Content

- Shinsei Group Overview
- Business Activities
- System Development
- Future Business Strategy

Content

Shinsei Group Overview

Business Activities

System Development

Future Business Strategy

SHINSEI GROUP OVERVIEW

ABOUT COMPANY PROFILE

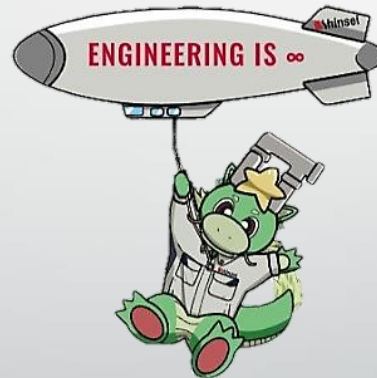**About Shinseigiken**

Shinsei Group is a company group with operations in Japan and Vietnam

Company Name	Shinseigiken Engineering Co., Ltd
Establish	March 18, 1987 (Showa 62)
Charter Capital	50,000,000 Yen

Board Member	President & CEO	Takushi Nishihara
	Senior Director	Kazuhiro Sakamaki
	Managing Director	Hisashi Fujii
		Hideki Katsuma
	Accounting Auditor	Kenji Nishihara

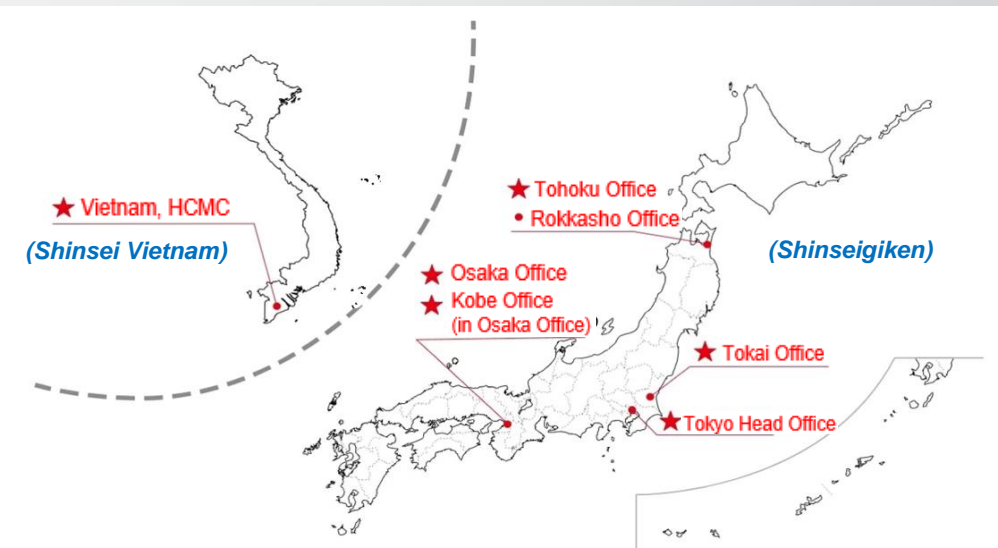| Employees	119 employees (93 full-time & 26 contract employees)

(As of the end of March 2024)

Year	2022	2023
Revenue	1,814,971	1,948,570

*(*In units of 1,000 Yen)*

ENGINEERING IS ∞

SHINSEI GROUP OVERVIEW

ABOUT OFFICES

About Shinseigiken
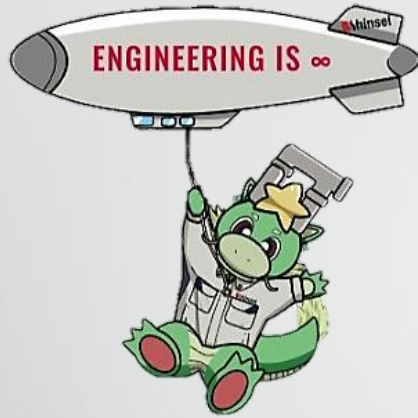
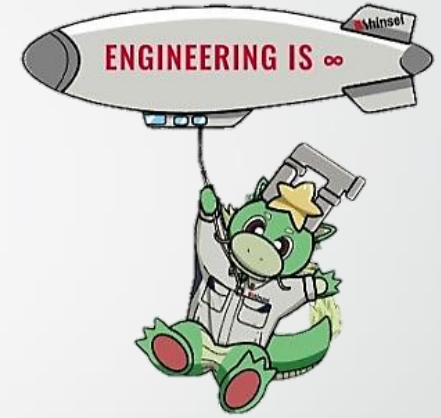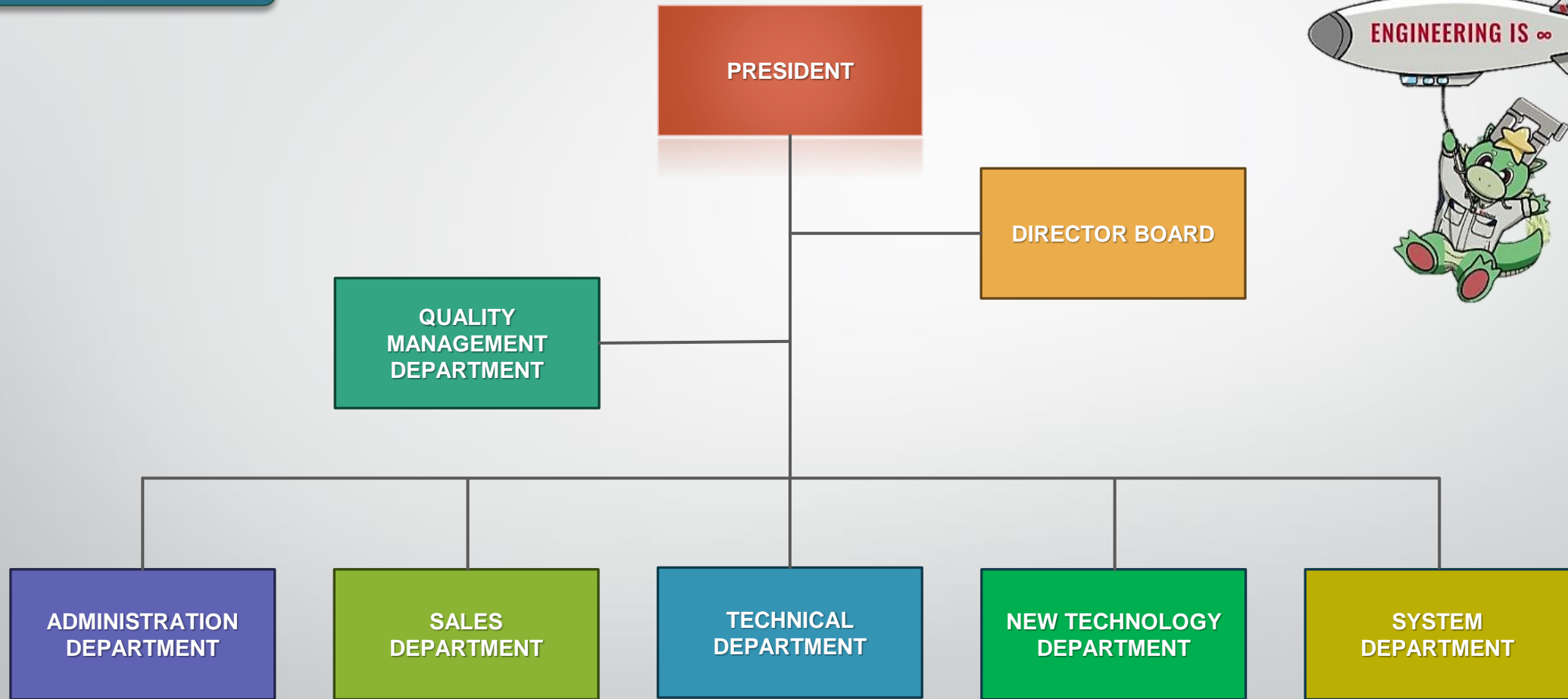|	
Company Name	Shinseigiken Engineering Co., Ltd
Head Office Location	PMO Nishi-Shinbashi 2nd Floor, 2-9-1 Nishi-Shinbashi, Minato-ku, Tokyo
Offices	Head Office, Osaka Office, Tokai Office, Kobe Office, Tohoku Office, Rokkasho Office
Subsidiary Company	Shinsei Vietnam Engineering Co., Ltd

ENGINEERING IS ∞

- Our company was established in 1987 as a specialized CAD engineering company in Chiyoda-ku, Tokyo.
- As of 2024, in addition to our head office in Shinbashi, Tokyo, we have five offices nationwide: Osaka Office, Tokai Office, Kobe Office, Tohoku Office, Rokkasho Office.
- We also have a subsidiary company in **Ho Chi Minh City, Vietnam.**

★ Vietnam, HCMC
(Shinsei Vietnam)

★ Tohoku Office
• Rokkasho Office

(Shinseigiken)

★ Osaka Office
★ Kobe Office (in Osaka Office)

★ Tokai Office

★ Tokyo Head Office

SHINSEI GROUP OVERVIEW

ABOUT ORGANIZATION CHART

About Shinseigiken

PRESIDENT

DIRECTOR BOARD

QUALITY MANAGEMENT DEPARTMENT

ADMINISTRATION DEPARTMENT

SALES DEPARTMENT

TECHNICAL DEPARTMENT

NEW TECHNOLOGY DEPARTMENT

SYSTEM DEPARTMENT

ENGINEERING IS ∞

SHINSEI GROUP OVERVIEW

ABOUT HISTORY

About Shinseigiken

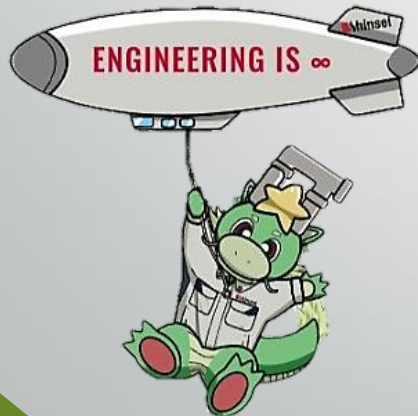| Year	Month	History of Development
1987	March	Established in Chiyoda-ku, Tokyo as a CAD specialist engineering company with capital of 10 million yen and introduced a 2D CAD system.
	August	Obtained specific worker dispatch business license.
1989	April	Opened Osaka branch in Yodogawa-ku, Osaka.
1995	October	Increased capital to 20 million yen.
1997	February	Head office relocated to Minato-ku, Tokyo.
	March	Osaka branch office relocated to Suita, Osaka.
1998	September	3D CAD system introduced.
	October	Increased capital to 30 million yen.
1999	May	Registered as a first-class architectural firm (Tokyo).
2000	April	Registered as a general and specific construction business (Tokyo).
	August	Kobe sales office opened.
2001	June	Increased the number of 3D CAD systems to 70. Introduced a 3D photo measurement system. Introduced as-built tools.
	November	Increased capital to 52 million yen.

ENGINEERING IS ∞

SHINSEI GROUP OVERVIEW

ABOUT HISTORY

About Shinseigiken

Year	Month	History of Development
2002	October	Received an order for a complete set of 3D as-built work from Japan Nuclear Fuel.
	November	Rokkasho office opened.
2004	December	Moved Osaka branch to Tennoji-ku, Osaka city. Integrated Kobe sales office into Osaka branch.
2005	May	3D laser scanner system introduced.
2007	January	Obtained ISO9001 quality management system certification.
	October	Shinsei Vietnam Engineering Co., Ltd. is established in Ho Chi Minh City, Vietnam.
	November	Shinsei Engineering Co., Ltd. is established in Rokkasho Village, Aomori Prefecture.
2008	April	Rokkasho office is upgraded to Rokkasho branch.
2009	June	Toshimasa Kato becomes president and CEO.
2010	May	Tokai office opened.
	June	Shinsei Engineering Co., Ltd. changed its name to Aomori Enetech Co., Ltd.
2011	September	Obtained Eco Action 21 certification.
2012	July	Takasago office opened.

ENGINEERING IS ∞

SHINSEI GROUP OVERVIEW

ABOUT HISTORY

About Shinseigiken
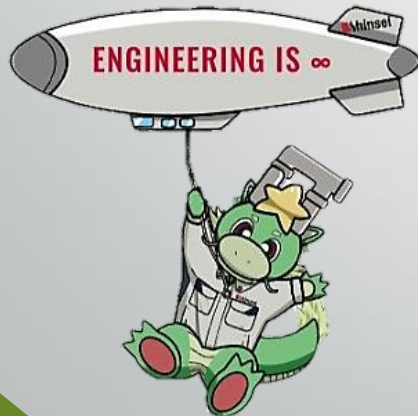
Year	Month	History of Development
2013	January	Hirokatsu Nakagawa appointed president and CEO.
	April	Takasago office is integrated into Osaka branch.
	June	Reduced capital to 50 million yen
2015	April	Genichi Shida appointed as President and CEO.
2017	January	Osaka branch office relocated to Fukushima-ku, Osaka.
	August	Head office relocated to PMO Building in Nishi-Shinbashi, Minato-ku, Tokyo.
2018	October	Moved the Tokai office to Muramatsukita, Tokai Village, Naka County, Ibaraki Prefecture and integrated the Naka branch office.
2019	January	Kobe office opened.
2020	April	• Opened Tohoku Branch. • Moved Rokkasho Branch to Misawa City as Tohoku Branch. Rokkasho Branch became Tohoku Branch Rokkasho Branch and Misawa Workshop was integrated into Tohoku Branch.
2021	June	Takushi Nishihara appointed President and CEO.
	December	Obtained a license for fee-paying job placement business.
2022	August	Kobe office merged with Osaka branch.

ENGINEERING IS ∞

ABOUT LICENSE

About Shinseigiken
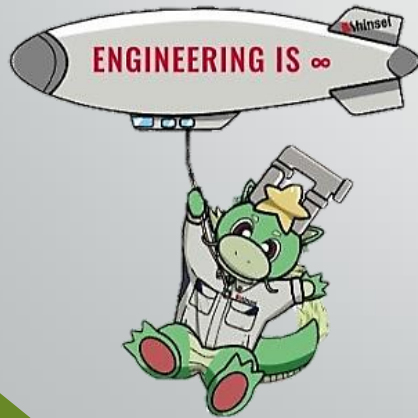
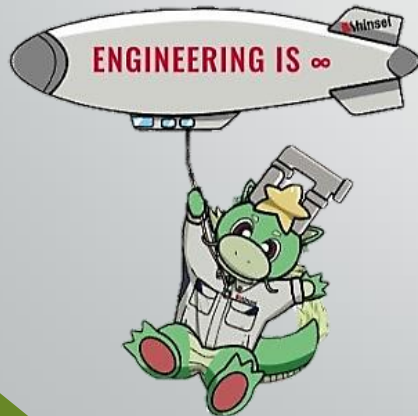| License	Main Content
General Construction Business License.	Tokyo Governor Permission (General-2) No. 112870 Machinery and Equipment Installation Work.
Specific Construction Business License.	Tokyo Governor Permission (Special-2) No. 112870 Building Work, Steel Structure Work, Piping Work.
General Worker Dispatch Business License.	Sect 13-300059 (For more detail, review next page please)
Paid Employment Placement Business License.	13-Yu-313824
Registered as a First-class Architect's Office.	First class Tokyo Governor Registration No. 44107.
ISO 9001 Quality Management System.	Registration number: 07QR-1433. Certified offices: Head office, Osaka branch, Tohoku branch, Tokai office, Kobe office.
Eco Action 21.	Registration number: 0005759. Certified offices: Head office, Osaka branch, Tohoku branch, Tokai office, Kobe office.

ENGINEERING IS ∞

ABOUT LICENSE

About Shinseigiken

Detail Information of General Worker Dispatch Business License	
1. Number of dispatched workers (as of the end of March 2022)	41 people
2. Actual number of places of employment	20 Results
3. Margin rate (rounded to two decimal places)	43.5% (*)
4. Matters related to education and training	Design technology education and training, information security education,…
5. Labor dispatch fees (average amount 8 hours per day)	41.033 yen
6. Average wages of dispatched workers (average amount 8 hours per day)	23.164 yen
(*) The margin rate is calculated as follows: (5.Labor dispatch fees – 6.Average wages of dispatched workers)/5.Labor dispatch fees. The margin includes various expenses such as welfare expense, education and training expenses, and the cost of using paid holidays.	

