelligent P&IDs and PFDs using MS Visio® Platform and still all the data is integrated with other CADISON modules in realtime. Its ability to export to AutoCAD, Pipe and Pump Sizing, Generation of Automatic Legend, Tagging, Report and integration with the 3D Designer makes it a powerful tool for the process industry.

CADISON® Archiver & Browser: An independent tool for Archiving of completed project databases from CADISON production environment. Archived Projects can be quickly and easily viewed with CADISON Archive Browser like a knowledge management platform. The archived projects can be re-activated or restored to work on future developments at any time.

CADISON® Maintenance: The CADISON Maintenance Management Tool is a tool for planning, managing and documenting technical inspection and notifications, schedule / planning of maintenance, repairs, and other measures for various objects in plant to maintain the operations efficient and reduce breakdowns. It also includes scheduling and tracking deadlines for next maintenance after the service is completed. It supports creation of test and inspection reports in different forms and management of the test history for corrective and preventive maintenance.

CADISON® ROHR2 / CAESAR II Interface: It has the feature and ability to export all pipeline systems created with CADISON 3D Designer to ROHR2 or CAESAR II for the quick and accurate static and dynamic analysis of piping system. All the required information will be completely exported in the form of .ntr files in ROHR2 or .cii file in CAESAR II for analysis based on user-defined variables and accepted industry guidelines.

CADISON® ERP Interface: CADISON provides interface with well-known ERP systems like SAP, Movex, Infor and others for dynamic data exchange. It establishes a mutual connection wherein Orders like purchase requisition can be directly released and also controlled within engineering workflow.

CADISON® Inventor Interface: It enables the Users to import an Autodesk Inventor part or assembly file along with the inventor properties in SAT and XML format into the CADISON environment as a CADISON object. It helps to import & update objects from the Inventor original / updated model.

CADISON® IFC interface: This provides exchange of graphics and data between AEC industry tools and CADISON 3D Designer with import revisions. The interface supports IFC2x3 and IFC4 configuration mappings for exchange. All object data in IFC can be imported into CADISON objects. Export process supports mapping of CADISON object properties with AEC objects.

CADISON® Equipment Simplifier: A customized wizard designed for the automatic simplification of large equipment models. It reduces the size and complexity of models upto 90% from different CAD formats with (interactive) manual or auto mode options and exports the results in DWG for CADISON.

CADISON® Application Programming Interface: CADISON API enables the Users to integrate CADISON engineering workflow with business workflow and organization specific document management tool. API developed for external access of CADISON data, contents, structures and even dynamic exchange of data / information.

Documentation Management in Plant Engineering: Advantages through the Digitalization of Business Processes

An industrial plant such as a factory or a power station consists of several individual machines, equipment and components. In order to operate such a complex structure efficiently and safely, plant documentation becomes foremost. As it contains all important individual documents thus, It provides the operator with information that is in use, under maintenance or repair. In fact, manufacturers and operators are obliged to provide all the documentation by law. The documentation thus serves as proof that all legal requirements and standards are met.

Elements of the technical documentation

The as-built documentation includes a wide range of information, data, and documents such as:

- Construction drawings, plans, schematics, diagrams and 3D models
- Operation, maintenance and assembly instructions
- Test certificates and Work Permits
- Applied standards and guidelines
- Data sheets from the component manufacturers with material properties
- Technical information, areas of application and spare parts information for the individual components of the system
- Individual process data corresponding to the plant

Advantages of digital documentation management with CADISON

The Plant Design with CADISON as a data-centric and integrated engineering system is the best way to implement a comprehensive and compliant documentation process. The advantages of this working method are:

- The project participants or team members from different disciplines can store, review and share the relevant data with right level of access at a centralized database system.
- The documents are created based on the existing data. The documentation is stored in the integrated document management system and is available to all project participants.
- Almost all existing report templates can be adopted.
- Project-relevant data are superior and must appear on every document (e.g. project name, project and commission number).
- Documents are structured hierarchically by document groups. They contain further information that can be evaluated with the help of reports.
- Data sheets of different components and equipments (pumps, vessels, measuring devices) are created automatically.
- The documents generated in the project can be translated almost automatically into the languages required for the various markets.

Efficient documentation management for a better overview and simplified transfer of documents & deliverables to end users/client end

A leading German company from the plant-engineering sector, which has been working with the CADISON engineering software for a long time, was looking for ways to optimize and digitalize the documentation management in everyday work environment.

The Client‘s requirements:

1. All data sheets, documents and drawings must be managed in the system itself and integrated into the existing document management tools seamlessly.
2. This documentation has to be sorted and the output should be in the same way as the plant structure so that it can be passed on to the ordering team at the production site.

Thus, a document folder with the component's identification number must be created for each component. The component-specific documentation is then stored in this folder in the form of PDF files. The components themselves are structured in document folders which is created as per the structure based on the plant areas and components.

Starting point and problem statement:

A plant is essentially a complex system consisting of large number of technical devices & components that are interconnected & coordinated with each other. It consists of process engineering equipment such as valves, pumps, drives/motors, tanks, pipe installation components, etc. For each component, there are various documents with data that the plant designer must provide to the client. These include:

- Data sheets with material properties, technical information and spare parts information
- Operating instructions
- Test reports

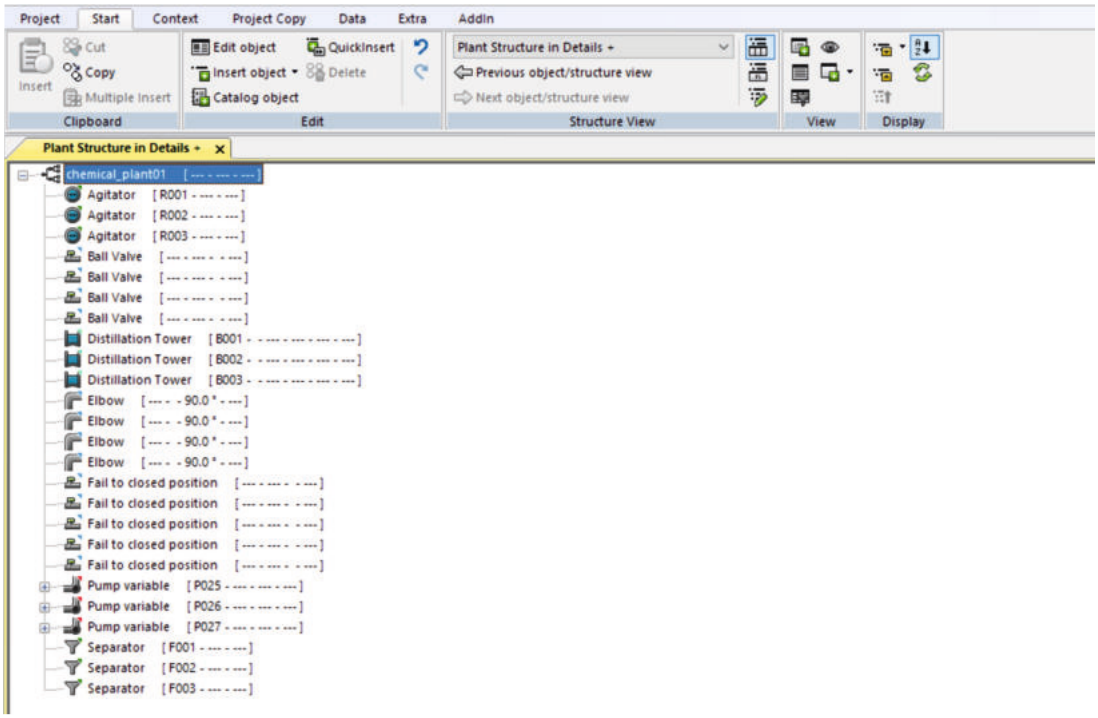


Figure 1: Example of a plant structure

Managing this large volume of disparate documents is further complicated because they come from different sources:

- The documentation of the standard components (e.g., operating instructions) are stored and maintained in the integrated document system.
- Project-specific documents (e.g., certificates or documentation for special designs) are managed directly in the system.
- Project-specific own designs, e.g., piping isometrics must be created and added.

The manual compilation of the corresponding documents is time-consuming, and in the case of customer-side adaptations, the modification effort is also correspondingly high.