ENGINEERING IS ∞

SHINSEI GROUP OVERVIEW

ABOUT COMPANY PROFILE

About Shinsei Vietnam

Shinsei Group is a company group with operations in Japan and Vietnam

Company Name	Shinsei Vietnam Engineering Co., Ltd	
Establish	October 01, 2007	
Charter Capital	25,000 USD	
Board Member	President	Hisashi Fujii
	General Director	Quang Doan Ngoc
	Vice General Director	Liem Huynh Thanh
	GA Director & Accounting Officer	Thao Nguyen Thi
	Technical Director	Duc Le Van
Employees	43 full-time employees *(As of September 2024)*	
Address	60 Le Quoc Hung Street., Ward 13, District 4, Ho Chi Minh City, Viet Nam	

Year	2022	2023
Revenue (USD)	1,442,018	1,724,600

★ Vietnam, HCMC (Shinsei Vietnam)
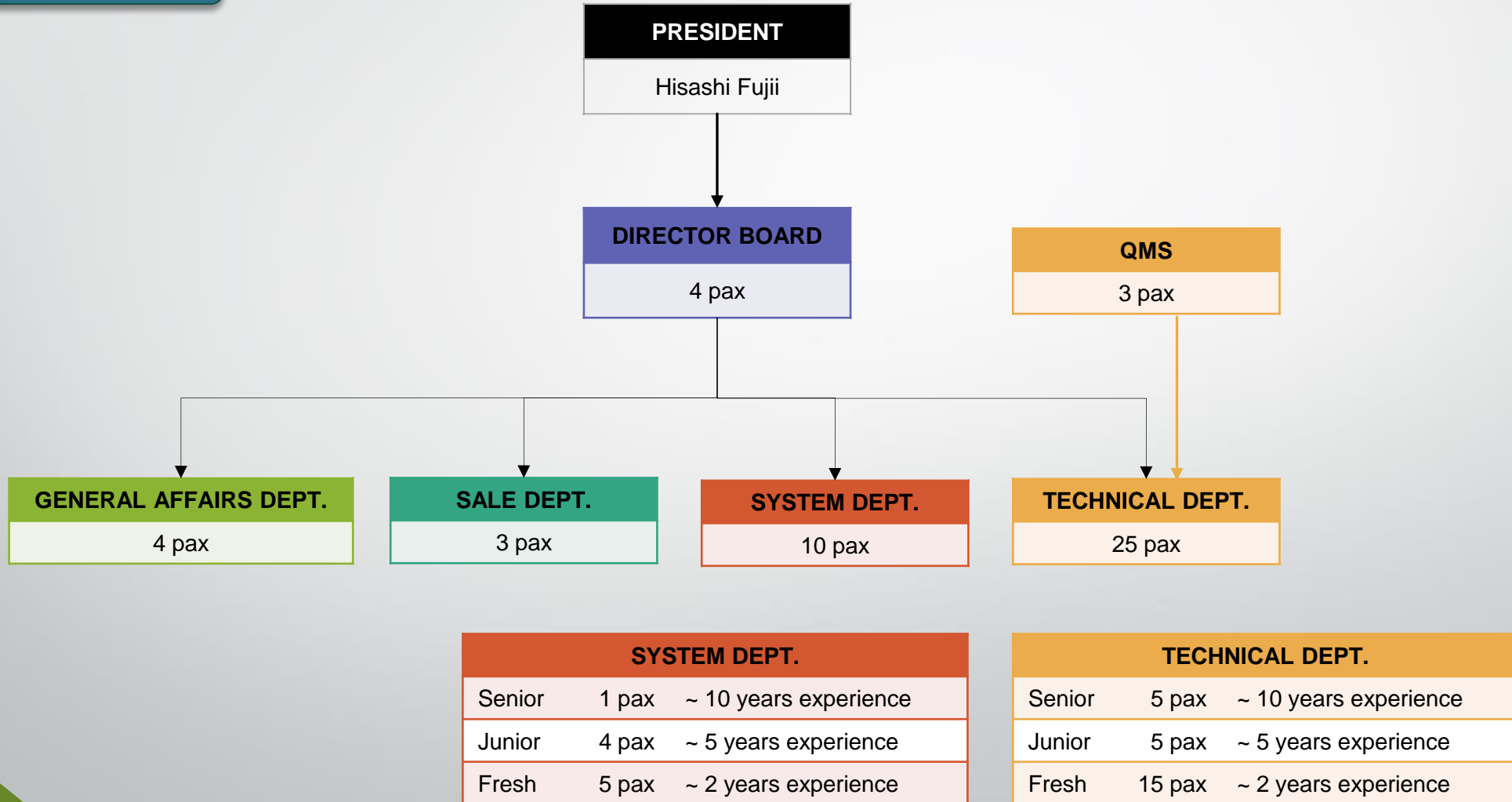
SHINSEI GROUP OVERVIEW

ABOUT LICENSE

About Shinsei Vietnam

1 2D Cad drawing creation service.

2 Engineering and consulting services related to industrial and civilian construction.

3 Management consulting service related to financial, human resource and common matters.

4 Computer software programing.

5 Computer network management.

6 Information technology (IT) service related to data preparation and operation.

Content

Shinsei Group Overview

Business Activities

System Development

Future Business Strategy

BUSINESS ACTIVITIES

We operate in four main areas, including:

Engineering
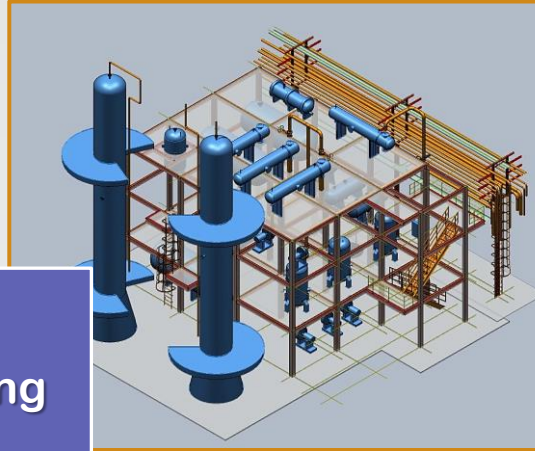
System Development

Analysis

Worker Dispatch Service

BUSINESS ACTIVITIES

ABOUT ENGINEERING

❑ Our engineering team offers a broad range of services in Plant Engineering and As-Built Engineering.

❑ Our goal is to deliver top-quality solutions, whether for new plant designs or upgrading existing systems, using the most advanced tools and methods available.

Plant Engineering
(For Piping, System, Equipment, Structural Design)

- We specialize in designing efficient plant layouts, including piping systems, structures, equipment and related tasks for power plants.
- We also build 3D modeling for reviewing and after that we generate 2D drawings or material lists.
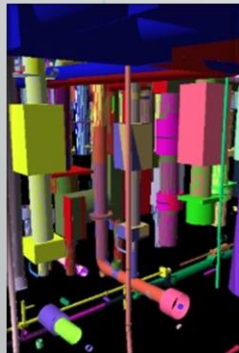
As-Built Engineering
(Using Laser Measurement Method)

- We use the latest 3D technologies like laser scanning to modernize existing facilities.
- By capturing detailed data with 3D scanning, we can create accurate models that help streamline project execution, reduce costs, and improve safety.

ABOUT ENGINEERING

Plant Engineering

❑ By using 3D CAD and the expanding digital world, we propose new design styles that are safer, more reliable, more secure and faster to meet our customers' needs.

Piping Design

Structural Design

Equipment Design
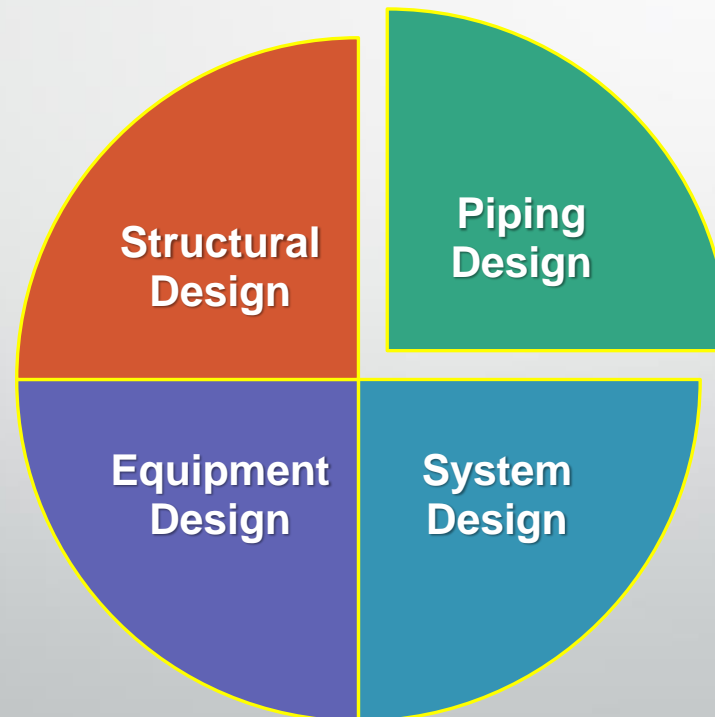
System Design

❑ We apply the latest 3D technology for piping, systems, equipment and structural design.

❑ All are delivered by experienced engineers.

ABOUT ENGINEERING

Plant Engineering

PIPING DESIGN

- By fully utilizing 3D CAD systems, we offer engineering services that surpass traditional 2D designs.

- With a 3D model simulating the entire plant, we can detect equipment interferences that are challenging to identify using 2D drawings. This also allows us to verify space for flow lines, assess operability and maintenance, and confirm construction feasibility.

- We also plan construction steps more accurately, reduce rework post-completion, and improve process precision.

- Additionally, by converting 3D CAD data into analysis code, we can perform piping analysis, speeding up the determination of piping routes and support positions.
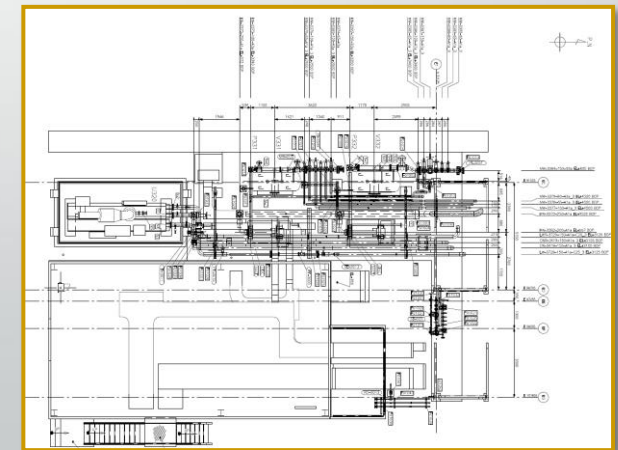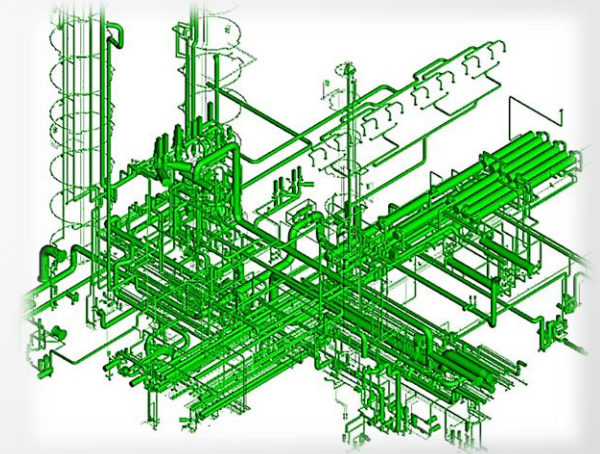
ABOUT ENGINEERING

Plant Engineering

SYSTEM DESIGN

- To provide plant equipment that meets customer needs, we carefully consider the basic specifications and determine the detailed specifications for equipment, piping, valves, instruments, and more.

- We prioritize design safety, operation, maintenance, and inspection throughout the process.

- Additionally, we create operating instructions and procedural documents for the plant equipment.
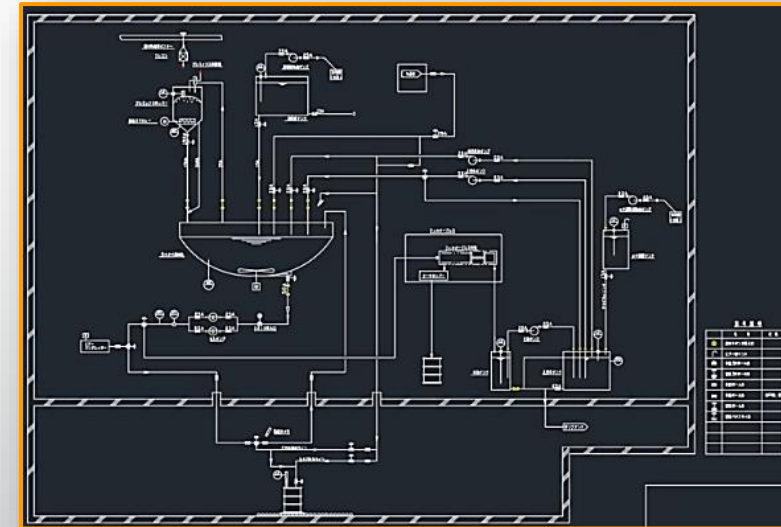
ABOUT ENGINEERING

Plant Engineering

EQUIPMENT DESIGN

(For Nuclear Facilities / General Industrial Machinery)

- We specialize in the design and manufacturing of equipment for both nuclear and general industrial facilities.
- Our expertise includes material handling equipment for nuclear facilities and production lines for industrial applications.

Notable Achievements:

- Nuclear Power Equipment: Waste treatment systems, shielding doors, drum handling equipment,...

- General Industrial Equipment: Can manufacturing machinery, production lines,…
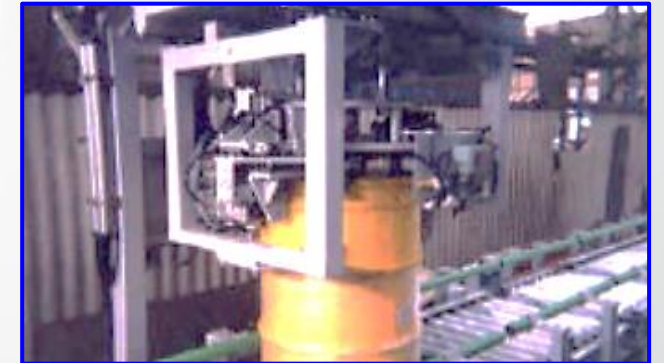
Nuclear Rad Equipment Capping Device

Miscellaneous solids reduction mortar solidification device
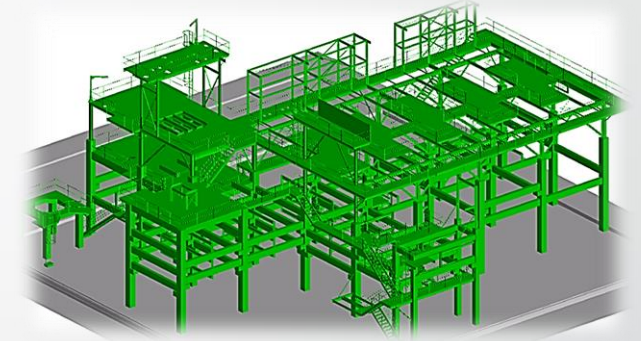
ABOUT ENGINEERING

Plant Engineering

STRUCTURAL DESIGN

- We design frameworks and support structures in compliance with standards from the Architectural Institute of Japan, Japan Society of Mechanical Engineers (JSME), Electrical Association, and the High-Pressure Gas Safety Institute of Japan.

- Our design accounts for various loads, including self-weight, mechanical, temperature, seismic (static and dynamic), forced displacement, and wind (Building Standards Act and tornado). If required, we also assess natural frequency for vibration mitigation.
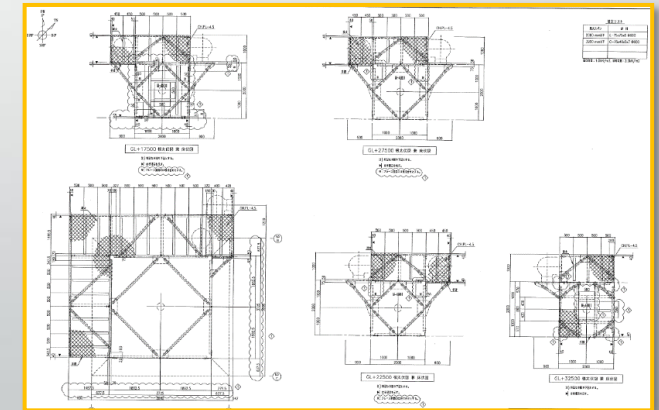
ABOUT ENGINEERING

Plant Engineering

STRUCTURAL DESIGN

- We create 3D and analytical models and evaluate designs according to JSME standards. By integrating structural planning with piping and layout design in-house, we deliver safe and efficient solutions.

- Our design scope includes primary components (columns, beams, braces), secondary supports for equipment and vessels, and some anchors.

- If needed, we provide production design, including part drawings and component inspections.

- In addition to creating new designs, we also review and strengthen existing structures to ensure they meet updated regulatory standards.
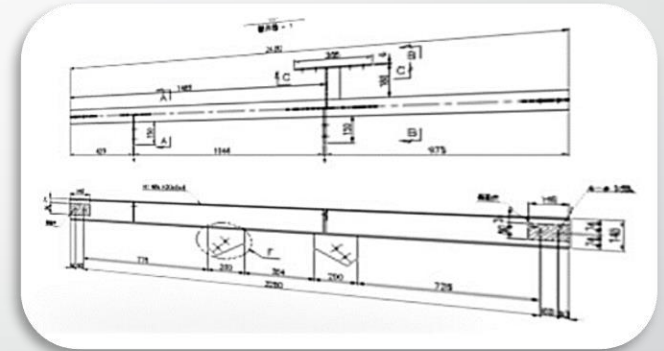
BUSINESS ACTIVITIES

ABOUT ENGINEERING

Plant Engineering

Specifically, we use 3D design tools to create 3D models and simulations of the entire factory. From this data, we generate drawings, material lists, and other necessary products according to the customer's requirements.

| Design / 2D-CAD Work	Input Work / 3D modeling	Material Take Off / Report Template
• Piping & support layout • Piping isometric • Piping support detail • Equipment nozzle orientation • Equipment platform • Equipment & piping support foundation information • Cable tray division layout • Cable tray fabrication • Cable tray support • Etc.	• Equipment and platform • Civil and Structure • Cable Tray • Duct • Piping • Piping support • Etc.	• Piping • Piping support • Cable tray • Cable tray accessories • Piping MTO Report Template • Support MTO Report Template • Etc.

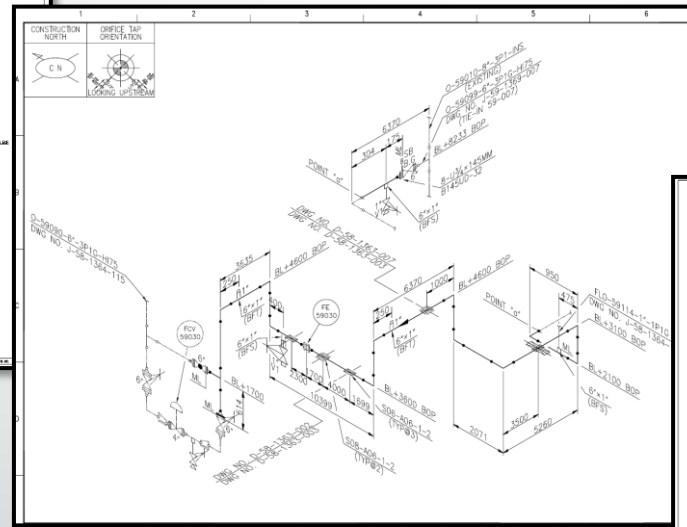# BUSINESS ACTIVITIES

ABOUT ENGINEERING

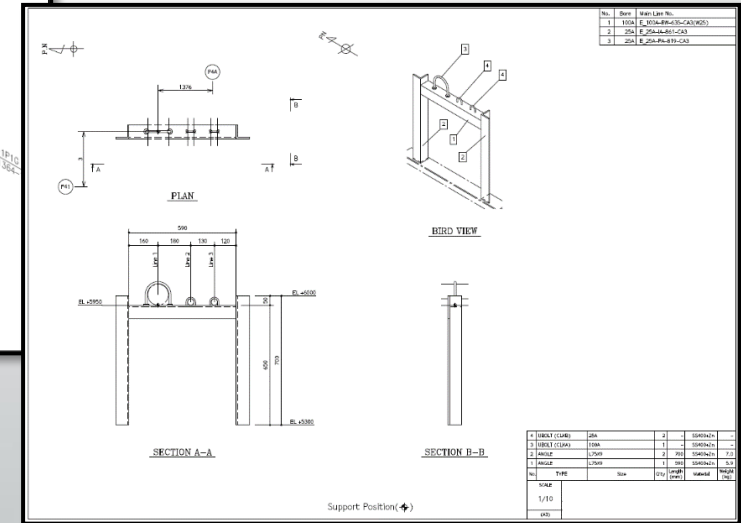**Plant Engineering**   **Design / 2D CAD Work**

We carry out the design and create 2D CAD drawings related to piping and supports according to the customer's requirements.
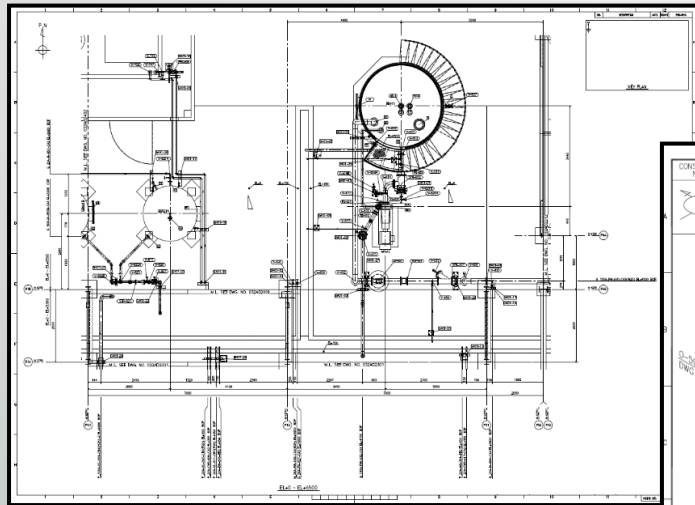
Piping & support layout drawing

Piping isometric drawing
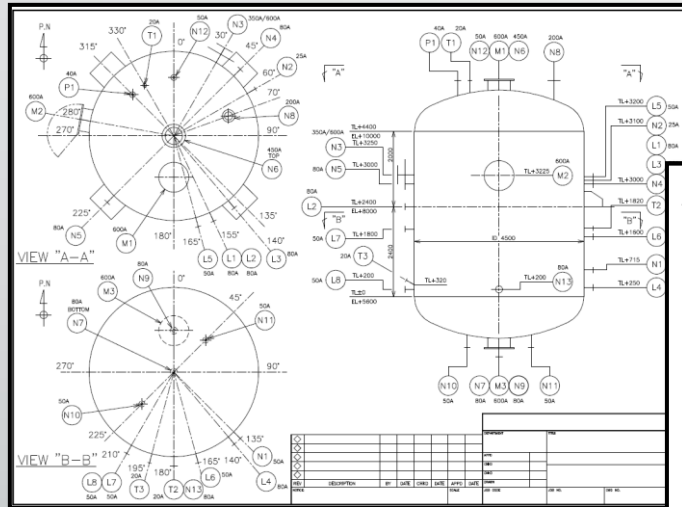

Piping support detail drawing
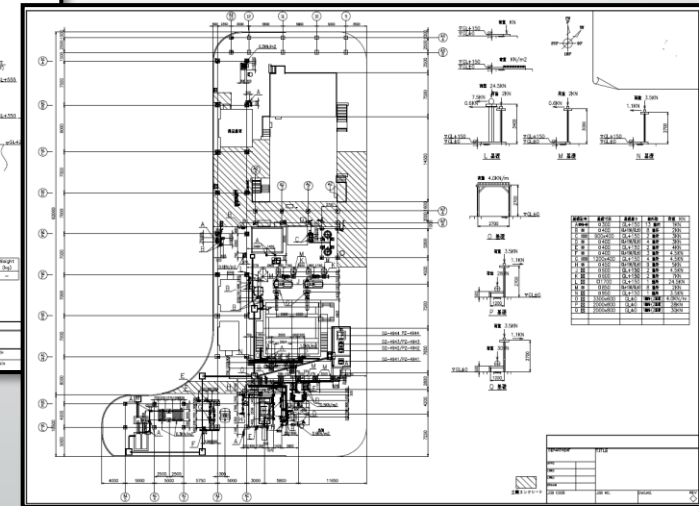
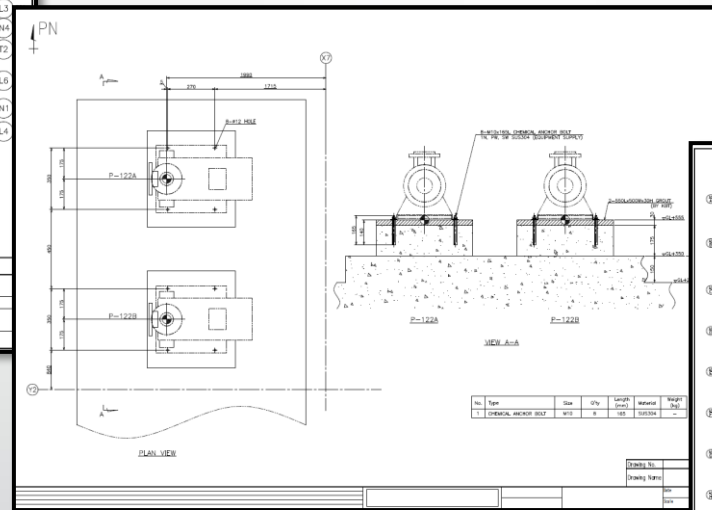# BUSINESS ACTIVITIES

ABOUT ENGINEERING

Plant Engineering   **Design / 2D CAD Work**

We also make the design and 2D CAD drawings related to equipment nozzle, equipment and piping support foundation.

Equipment nozzle orientation drawing

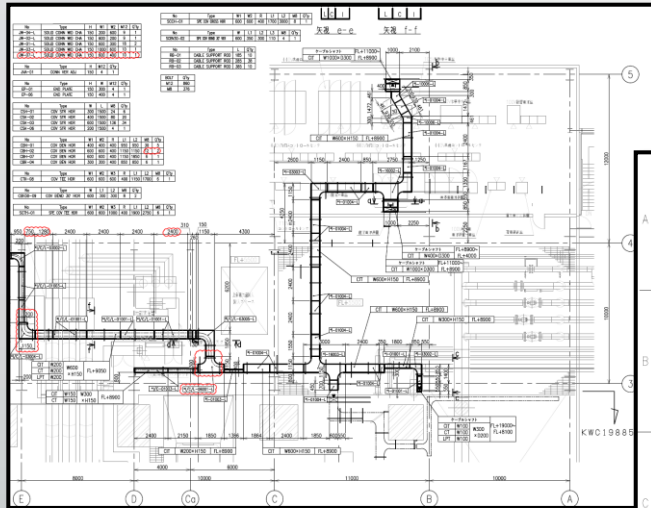Equipment & piping support foundation information drawing
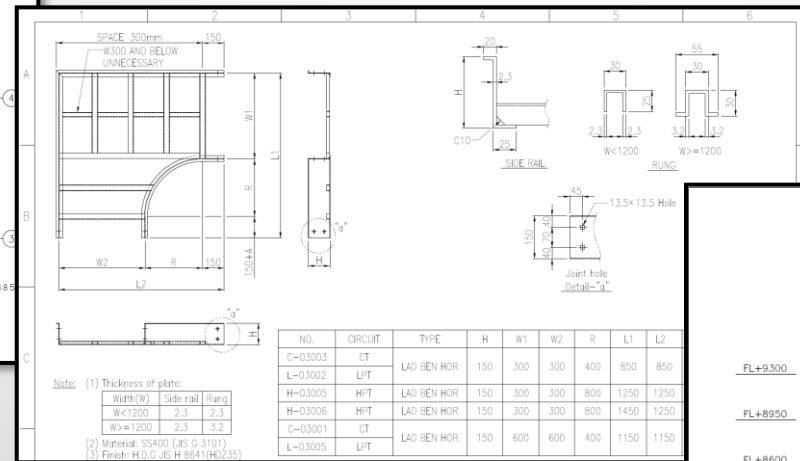
BUSINESS ACTIVITIES

ABOUT ENGINEERING

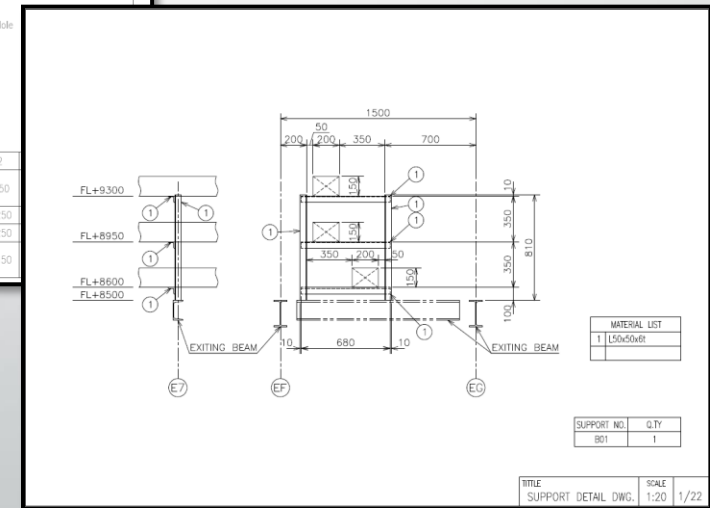**Plant Engineering**   **Design / 2D CAD Work**

In addition, we also create various types of cable tray drawings as shown below:

Cable tray division layout drawing

Cable tray fabrication drawing
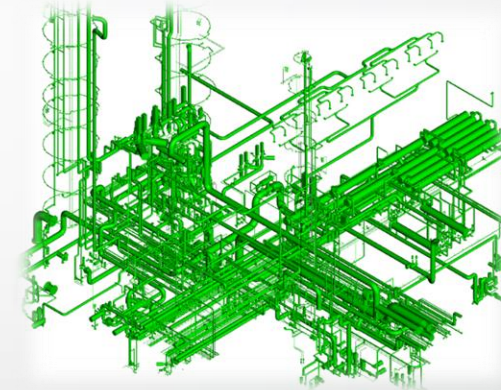
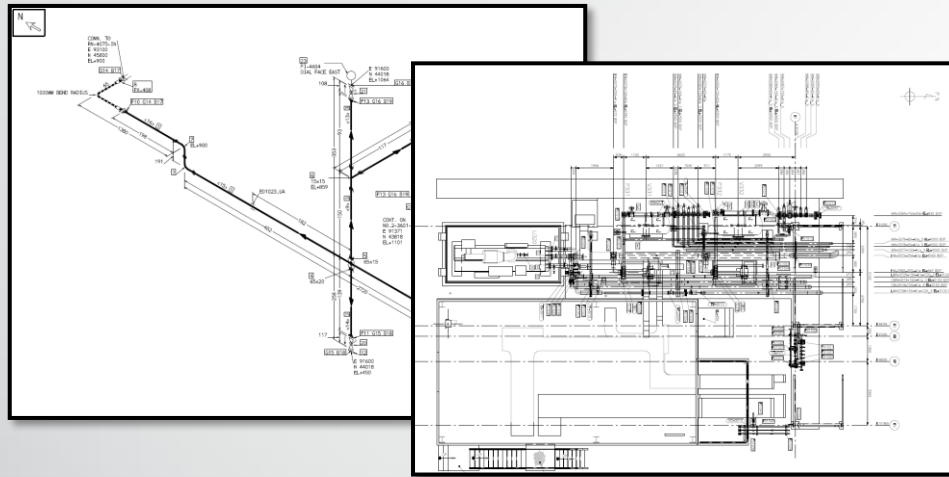Cable tray support detail drawing
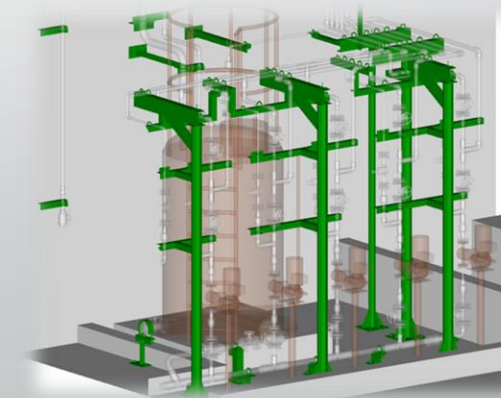
BUSINESS ACTIVITIES

ABOUT ENGINEERING

Plant Engineering
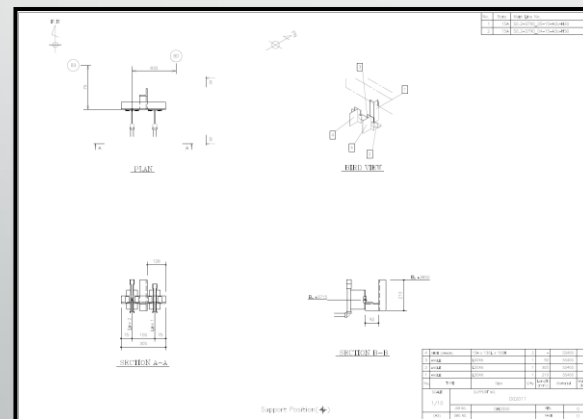
Input work / 3D modeling

We build piping and support 3D modeling base on drawings received from customers.