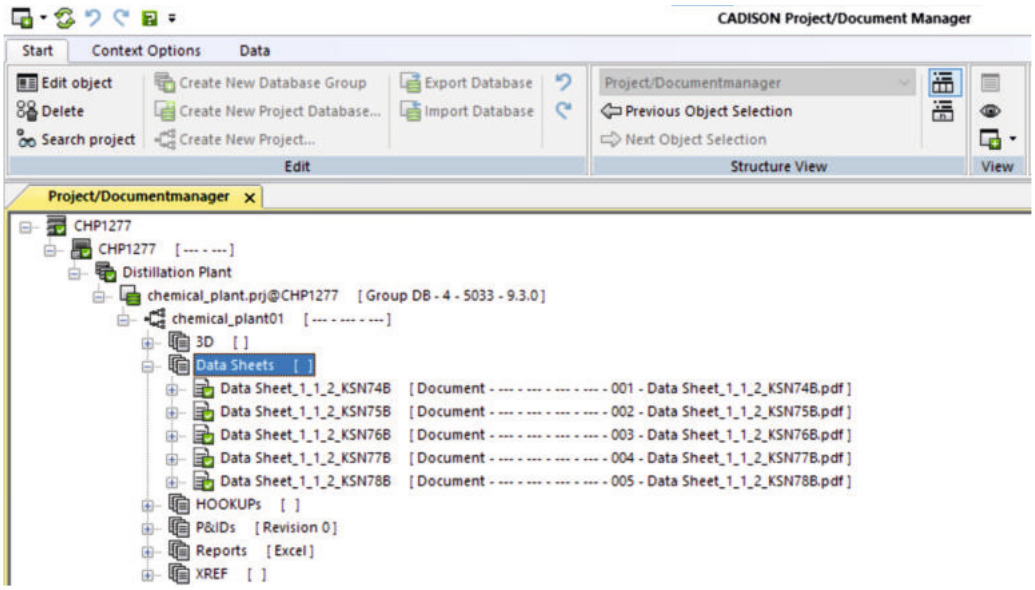


Figure 2: Example of a document structure

The solution with CADISON:

1. The documentation of the standard components, which is stored in the integrated catalog system, can simply be loaded from the catalog into the project. The advantage of this is that each document needs to be stored in the database for once and can be assigned to the standard components. This stored documents are then reusable for any other projects.
2. The project-specific documents are easily inserted into the existing document structure by simply ‘drag and drop’ from Windows Explorer. These are linked to the relevant components.
3. The advantage is that all the documents can be accessed directly from the component (e.g., through the P&ID), as using a collective directory for searching such documents/information is unnecessary. Depending on the data situation, this assignment can also be automated.
4. The export of the documentation takes place through the programmable CADISON API. This searches the existing plant structure and newly added documents are stored in a clear folder structure on the drive according to the plant areas and plant parts. The documentation of the components also takes place in this folder structure.
5. This clear folder structure can then be passed on to the end customer as a data record.