Piping Modeling

Support Modeling
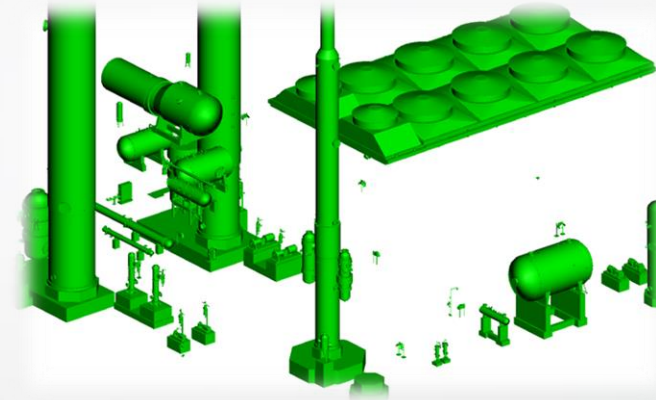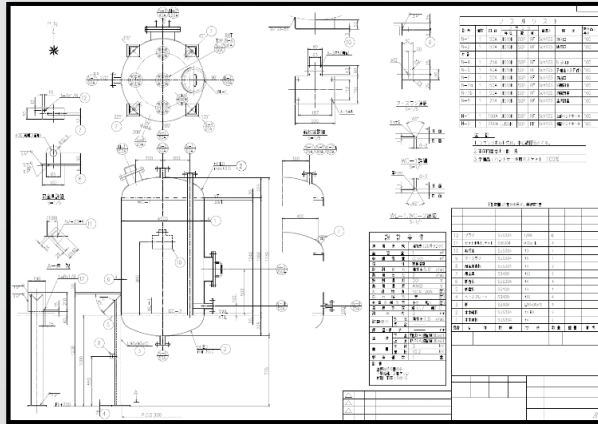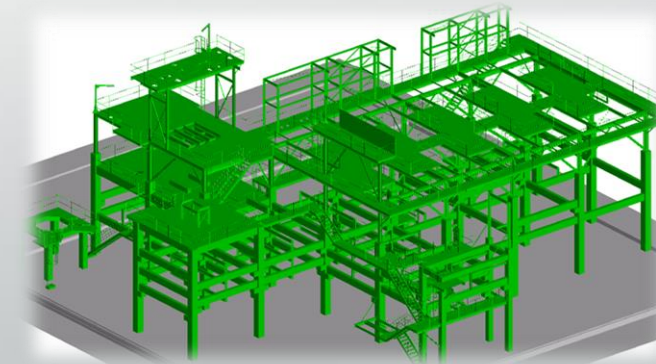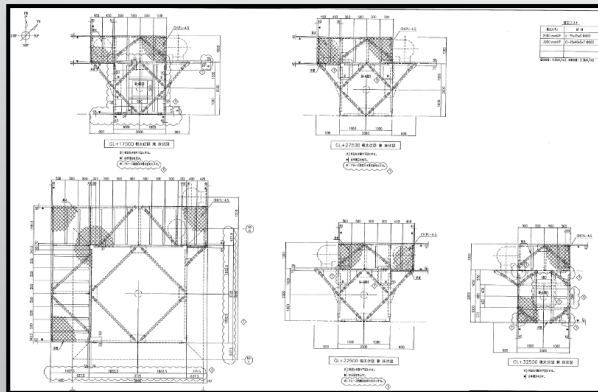
BUSINESS ACTIVITIES

ABOUT ENGINEERING

Plant Engineering

Input work / 3D modeling

We also create equipment/platform and civil/structure 3D modeling base on drawings.

Equipment/Platform Modeling

Civil/Structure Modeling

BUSINESS ACTIVITIES

ABOUT ENGINEERING

Plant Engineering

Material Take Off / Report Template
Piping MTO Report Template

Additionally, we export the necessary material information for all items according to the customer's requirements.

Plant Name: Date:
User:

PIPING MATERIAL REPORT

ITEM NUMBER	PIPE LINE	CATEGORY	SIZE	ITEM CODE	DESCRIPTION	MATERIAL	PIPING CLASS	TOTAL QUANTITY	TOTAL WEIGHT (kg)	REMARK
1	HW-755091MC-1-B4aC3	PIPE	1 in	/JIPA000/SCH20S-BE	PIPE BE SCH.20S	SUS304, JIS G 3459	B4aC3	4503.7	0.00	
2	HW-755091MC-1-B4aC3	FITTING	1 in	/JIEA002/SCH20S	ELBOW 90DEG. LR SCH.20S BW	SUS304, JIS G 3459	B4aC3	4	0.00	
3	HW-755091MC-1-B4aC3	FLANGE	1 in	/JIFPJGB/D	FLANGE SO JIS10K RF	Undefined	B4aC3	3	0.00	
4	HW-755091MC-1-B4aC3	VALVES	1 in	/10UTBD_10K_RF/D	BALL VALVE JIS10K RF	Undefined	B4aC3	1	0.00	
5	HW-755091MC-1-B4aC3	GASKETS	1 in	/JIGBJG2.8t/D	GASKET FLAT RING 2.8MM JIS10K	T#9010-A-7-S	B4aC3	2	0.00	
6	VG-750031MG-1_1/2-B4aC3	PIPE	1 1/2 in	/JIPA000/SCH20S-BE	PIPE BE SCH.20S	SUS304, JIS G 3459	B4aC3	6310.9	0.00	
7	VG-750031MG-1_1/2-B4aC3	FITTING	1 1/2 in							
8	VG-750031MG-1_1/2-B4aC3	FLANGE	1 1/2 in							
9	VG-750031MG-1_1/2-B4aC3	GASKETS	1 1/2 in							
10	/WSO-750181MC-1/2-B4aC3-E(危)	PIPE	1/2 in							

Plant Name: Date:
User:

BOLT MTO REPORT

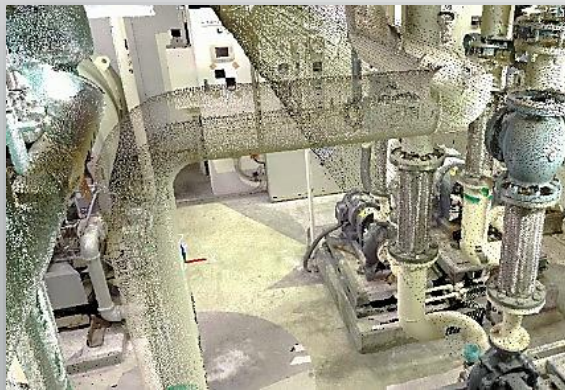| ITEM NUMBER	PIPE LINE	CATEGORY	SIZE	DESCRIPTION	MATERIAL	BOLT LENGTH	PIPING CLASS	TOTAL QUANTITY	REMARK
1	HW-755091MC-1-B4aC3	BOLTS	5/8 in	MACHINE BOLT AND NUT	SUS304/SUS316	55.00 mm	B4aC3	8	
2	VG-750031MG-1_1/2-B4aC3	BOLTS	5/8 in	MACHINE BOLT AND NUT	SUS304/SUS316	60.00 mm	B4aC3	8	
3	APoly-716161MG-1/2-B8jC70-CF30(危)	BOLTS	1/2 in	MACHINE BOLT AND NUT	SUS304/SUS316	50.00 mm	B8jC70(K)	16	
4	APoly-716162MG-1/2-B8jC70-CF30(危)	BOLTS	1/2 in	MACHINE BOLT AND NUT	SUS304/SUS316	50.00 mm	B8jC70(K)	16	
5	APoly-717161MG-1/2-B8jC70-CF30(危)	BOLTS	1/2 in	MACHINE BOLT AND NUT	SUS304/SUS316	50.00 mm	B8jC70(K)	16	
6	APoly-717162MG-1/2-B8jC70-CF30(危)	BOLTS	1/2 in	MACHINE BOLT AND NUT	SUS304/SUS316	50.00 mm	B8jC70(K)	16	
7	APoly-718161MG-1/2-B8jC70-CF30(危)	BOLTS	1/2 in	MACHINE BOLT AND NUT	SUS304/SUS316	50.00 mm	B8jC70(K)	16	
8	APoly-718162MG-1/2-B8jC70-CF30(危)	BOLTS	1/2 in	MACHINE BOLT AND NUT	SUS304/SUS316	50.00 mm	B8jC70(K)	16	
9	APoly-719161MG-1/2-B8jC70-CF30(危)	BOLTS	1/2 in	MACHINE BOLT AND NUT	SUS304/SUS316	50.00 mm	B8jC70(K)	16	
10	APoly-719162MG-1/2-B8jC70-CF30(危)	BOLTS	1/2 in	MACHINE BOLT AND NUT	SUS304/SUS316	45.00 mm	B8jC70(K)	8	

ABOUT ENGINEERING

As-Built Engineering

We use a variety of modern 3D renovation technologies to meet our clients' needs, providing safe, reliable, and efficient engineering solutions.

Our services cover the full process, from detailed site surveys to producing design drawings and as-built documentation.

With the latest 3D modeling and laser scanning tools, we ensure high accuracy and efficiency.

This allows us to optimize the renovation of plants, piping systems, structures, and equipment, improving safety and performance while reducing downtime.

Our approach ensures a smooth and innovative engineering experience for our clients.

BUSINESS ACTIVITIES

ABOUT ENGINEERING

As-Built Engineering

About Laser Measurement Method

3D laser scanning is a widely used tool in construction, engineering, and architecture, particularly for documenting the existing (as-built) conditions of plants and facilities.

- 3D laser scanners precisely measure and record locations and distances, producing a point cloud file. These scanners quickly and accurately capture digital measurements and images, making them essential for construction and engineering projects. The data is invaluable for design, prefabrication, asset management, and facility modifications.

- Laser scanners work by emitting light pulses at high speeds, which bounce off objects and return to the scanner's sensor. The scanner calculates the distance between itself, and the object based on the time it takes for the pulse to return. Each data point is translated into a pixel with an x, y, and z coordinate.

- Multiple scans are taken from various positions around a site, capturing millions of data points that are processed into a point cloud. This generates an accurate 3D as-built dataset of the site. Some scanners can capture up to 2 million points per second with an accuracy of 2-4 mm.

- In simple terms, the process of laser scanning begins when a Project Manager takes a scanner to the site and performs a walkthrough to capture the necessary data.

BUSINESS ACTIVITIES

ABOUT ENGINEERING

As-Built Engineering

**Benefits of Laser Measurement Method**

High Accuracy: Provides detailed measurement data, minimizing errors in design and construction.

Speed and Efficiency: Captures millions of data points in a short time, saving survey time.

Conflict Detection: Helps identify and resolve design conflicts early, reducing risks and costs.

Supports Renovation and Expansion: Provides accurate information for upgrading existing infrastructure.

Creates a Digital Twin: 3D data facilitates effective project management and easy tracking of changes.
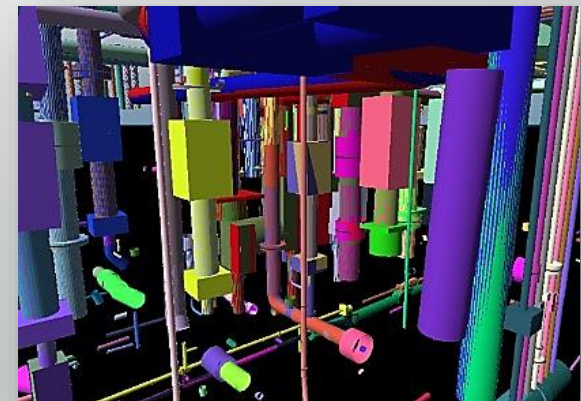
BUSINESS ACTIVITIES

ABOUT ENGINEERING

As-Built Engineering

Innovative Workflow for 3D Laser Scanning Technology when compare with 2D Technology:

✓ Incorporating 3D technology eliminates discrepancies that are difficult to resolve with traditional 2D methods.

✓ The highly accurate 3D data helps reduce risks and enhances mutual understanding throughout the process.

| PROCESS	3D TECHNOLOGY	2D TECHNOLOGY
01 - Remodeling Plan Proposal	• The process is similar for 3D technology.	• Since it is not possible to collect existing information (vague/incomplete) at the planning stage, a survey is required to confirm the current state.
02 - 3D Measurement	• Accurately capture the existing situation. • Record exact locations and measurements of all points.	• Unexpected issues often arise during site inspections (things not shown or different from the drawings). • It can be hard to organize and recall where photos were taken on-site.
03 - Remodeling Plan Measurement	• Provides absolute 3D coordinates. • Captures information for the entire area, enabling thorough desk-based reviews.	• Data inconsistencies may arise when converting to 2D CAD. • Specifications can change due to customer requests or upstream design alterations.
04 - Material Procurement	• Allows for highly accurate material aggregation.	• Only rough estimates are possible.
05 - Construction Plan	• Provides three-dimensional visualizations of the construction, enabling detailed risk assessment and clearer understanding.	• Construction cannot be visualized (only exists conceptually in the designer's mind).
06 - Remodeling Work	• Enhances mutual understanding with the construction team, leading to improved efficiency.	• Perception differences with the construction company can lead to issues.
07 - Completion	• The completion process is similar, but with the added benefit of 3D technology's detailed data and visualization.	• Construction is completed, and the facility is built according to the design.
08 - Secondary use of data	• Data can be reused as existing information for future projects or for after-sales service.	• Only delivery drawings are maintained, requiring a new site inspection before starting the next project.

BUSINESS ACTIVITIES

ABOUT ANALYSIS

As part of our analysis services, we assess piping, equipment, and structures in chemical and nuclear plants.
❑ We not only analyze the results but also suggest improvements for earthquake and vibration resistance.
❑ We also handle the design and manufacturing of these structures.

❑ We provide structural and safety analysis as well as engineering simulations. Our experienced team ensures the accuracy and quality of these analyses.
❑ We use different analysis codes depending on the specific needs and criteria.
❑ Additional services include creating floor response spectra, measuring vibrations, and planning vibration control measures.

Safety Analysis

Structural Analysis

Engineering Simulation
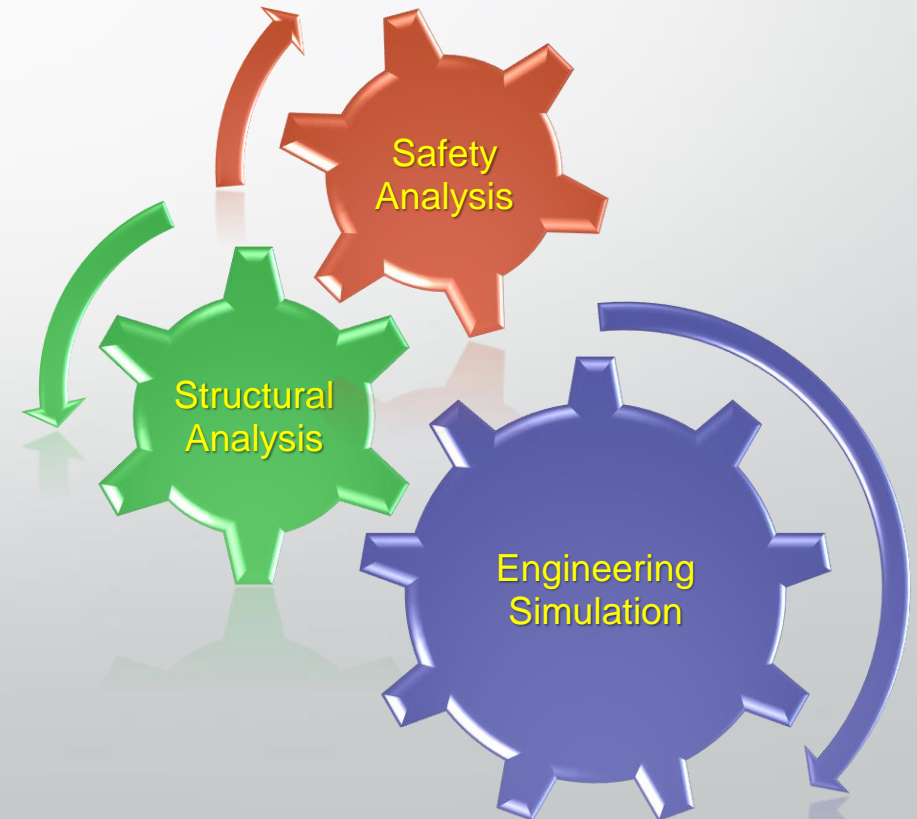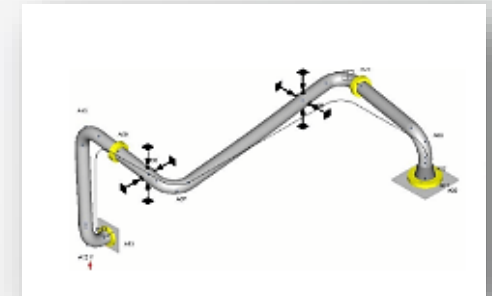
BUSINESS ACTIVITIES

ABOUT ANALYSIS

Structural Analysis

- We evaluate the strength and stability of piping, equipment, containers, and structures by calculating stress and deformation from design loads.

- We can perform stress evaluations in accordance with various standards.

Analysis model

Evaluation by JSME

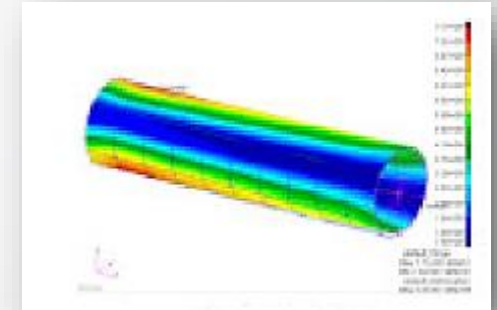# BUSINESS ACTIVITIES

ABOUT ANALYSIS

Safety Analysis

Examples of safety analysis include:

Evaluating pipe damage based on protection standards (JSME S ND1-2002).

Assessing the potential for objects to topple or slide during an earthquake.

Piping detail model
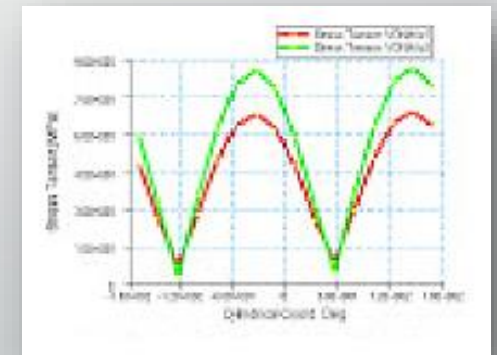
Evaluation based on protection standards

ABOUT ANALYSIS

Engineering Simulation

❑ To ensure the accuracy of our analysis methods and results, we perform verification through both physical and mathematical theories, along with material testing.

JEAG shell parameter calculation

Confirmation of physical properties through material testing

BUSINESS ACTIVITIES

ABOUT SYSTEM DEVELOPMENT
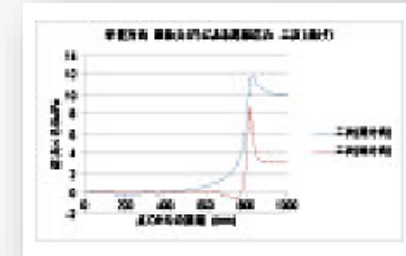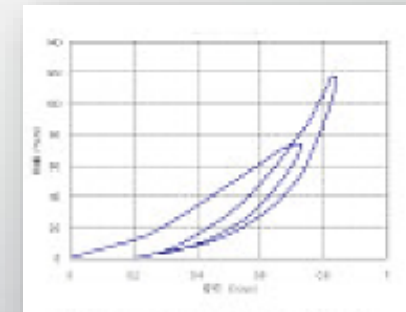

Latest Tool Management

- To maintain and enhance our advanced plant design technology, we continuously gather the latest software advancements and integrate them effectively.

- Our goal is to boost productivity and improve the quality of design services by creating a specialized software environment, linking data across programs, and developing customized tools/macros as well as providing technical support services.

Information System Management

- We offer system support to ensure smooth business operations across the company.

- This includes safeguarding the internal network, enhancing security to prevent unauthorized access and data leaks, and protecting the company's valuable information assets.

BUSINESS ACTIVITIES

ABOUT WORKER DISPATCH SERVICE

❑ Since our establishment, we've specialized in plant engineering. With our deep expertise, experience, and proven success, we also provide highly skilled engineers to address the specific needs of our customers.

Construction Manager Dispatch	Design and Engineering Dispatch	General Engineer Dispatch
We provide a range of construction managers and experienced personnel for your projects.	By incorporating 3D Plant Engineering from the early project stages, we provide advanced strategies that surpass traditional methods, offering innovative solutions and better project outcomes.	We provide engineers with the appropriate technical skills to solve customer challenges in different construction projects, ensuring the expertise fits each project's specific requirements.

BUSINESS ACTIVITIES

ABOUT THE SOFTWARE IN USE

We use a variety of tools and software to meet job requirements, including:

- Smart3D (S3D), BricsCAD, Everything3D (E3D), PCM, Navisworks, Infipoints, AutoCAD, Galaxy-Eye, SCENE.

Plant & As-Built Engineering
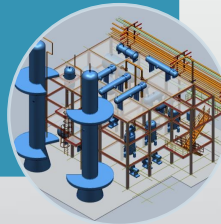
- SAP (IV/2000), AutoPIPE(Advanced/KHK2/Nuclear), SimXpert, STADD.Pro, FAP-3, MSC NASTRAN.
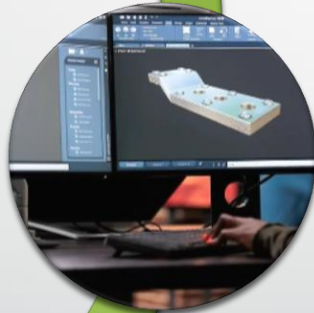
Analysis

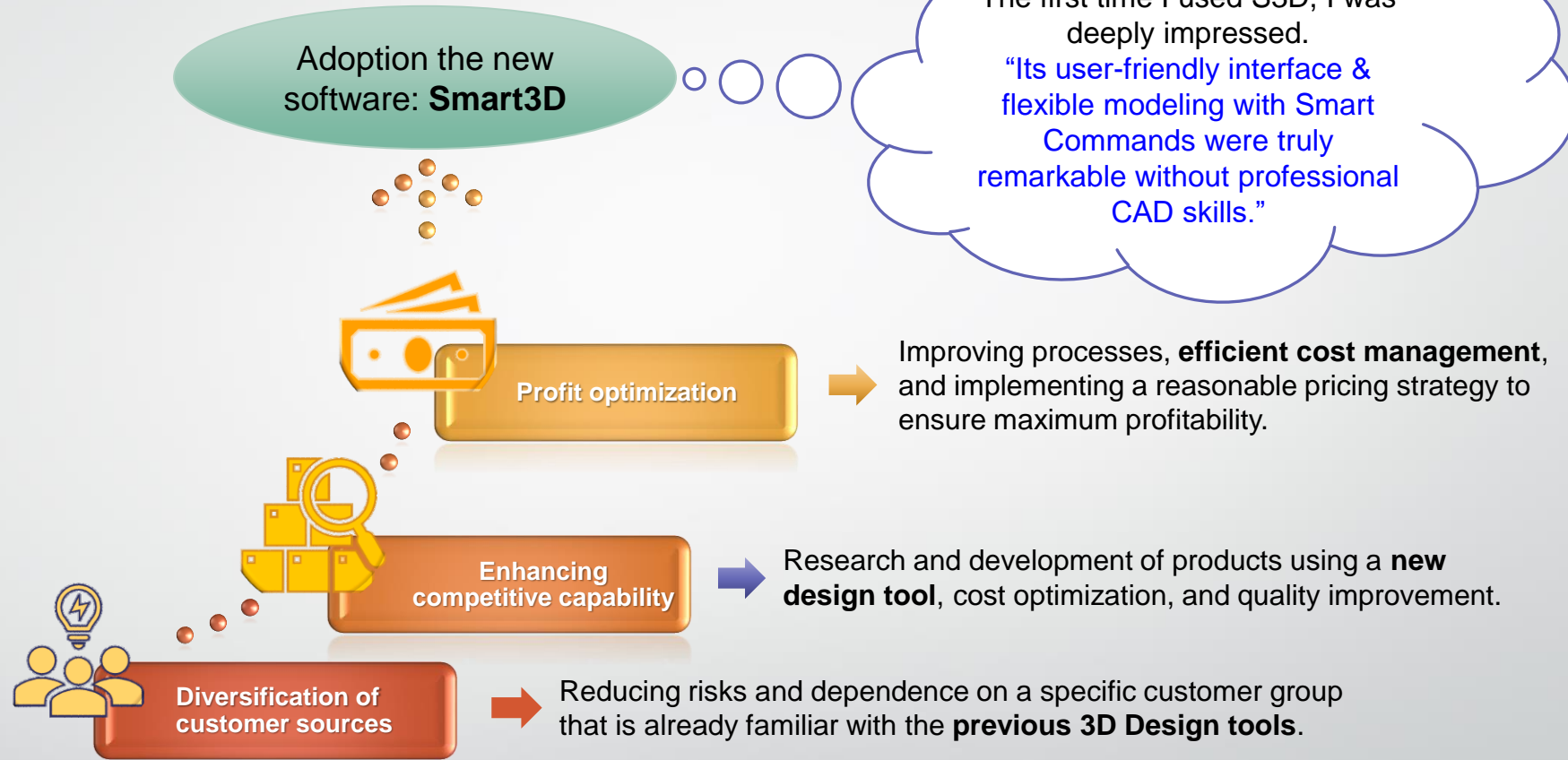Content

Shinsei Group Overview

Business Activities

System Development

Future Business Strategy

SYSTEM DEVELOPMENT

ABOUT THE REASON WHY WE CHOOSE SMART 3D

Context for Adoption S3D

Adoption the new software: **Smart3D**

The first time I used S3D, I was deeply impressed.
"Its user-friendly interface & flexible modeling with Smart Commands were truly remarkable without professional CAD skills."

Profit optimization

Improving processes, **efficient cost management**, and implementing a reasonable pricing strategy to ensure maximum profitability.

Enhancing competitive capability

Research and development of products using a **new design tool**, cost optimization, and quality improvement.

Diversification of customer sources

Reducing risks and dependence on a specific customer group that is already familiar with the **previous 3D Design tools**.

About 4 years ago
• After seeing a presentation on 'HEXAGON S3D', we recognized it as a valuable tool.

For about 20 years
• We have only used 'AVEVA PDMS & E3D' tools for plant design.

SYSTEM DEVELOPMENT

ABOUT THE REASON WHY WE CHOOSE SMART 3D

Results for Adoption S3D

When We First Started with S3D

- We had no prior knowledge about how to use and customize the software for its effective operation.
- It took us over two years to make the software operational and achieve the desired efficiency.

Where We Are Now with S3D

- We have developed skills setup, customization, function development, training, and database management.
- We can design plant efficiently and meet all client requests.
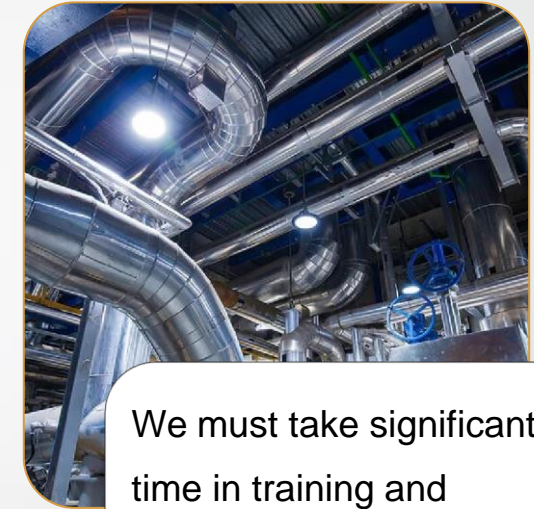
SYSTEM DEVELOPMENT

ABOUT THE CHALLENGES WITH SMART 3D
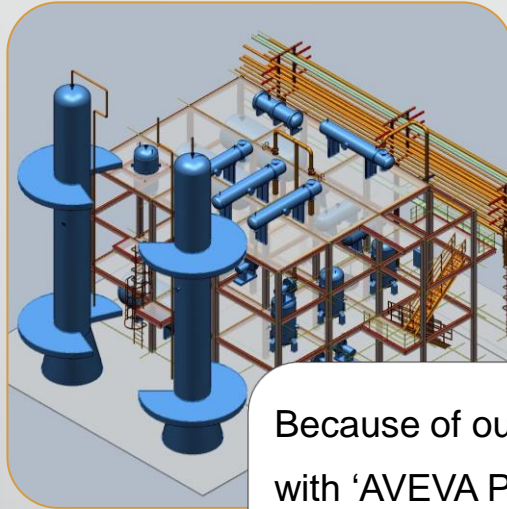
Because of our familiarity with 'AVEVA PDMS & E3D' tools for many years, adapting to the entirely different operations, commands, and language in S3D was difficulty.
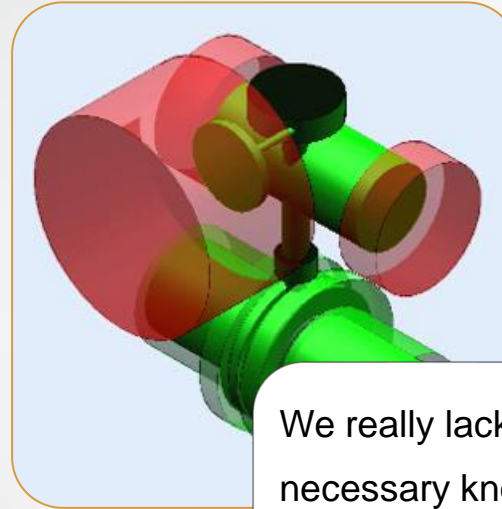
We really lack the necessary knowledge for admin tasks in the initial phase, such as catalog registration and operation shortcuts.
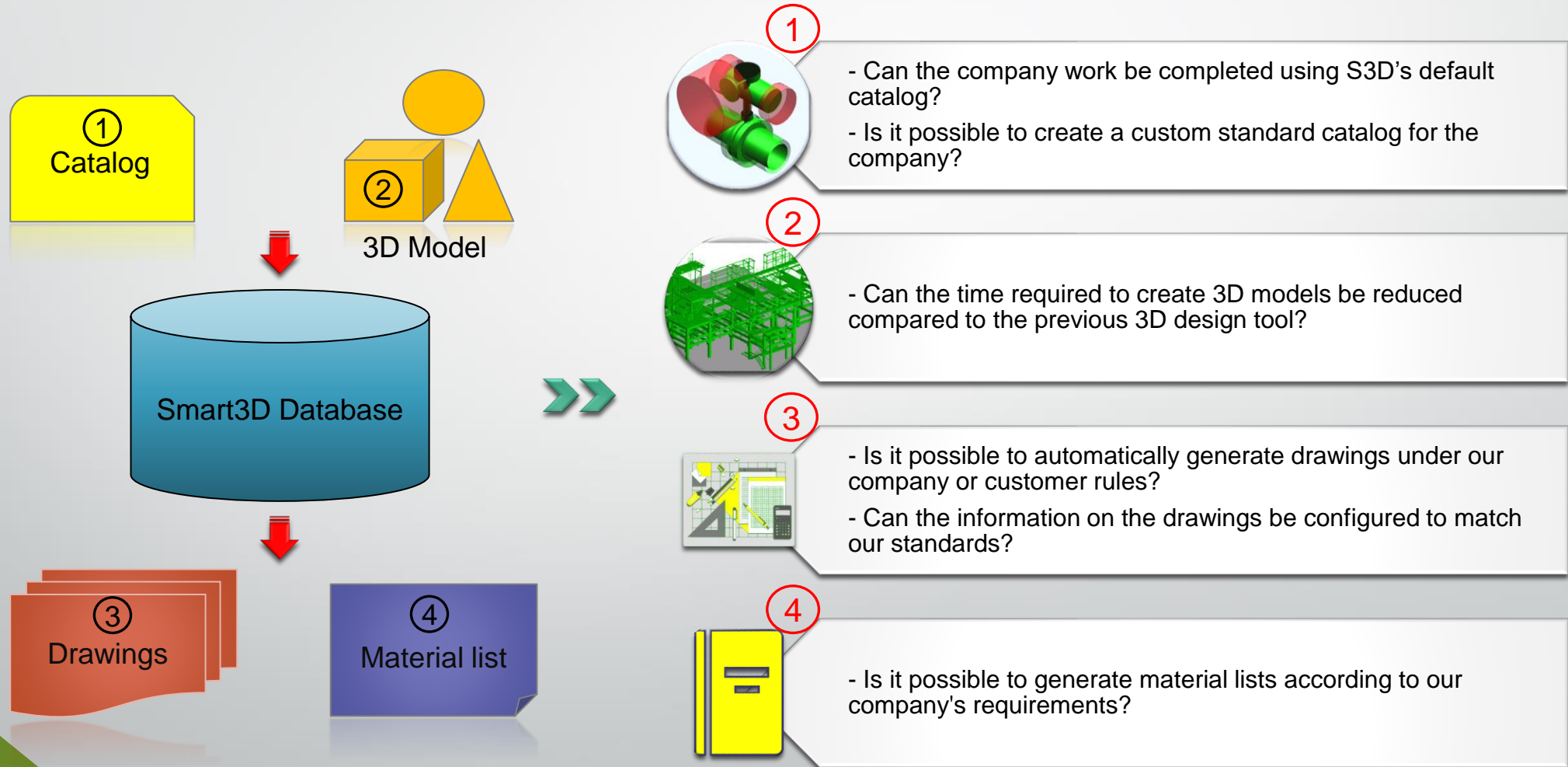

We must take significant time in training and learning through trial and error.

In fact, it took over two years to fully integrate S3D into actual projects, and early on, there were times when we regretted implementing it.