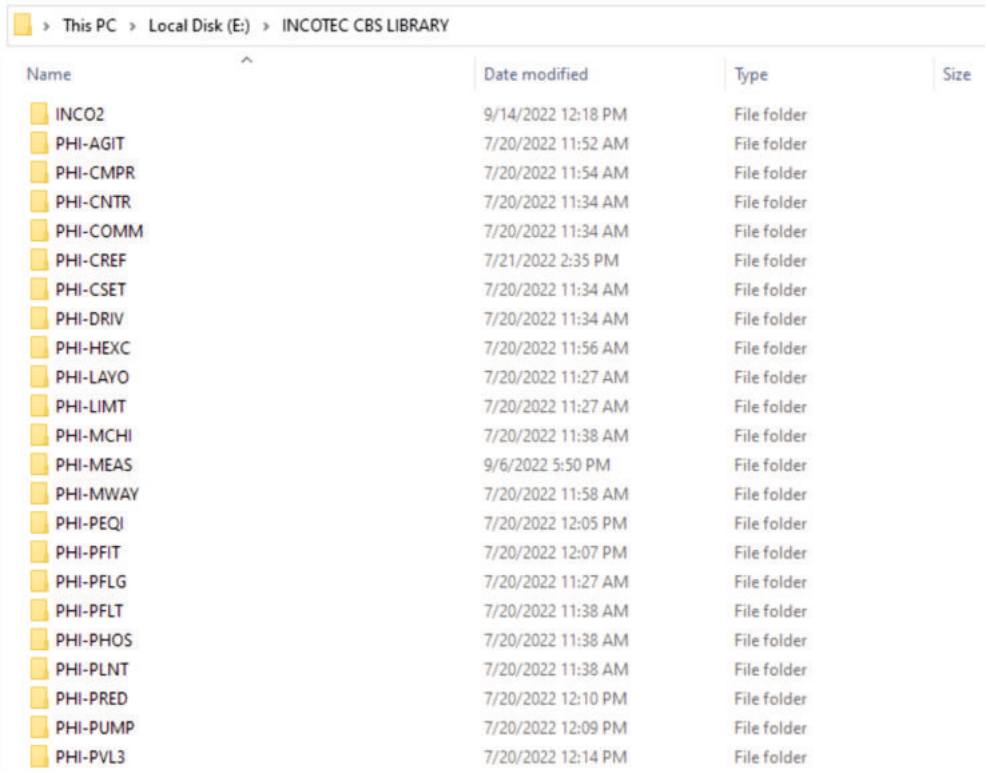


Figure 3: Result: Export directory for documentation

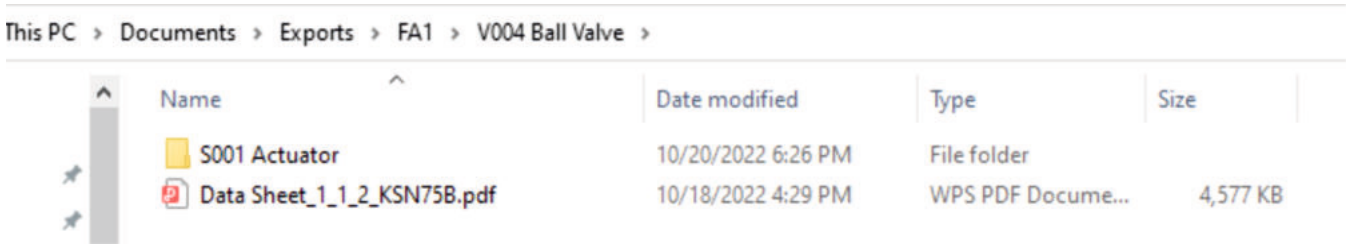


Figure 4: Export of the data-sheets

Benefits at a glance of this working method:

- The time saved in compiling the final documentation is immense. The effort for the manual compilation was previously approx. 2 days for this CADISON customer. Thanks to the automated export, the effort is now reduced to 15 minutes. And of course, this time saving adds up when changes to the project are made.
- Due to the automated creation of documentation, a quality-assured export of the documents takes place. This means that typing errors or file mix-ups no longer can occur.
- The automation options for assigning documents to components also save time and minimize errors.
- A lean documentation management leads to the prevention of multiple data-sheets storage.
- The clear arrangement analogous to the plant structure ensures easy retrieval of documents for all, the planner, operator and the client.
- The export into any structure and the transfer of the documents is possible in a simple ‘drag and drop’ from Windows Explorer.
- Only files are copied that are necessary as per the project structure.

OSCHATZ Bohemia has embraced CADISON 3D Designer to enable an Interdisciplinary Collaboration in the overall Plant Design Process

OSCHATZ Bohemia is a technology partner for turnkey systems, systems and components in steam generation, energy recovery and exhaust gas cooling systems. With its 170 years of expertise, it has expanded globally and currently has a presence in 9 locations worldwide. The focus of OSCHATZ Bohemia solutions is on efficient, environment friendly and sustainable utilization of exhaust gases, residues and waste heat from production or combustion processes by following the 3 R's (Reduce, Reuse, Recycle) through waste-to-energy technology.

The core strength of the OSCHATZ Bohemia is in having the in-house manufacturing capability of key plant components and complete systems facility in Ceske Budejovice, Czech Republic, which ensures the components made are in accordance with European and international environmental standards and quality.

Challenges that led to the search for a new age solution:

In the Process Industry, complete collaboration of interdisciplinary processes & workflows is one of the major factors that improves the overall efficiency of project execution and quick Time-To-Market (TTM).