SYSTEM DEVELOPMENT

ABOUT THE CHALLENGES WITH SMART 3D

Specifically, we faced many difficulties related to building catalog, creating 3D Model and generating 2D drawings as well as material list when first using S3D, including:
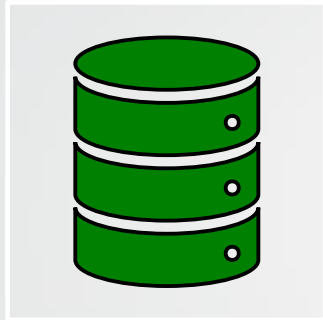
① Catalog

② 3D Model

Smart3D Database

③ Drawings

④ Material list

1
- Can the company work be completed using S3D's default catalog?
- Is it possible to create a custom standard catalog for the company?

2
- Can the time required to create 3D models be reduced compared to the previous 3D design tool?

3
- Is it possible to automatically generate drawings under our company or customer rules?
- Can the information on the drawings be configured to match our standards?

4
- Is it possible to generate material lists according to our company's requirements?

1 **Building Catalog**

ABOUT HOW WE RESOLVE THE CHALLENGES

❖ Can the company work be completed using S3D's default catalog?
❖ Is it possible to create a custom standard catalog for the company?

Specific Problems

- The default S3D libraries don't have some piping components and support parts needed for our projects.

- The piping catalog library under the JIS standard are unavailable.

- The default S3D templates for creating piping catalogue and material specifications are complex and prone to errors.

Solutions

- Make new piping components symbols and support parts, requiring .NET programming skills and attendance at specialized training sessions provided by Hexagon.

- Create a piping catalog library under JIS standard.

- Develop an application to make the process of creating piping catalogue and material specifications simpler, faster and to minimize errors.

SYSTEM DEVELOPMENT

① Building Catalog

ABOUT OUR ACHIEVEMENTS WITH SMART 3D

After the specialized training course provided by Hexagon in about two months, we created over 1100 types of piping component symbols and piping support parts by using .NET programming language.

JIS Library
(Over 1100 Types)
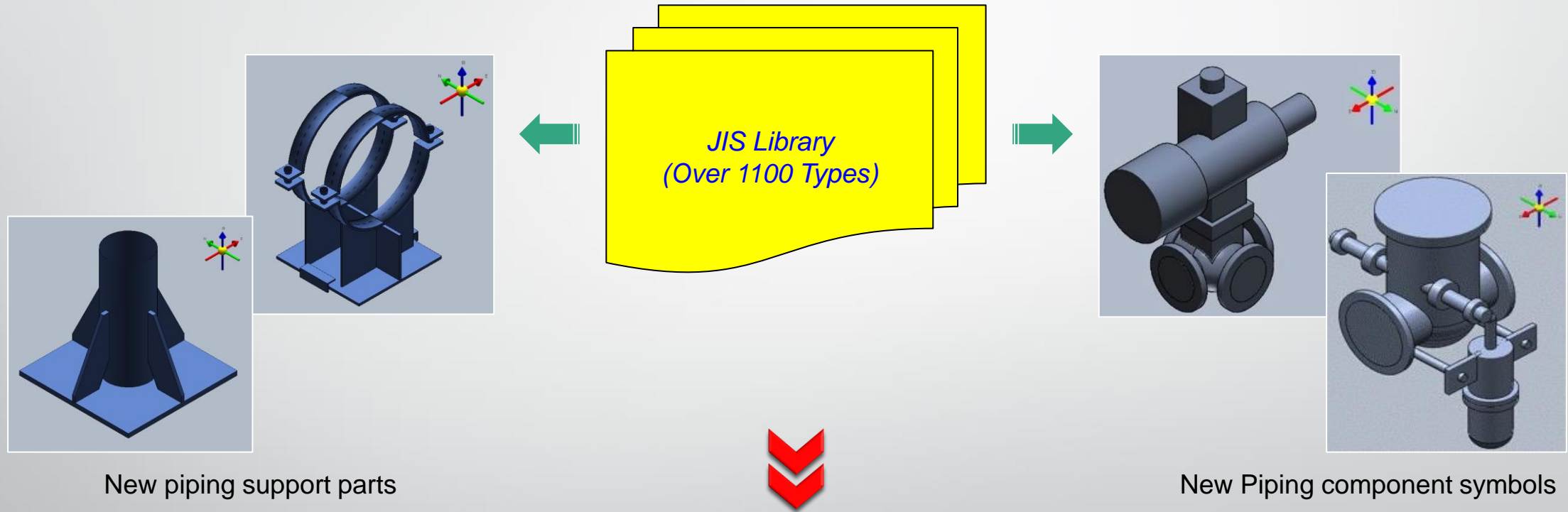
New piping support parts

New Piping component symbols

All these items immediately meet the needs for using in all our projects.

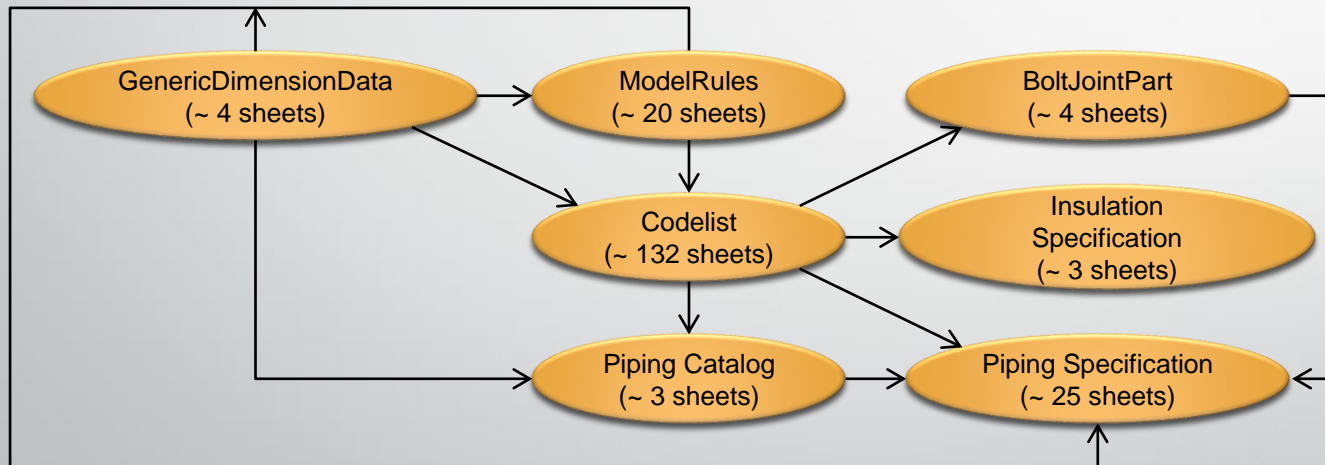# SYSTEM DEVELOPMENT

ABOUT OUR ACHIEVEMENTS WITH SMART 3D

S3D Default For Register Catalog & Specification

Developed Application by Shinsei

❑ Creating new Catalog & Specification by default S3D requires the creation or modification of numerous Excel sheets (about 200 sheets).

❑ The complex relationships between these sheets make it easy to make mistakes and consume a lot of time.

To simplify the catalog and specification registration process and enhance work efficiency, we developed an application that automatically generates Excel files for bulkloading to S3D database.

(The relationships between the Excel sheets)

Excel File

49

SYSTEM DEVELOPMENT

ABOUT OUR ACHIEVEMENTS WITH SMART 3D

① Building Catalog

Application for Catalog/Spec

EXPORT

BULKLOAD

1 Search shape and create desired item from customizable libraries easily.

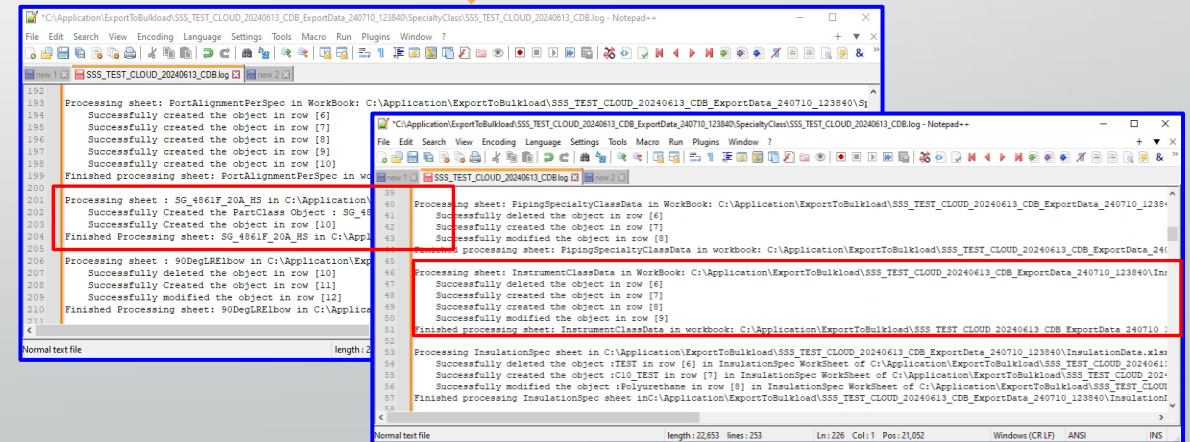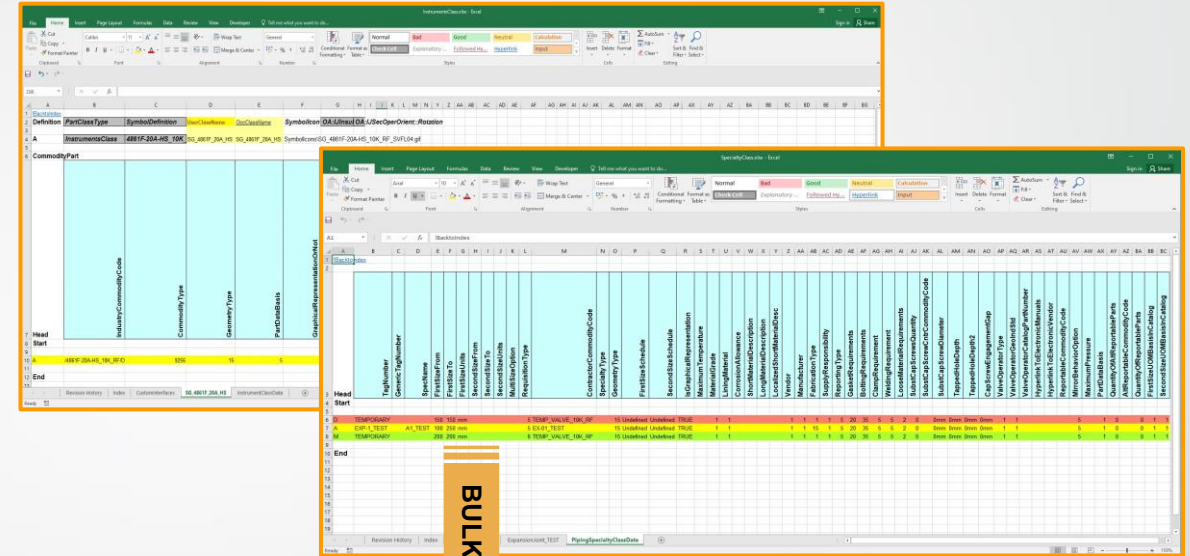**2** Create a new piping specification conveniently.

3 Customize existing data in database quickly without relying on Hexagon's default extraction tools.

4 Users can reduce errors & save time compared to initial manual method.
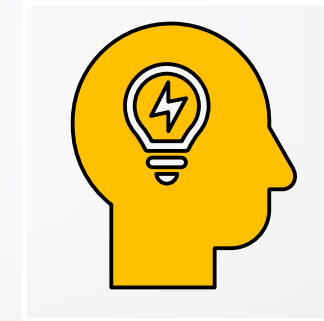
(Advantages of new Application)

SYSTEM DEVELOPMENT

ABOUT HOW WE RESOLVE THE CHALLENGES

❖ Can the time required to create 3D models be reduced compared to the previous 3D design tool?

Specific Problems

- Since the large number of supports following our company's standards, using the S3D default will not meet the project timeline.

- Operations like review or modify properties for a series of pre-inputted pipelines spend lots of time.

Solutions

- Create the Support Assembly standard that meets all our design rules.

- Develop tools (or macros) to enhance performance and work efficiency.

2 **Creating 3D Model**

ABOUT OUR ACHIEVEMENTS WITH SMART 3D

To make the 3D modeling process faster and more accurate, our development team has created and is continually enhancing tools and macros with new features such as:

|			
1 - Creating support shape with all components type follow the company standard automatically.	2 – Creating dummy or trunnion at specific positions quickly.	3 - Renaming all pipe names according to the project's rules easily.	4 - Adjusting pipe elevations based on BOP/COP automatically.
5 – Displaying information for objects in S3D model quickly.	6 - Showing relevant information for objects in S3D model quickly.	7 - Creating positioner for control valve automatically.	8 – Converting Galaxy-Eye software to S3D

② Creating 3D Model

ABOUT OUR ACHIEVEMENTS WITH SMART 3D

1 – Macro For Creating Piping Support

Creating Support Standard by Default S3D
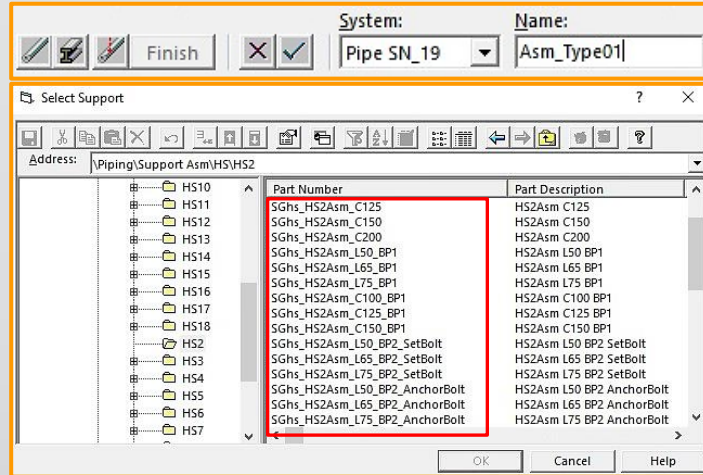
❑ These default selection operations take a long time to load during runtime.

❑ Because the support types are displayed in a list format, it often leads to confusion when selecting different types of supports (such as with or without baseplates, bolts, or various types of bolts).

❑ Besides, the interface is not yet truly user-friendly or convenient for users.

Developed Macro by Shinsei

We have developed a new macro with a user-friendly and highly convenient interface.

This macro includes all the necessary functions to create a new Support Assembly.

Users can easily select and create the desired type of support with various component options (such as steel, baseplates, and bolts) without waiting for data to load.

Users can also quickly modify basic dimensions or change the fitting type without needing to access the properties.
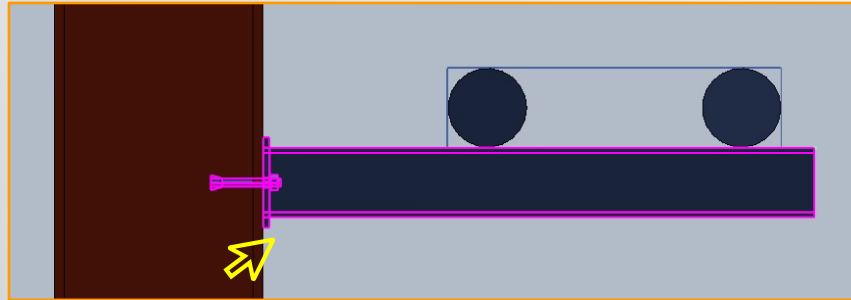
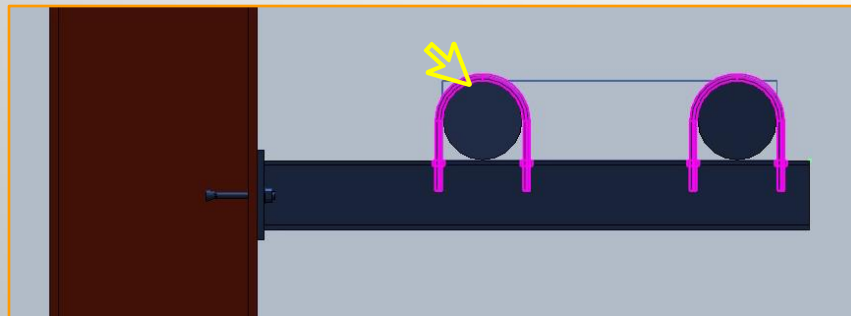# SYSTEM DEVELOPMENT

ABOUT OUR ACHIEVEMENTS WITH SMART 3D

1 – Macro For Creating Piping Support

**Creating Support Standard by Default S3D**

1 Create frame of support standard.

2 Create fittings one by one at each corresponding pipe position.

➡ Spend a lot of time & easily make mistakes.