For OSCHATZ Bohemia the overall collaboration of plant design processes, interdisciplinary check outs as well as project execution were challenging with the existing setups. They started to search and evaluate a solution for efficient Plant 3D Design that has been developed by industry experts and is established in their sector and industry. They needed a solution with which the team can reuse the existing Plant Design Data for the future Plant projects.

The key features that OSCHATZ Bohemia was looking to improve its global footprint capabilities were:

- An effective advanced solution that can generate design drawings quickly & easily, with standard graphics with International and European norms.
- A tool that can perform collision checking, extract material list, and generate customizable reports with a few clicks, saves enormous time and eliminate manual errors.
- A solution which can give the team real-time access to data/information anytime and anywhere. Also, it has the control to show the right data to the right or assigned member of the team.

For such integration & collaboration they needed a cutting-edge solution which is industry-proven, cost-effective and easy-to-implement in their system. They also got a recommendation of using CADISON 3D Designer from one of their own key customers, which also meant faster client approval & reduction in project completion time.

Key benefits of implementing CADISON 3D Designer:

- CADISON 3D plant module has proved to be an essential tool for plant piping, piping support, equipment layout and steel structure for projects due to its intelligence & integration capabilities.
- The automatic generation of Isometrics Drawings, GA Drawings, BOM Reports, etc. makes completion of projects easy, quicker & error free. It also assisted to totally manage all piping specs and vendor catalogs very well.
- The in-built PDM tool with centralized database became a significant addition to their Project Management.
- Every 3D Model generated in CADISON is intelligent and has huge object information with a library of piping components and complete specifications according to European standards.
- The customized 3D MATPIPE environment to create intelligent Standard Parts catalogs and Pipe Specs helped to manage and edit any equipment and piping fittings specifications.
- The integrated & multi-disciplinary capabilities of CADISON helped to eliminate errors in P&IDs, 3D Piping layouts as well as Electrical designs, as all disciplines started working on a single database platform. With the access of updated data in a single centralized database, it facilitated seamless communication between the Designers, Planners, Construction Site team and Fabrication team at plant site.
- The generation of project information & engineering deliverables has become accurate and consistent. The automatic generation of Piping, GA Drawings, Isometric Drawings and accurate Bill of Quantities, Part List, Reports, etc. made the whole process easy and seamless.

CADISON Support Team – Quick & Prompt just like CADISON 3D Designer

It was crucial for the OSCHATZ Bohemia team to start implementing and using CADISON in the live Project as quickly as possible. The CADISON Support team implemented the solution and conducted the technical trainings & prepared the efficient team of OSCHATZ Bohemia to start working on the projects using CADISON.

"After a five-day training course on usage of CADISON modules, the OSCHATZ Bohemia team was up and ready quickly and started working on live projects. Together with the extensive support offered as part of the customer package, CADISON helped us to improve design efficiency, lower the project delays and project delivery on time.

We are handling unique projects each time and it demands new requirements in engineering workflow. The CADISON team comprises well-trained and qualified engineers to answer all questions."

Mr. Marek Matejka - Managing Director
OSCHATZ Bohemia, spol. s r.o.

Helios TBLUS Optimized & Streamlined its Engineering Processes with CADISON P&ID Designer

Helios TBLUS, located in Domžale, Slovenia, is a member of the European KANSAI HELIOS Group, which employs more than 2,100 people across Europe. The KANSAI HELIOS Group is specialized in the production and development of coatings, paints, chemicals, resins, and adhesives and offers excellent products and solutions that meet the customer´s demand for supreme reliability, high performance, and safety.

Being part of the Group, Helios TBLUS shares the same high standards, extensive know-how, and a passion for innovation. Within the company, they have a tight-knit team who work together to produce high-caliber work in an efficient manner. And for such a closely integrated team, they were looking for a Plant Design solution that is seamlessly integrated & efficiently apt for every discipline and department of their team.

P&IDs play a significant role in the maintenance & modification of any plant process, and it is crucial for the representation of the physical flow of the systems, equipment, and control schemas – and this whole process plays a major role in HAZOP.