Developed Macro by Shinsei

➢ More importantly, we developed various support shapes, combining different types of fittings, baseplates, and bolts according to our company's specific standards, known as Support Assemblies.

➢ Users now create supports for various types of pipes by only One-step.
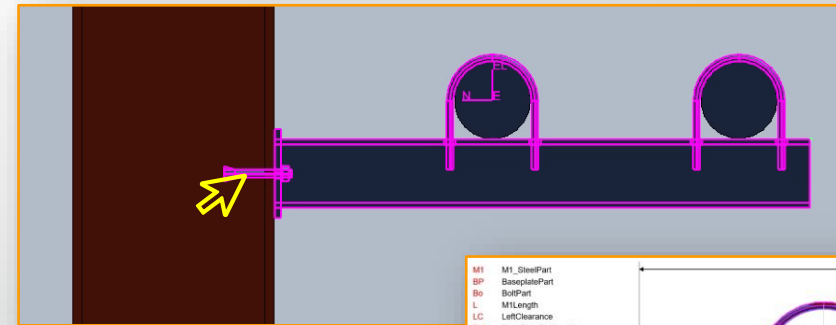
1 One - Step creation

Save time & prevent errors caused by manual operations.
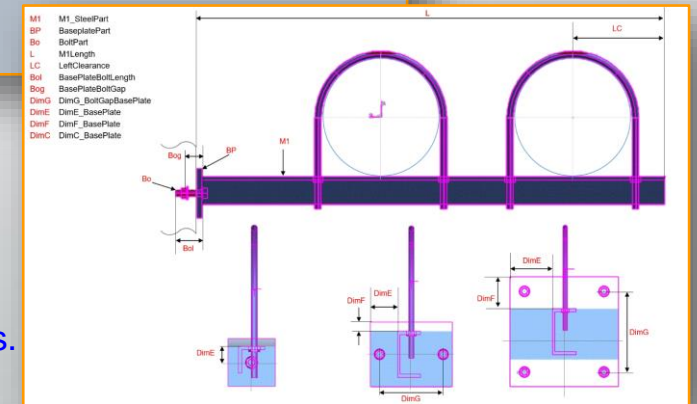
② Creating 3D Model
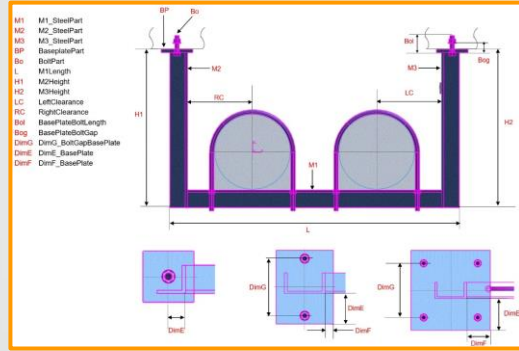
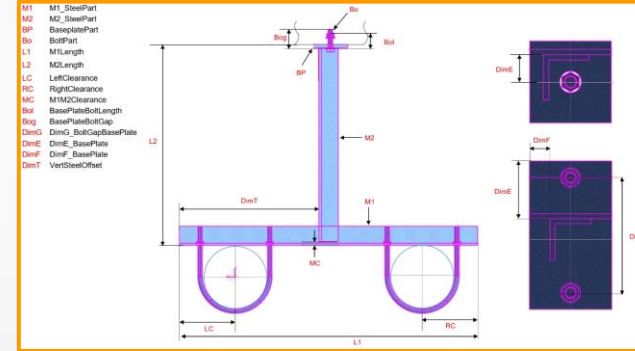## ABOUT OUR ACHIEVEMENTS WITH SMART 3D

1 – Macro For Creating Piping Support

Developed Macro by Shinsei
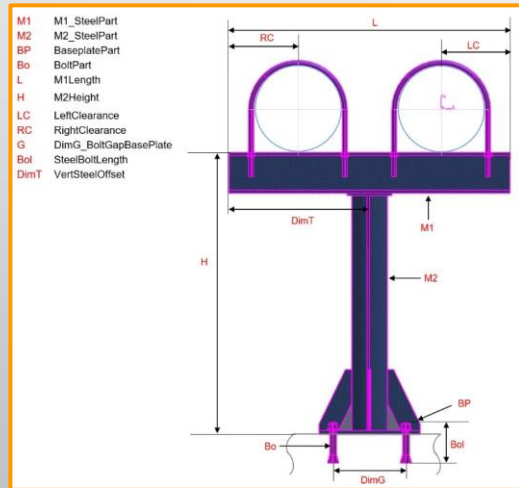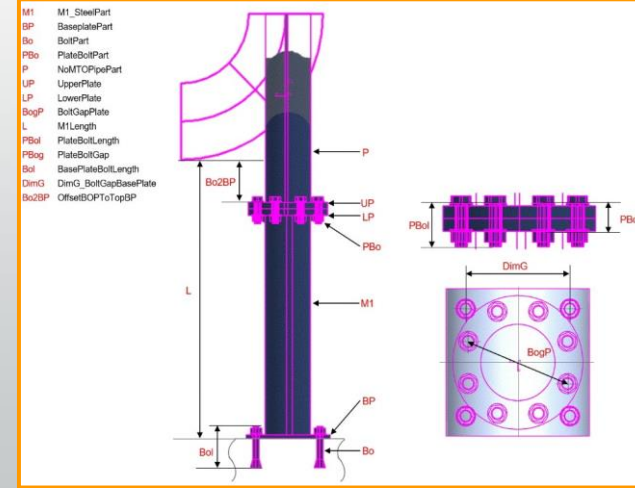
Some examples about support assemblies as below:

Horizontal Support (HS)

Vertical Support (VS)

Stanchion Support (SS)

Trunnion Support (TS)

2 **Creating 3D Model**
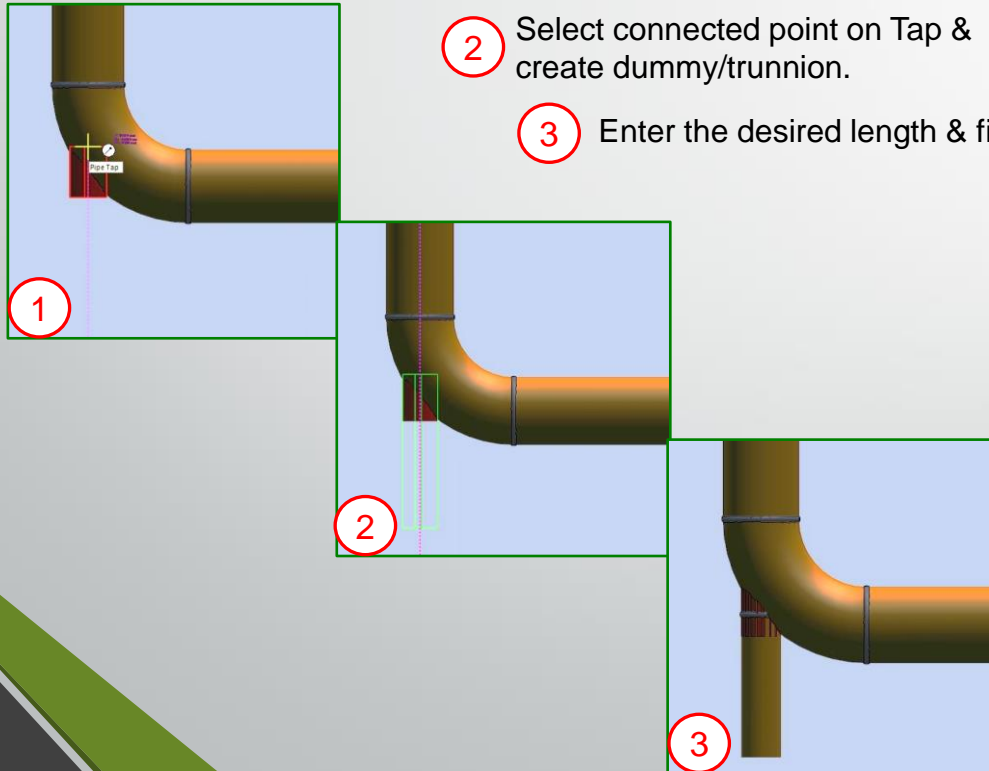
ABOUT OUR ACHIEVEMENTS WITH SMART 3D

2 – Macro For Creating Dummy or Trunnion

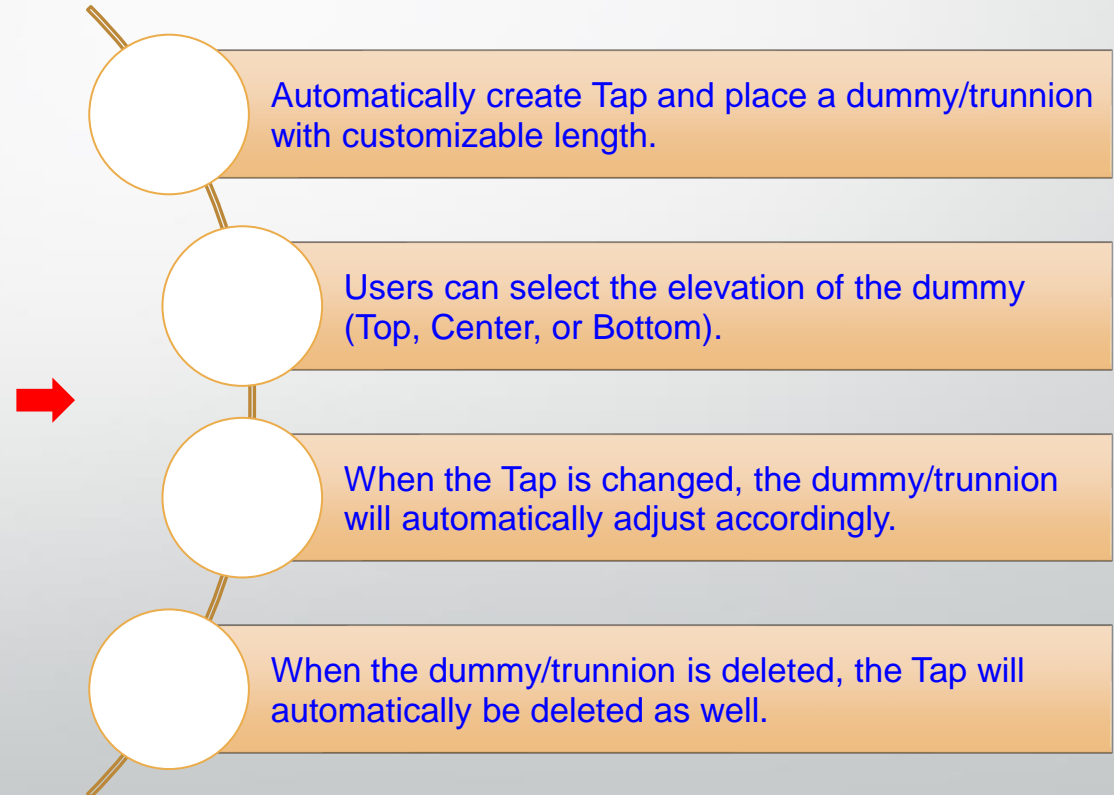*Creating Dummy/Trunnion by Default S3D*

Developed Macro by Shinsei

❑ To create a dummy or trunnion using the default S3D settings, users typically spend a lot of time and require precision because they need to perform several steps as below:

① Create Tap at specific position.

② Select connected point on Tap & create dummy/trunnion.

③ Enter the desired length & finish.

➢ For this case, we have developed a macro to reduce manual operations when creating or editing and improve efficiency with the following key features:

Automatically create Tap and place a dummy/trunnion with customizable length.

Users can select the elevation of the dummy (Top, Center, or Bottom).

When the Tap is changed, the dummy/trunnion will automatically adjust accordingly.

When the dummy/trunnion is deleted, the Tap will automatically be deleted as well.

② **Creating 3D Model**
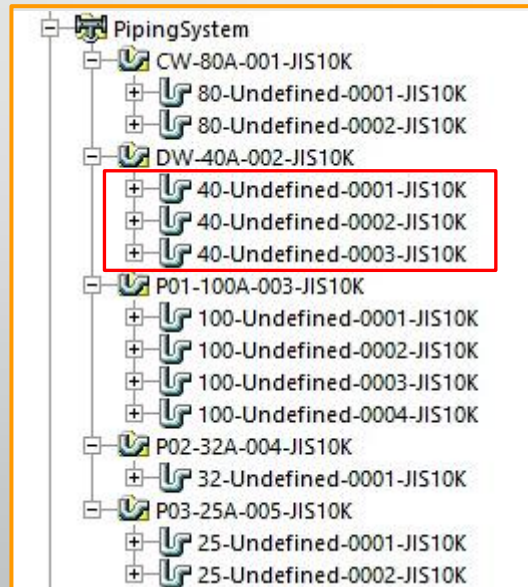
ABOUT OUR ACHIEVEMENTS WITH SMART 3D

3 – Macro For Renaming Pipe Branch Names

Renaming Pipe Branch by Default S3D

❑ Due to the project-specific rule name requirements, renaming pipe branches after creation on the model is essential.

❑ If only manual methods are used, managing a lots of pipes will be time-consuming and prone to errors.

Developed Macro by Shinsei

➢ Therefore, we have created a new macro that automatically handles the renaming of all pipe branches flexibly.

➢ This significantly reduces editing time, and users can adjust the order of the components in the name in a unified manner.

Before: Default Name Rule
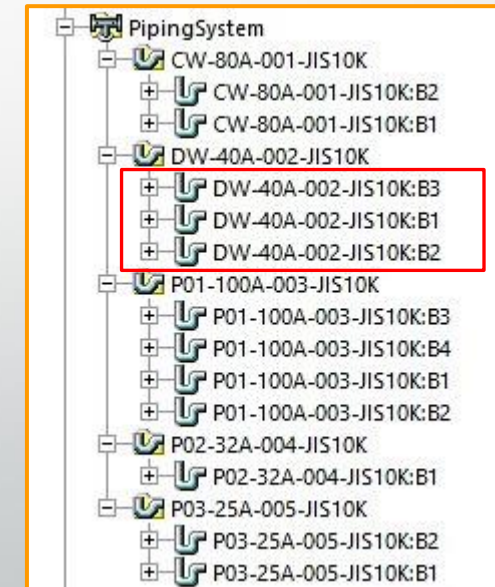
Result after using macro

② Creating 3D Model

ABOUT OUR ACHIEVEMENTS WITH SMART 3D

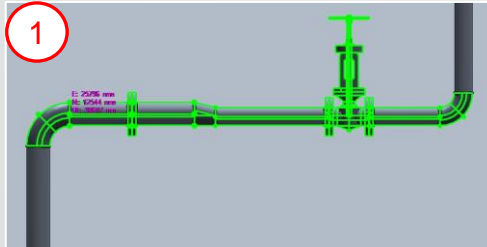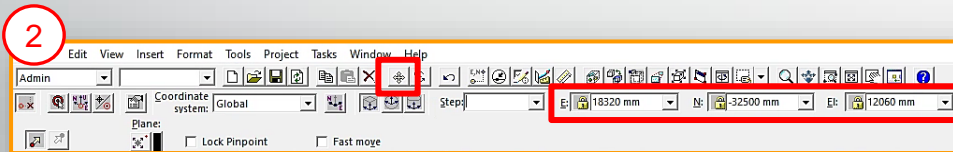### 4 – Macro For Adjusting Pipe Elevation

Adjusting Elevation by Default S3D

❑ When adjusting the elevation of a pipe section, users must first select all the components in that section. The more components there are, the more time-consuming and meticulous the process becomes.

❑ After that, the user uses the **Move** and **PinPoint** tools to adjust the elevation of the pipe section as desired. Selecting the coordinates from the starting point to the elevation coordinates (based on center or bottom of pipe – COP/BOP) can easily lead to errors.

Developed Macro by Shinsei

➢ Our new macro can adjust the elevation of the horizontal features pipe correctly & quickly.

➢ Users only need to select a component on the pipe and specify the desired elevation adjustment based on COP or BOP.