The Helios TBLUS team needed a solution that could provide all the information at one central point and could easily review, update and notify all project members at the same time. CADISON offers a smart solution that can simultaneously complete multiple tasks for Plant engineering, planning for Maintenance activities and which can extend to Plant Asset Management. CADISON with a centralized and single database environment immediately became the right and obvious choice for Helios TBLUS.

While comparing CADISON with other available software in the market, the Helios team found CADISON has the capability to fit into their infrastructure, as a complete package with a wide range of features and add-ons that are integrated and come at a reasonable cost.

Another major factor in considering CADISON as their preferred choice was the prompt and informative response of the CADISON Team. The active engagement of the CADISON team was also instrumental in their decision to choose CADISON as a preferred solution as they could foresee the dedication and the exceptional support experience in the long run.

The key features that made CADISON the right choice for Helios TBLUS:

- Quick creation of intelligent P&IDs with a large standard Symbol library and with a centralized database to store all design documents and data in one place.
- An intelligent solution that helped the team to easily generate and export the BOM, Reports & schedules with a minimal number of clicks. Standardization & customization of reports & schedule templates as per company standard, e.g., with company name and logo, project name and number with other information, etc. was easily achievable.
- A built-in PDM for quick creation and tracking of projects/documents with efficient revision management for error-free designs, reports & data sheets.
- In addition to the easy access to the intelligent built-in symbol and object library, the ability to easily create own custom intelligent symbol & objects helped them to customize CADISON as per their design workflow.
- CADISON made it seamless to create the intelligent title block as per the project requirements and company standard.

In addition to the several unique features with CADISON P&ID, another foremost reason that encouraged HELIOS TBLUS KOLICEVO to adopt CADISON was the availability of a dedicated support team for them.

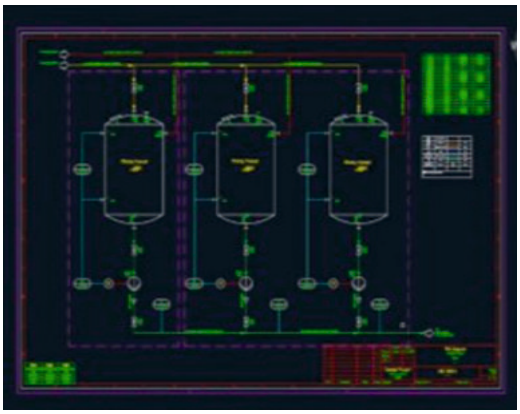
"The efficiency of our team has been increased due to the ability to simultaneously complete multiple tasks, as well as increasing the ease with which our P&IDs can be generated, managed and checked after each revision is made."

Mr. Iztok Avbelj
Head of Maintenance
HELIOS TBLUS KOLICEVO

Helios TBLUS is delighted and fully satisfied with the CADISON Support Team and the 'Training & Service' support during the implementation and transition phase.

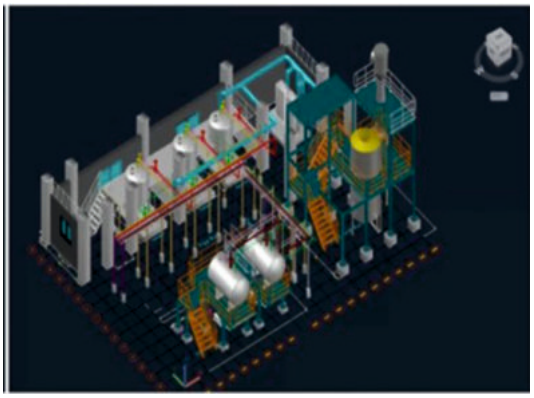
A Smarter & Integrated Way to Digitalize Plant Operation & its Maintenance for Better & Improved Productivity and Longevity

Project Engineer | P&ID Designer | 3D Designer | Electrical Designer | MATPIPE | Maintenance



The world has always been moving toward digitalization, but in the last two years, the pace of its adoption by Process Industry has accelerated exponentially. The digitalization in the Process Industry is a methodology for enabling or improving the work processes by leveraging digital tools and technologies and digitized data. The purpose of digitalization is to enable the automation (using knowledge gained from experience and Thumb rules - KBE), increase data quality, collect and structure all that data in a structured format so that User can use that data for Operation and Maintenance of the plant and optimize the overall process. The industry has also started using 3D Plant data with AR/VR and AI tools to train their technicians with real-life Plant models & simulations of plant operations and maintenance, as well as safety conditions.

How CADISON plays a role in operating & maintaining a complete Plant Lifecycle:



CADISON helps the Plant Owner Operators to digitalize the Plant Data by creating the Smart P&ID and 3D Design of the plant, so that User can use that data for Operation and Maintenance and other downstream applications. The CADISON has a true integration with all the Modules using a single database, it enables a connected flow of data as well as an integrated view of an asset's information across engineering disciplines throughout the various stages of a project. This concept promotes transmission of the right information to the right place, connected through the right data linking, making Digital Thread for data management a new reality.

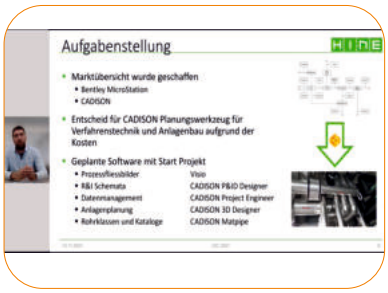
At the initial stage of the project, the CADISON Project Engineer module helps in Project Planning, Basic & Detailed Engineering. Users can create all the design data in the form of Smart P&IDs, 3D objects & models, BOMs and Reports to support the daily work. As the CADISON modules are all integrated across the engineering disciplines, the information such as details of Instruments & major Equipment like Boilers, Chillers, or Pumps etc., & Manufacturer's Maintenance instructions, etc. can be used further using the CADISON Maintenance Module during the operational tasks and maintenance. After the maintenance, the operator’s notes and reports can be transferred back to the Project Engineer module for future work and process improvements.

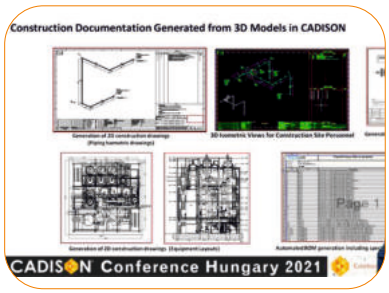
The Asset Management process in CADISON manages the entire lifecycle of a project and the database. This increases the availability of data from the initial stage of any project to all subsequent stages and for new/similar plants. The Reusability of Data in the project database is very helpful for Plant Operation and Maintenance, and for its Lifecycle Management. Also, real-time collaboration across engineering disciplines leads to huge time & cost saving with up-to-date information and eventually increases overall productivity.

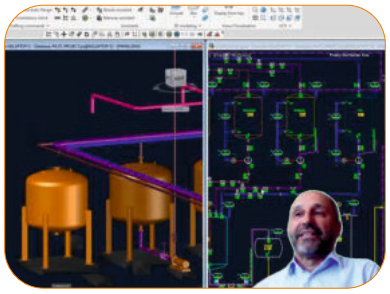
CADISON Virtual Conference - 2022

CIC 2021

(Global Conference)





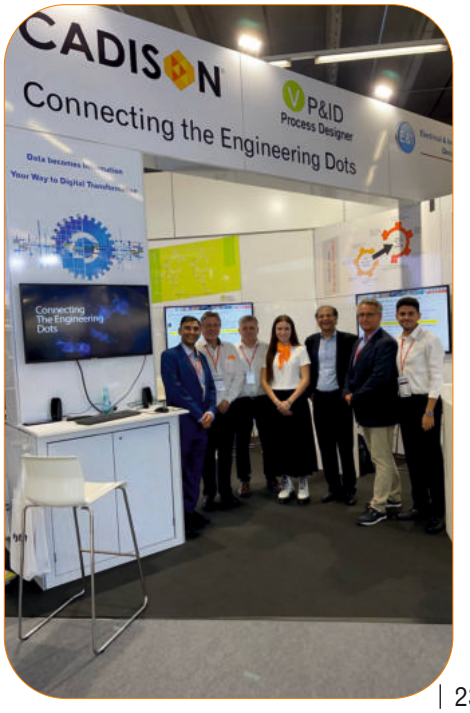


CCH 2021

(Hungary Conference)

ITF Global Meet - 2022

Participation as Exhibitor at ACHEMA2022



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