➢ As a result, the entire pipe section and all its components will be raised or lowered to the specified height.
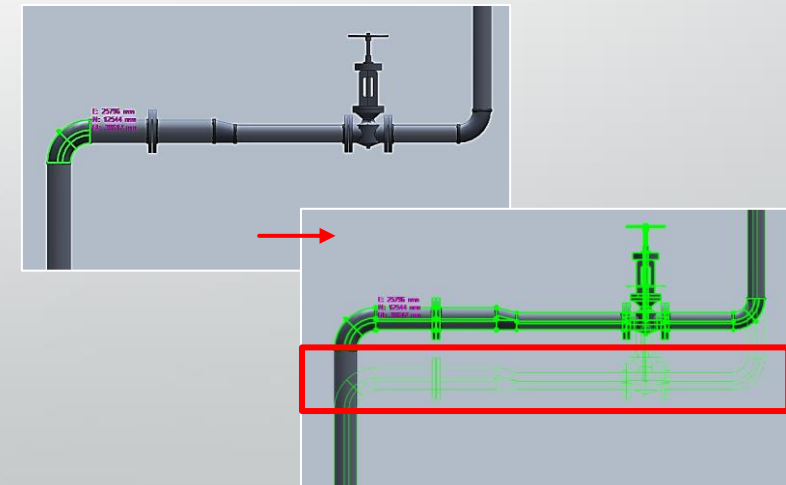
② Creating 3D Model

ABOUT OUR ACHIEVEMENTS WITH SMART 3D

5 – Macro For Displaying Information of Objects

Using Properties by Default S3D

❑ To view information such as the name, size, position, and direction of all nozzles, or the type of steel, elevation, or names of instruments on a pipeline, users need to go into the properties for each object.

❑ This process is not intuitive and can be time-consuming.
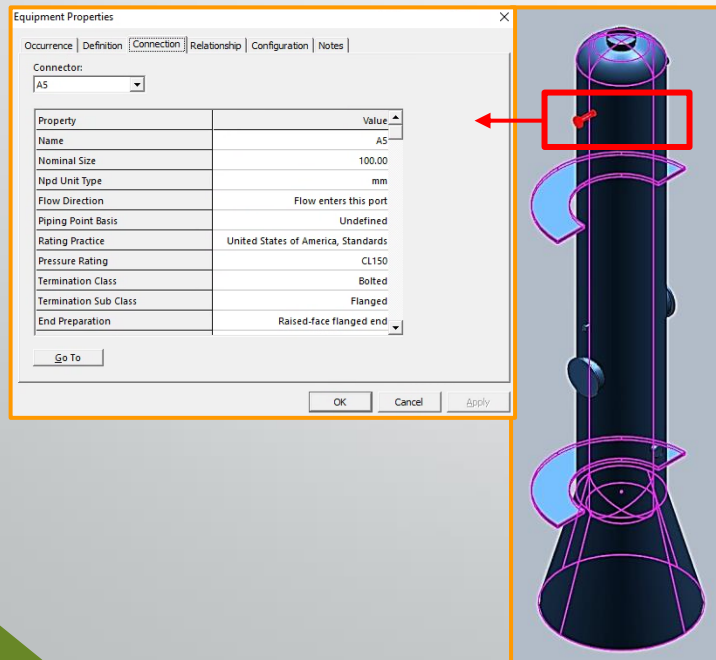
Developed Macro by Shinsei

➢ To provide immediate visualization and information display for convenient review, our team has developed a new macro that effectively addresses these challenges.

➢ Users can quickly view basic information of all objects at the same in the 3D model with simple step, and the result as below.

Structure Steel Information

Equipment Nozzle Information

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2 **Creating 3D Model**

ABOUT OUR ACHIEVEMENTS WITH SMART 3D

6 – Macro For Showing Relevant Information of Objects

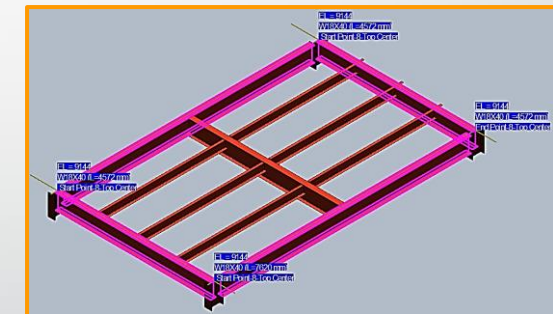**Looking for Information by Default S3D**

1. Select Occurrence Tab to view Name.
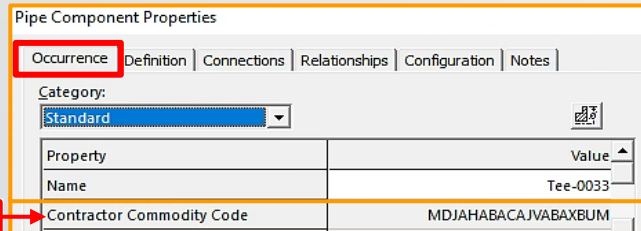
2. Select Definition Tab to view Contractor Commodity Code.
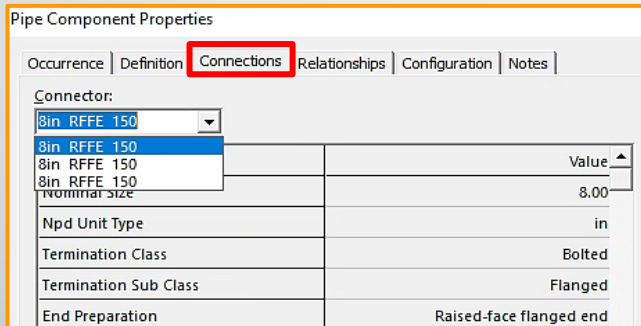
3. Select Connection Tab to view size, unit, connection type, pressure rating,…

❑ In the properties, the object's information is divided into multiple tabs, making quick access difficult.

❑ Additionally, the scattered distribution of information across different tabs can confuse users.

Developed Macro by Shinsei

➢ With our new macro, users can quickly and easily review all information related to the object on a single display table.

➢ Here is an example illustration.

Property	Value
Owner	0001388D-0000-0000-9A09-98217F492C04
ID	00013885-0000-0000-780a-98217F492c04
Name	Tee-0033
ContractorCommodityCode	MDJAHABACAJVABAXBUM
ShortMaterialDescription	Flanged Tee, CL150, RFFE, ASME-B16,5, A...
EndPrep	Raised-face flanged end
PressureRating	150
HeaderSize	8
BranchSize	8
UnitType	in

② Creating 3D Model

ABOUT OUR ACHIEVEMENTS WITH SMART 3D

7 – Macro For Creating Control Valve Positioner

Creating Positioner by Default S3D

❑ When creating control valve positioners, the process typically involves manually creating shapes with specified dimensions according to the design equipment.

❑ Then moving them to the correct position on the valve and adjusting their orientation.

❑ This method is time-consuming and labor-intensive, and it can lead to errors if the positions are not accurately controlled.

```
        Start
          │
          ▼
 Create Design Equipment
          │
          ▼
    Create shapes
          │
          ▼
   Move to position
          │
          ▼
         End
```
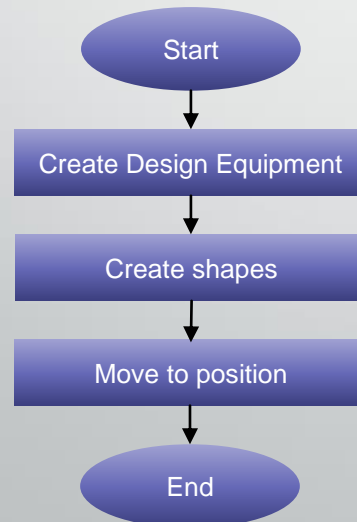
Developed Macro by Shinsei

➢ We have developed a macro that allows for automatic modeling of control valve positioners with adjustable dimensions and positions, depending on whether the valve is vertical or horizontal.

➢ This method reduces complexity and saves time compared to the default approach.

Positioner created by our macro
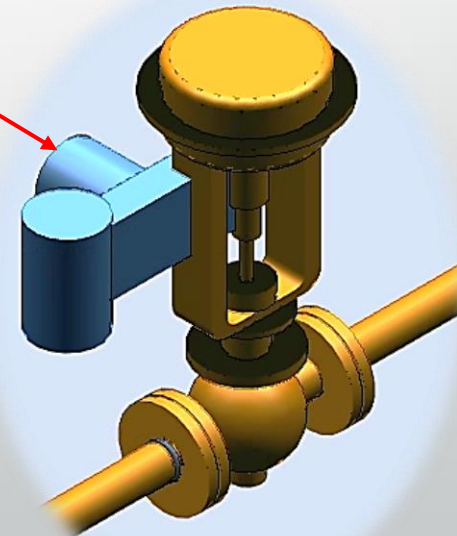
SYSTEM DEVELOPMENT

ABOUT OUR ACHIEVEMENTS WITH SMART 3D

8 – Macro For Converting Galaxy-Eye software to S3D

Original Piping Data in Galaxy-Eye

Developed Macro by Shinsei
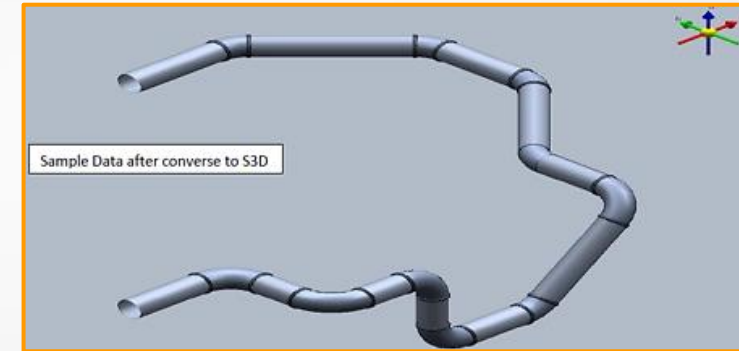
- ❑ Converting as-built piping models to S3D can be quite challenging.

- ❑ Standard S3D functions have limited capabilities for importing extended model data, often requiring additional software or paid add-ons.

- ❑ This makes importing as-built traces and converting piping models a time-consuming process.

- ➢ We have developed a macro that automatically converts piping models created with Galaxy-Eye into S3D piping models.

- ➢ This feature is incredibly convenient, enabling rapid modeling and significantly reducing operation time, while also preventing unnecessary errors.

3 **Generating 2D Drawings**

ABOUT HOW WE RESOLVE THE CHALLENGES

❖ Is it possible to automatically generate drawings under our company or customer rules?
❖ Can the information on the drawings be configured to match our standards?

Specific Problems

- Only the default functions don't provide all information for our drawings.
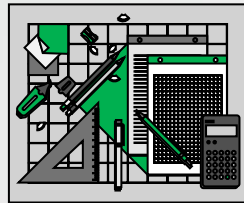
- To meet customer expectations in presenting drawings, numerous manual operations are required on SmartSketch.

- Minor changes to the model necessitate starting over with all manual operations in SmartSketch, leading to significant time loss & potential errors.
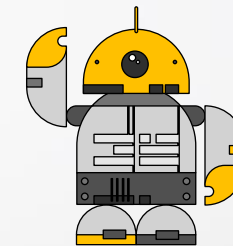
Solutions

- Develop macros to add necessary information to drawings automatically.

- Build tools to swiftly and accurately create dimensions, scale settings, labels, etc.

- All these new tools of ours streamline the drawing output process, saving time & effort while ensuring work efficiency.

③ Generating 2D Drawings

ABOUT OUR ACHIEVEMENTS WITH SMART 3D

To make the process of generating 2D drawings with all necessary information according to company standards more convenient and automated, our development team has created and is continuously improving tools and macros with new features such as:

1 – Adding piping support information for isometric drawings automatically.	2 – Modifying attributes of pipeline for isometric drawings quickly.	3 – Setting piping support material for support detail drawings easily.	4 – Changing all views scale in drawings quickly.
5 – Displaying piping support information on support detail drawings automatically.	6 – Creating grid symbols in support detail drawings automatically.	7 – Aligning the attributes of labels automatically.	

3 **Generating 2D Drawings**

ABOUT OUR ACHIEVEMENTS WITH SMART 3D

1 – Macro For Adding Piping Support Information

Default S3D Isometric Package Setting

❑ Since the relationship is missing or there is no function support, the isometric drawing still lacks the fitting name of the support.

❑ If added manually, the user must create a temporary design support at the fitting support position along the pipe, then rename it and assign the corresponding fitting name,...
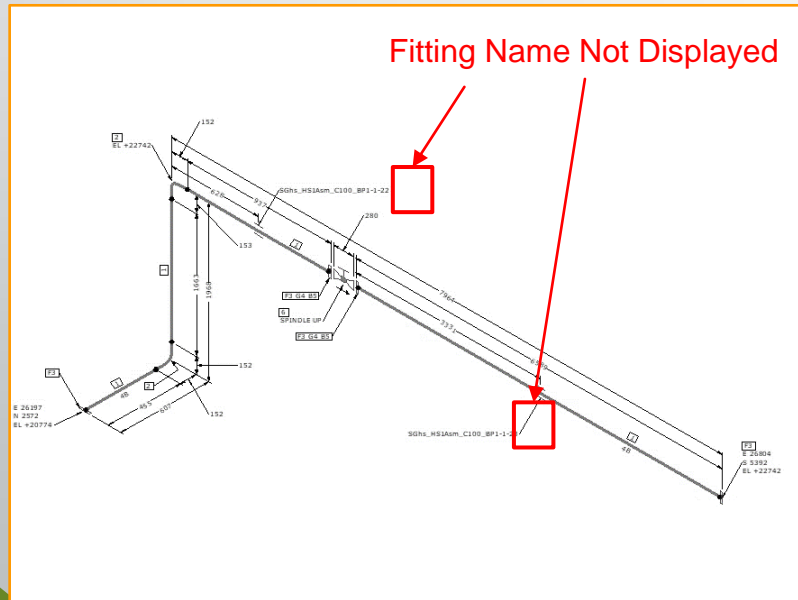
Developed Macro by Shinsei

➢ Our new macro can create and delete all support attachments on the pipeline, make checking and reporting much easier.

➢ Now, users can add fitting name of piping support automatically.
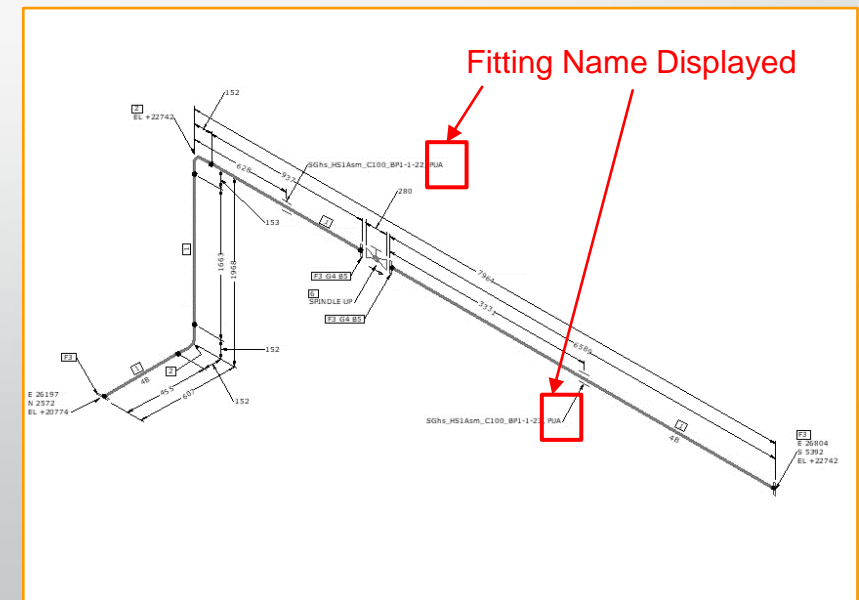
Fitting Name Not Displayed

Fitting Name Displayed

3 **Generating 2D Drawings**

ABOUT OUR ACHIEVEMENTS WITH SMART 3D

2 – Macro For Modifying Attributes of Pipeline

Modifying Attributes of Pipeline by Default S3D

❑ To change or add values to the pipeline attributes, users must go into the properties and edit each attribute individually, then apply the changes.

❑ When a project has many pipelines, this manual process can be time-consuming and prone to errors.

Manual Input
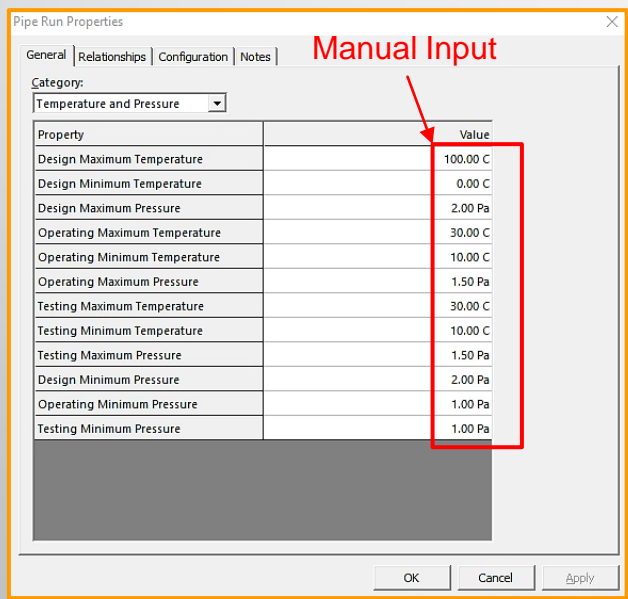
Developed Macro by Shinsei

➢ We have researched and developed a macro that can batch change all attributes of the pipeline according to the project requirements.
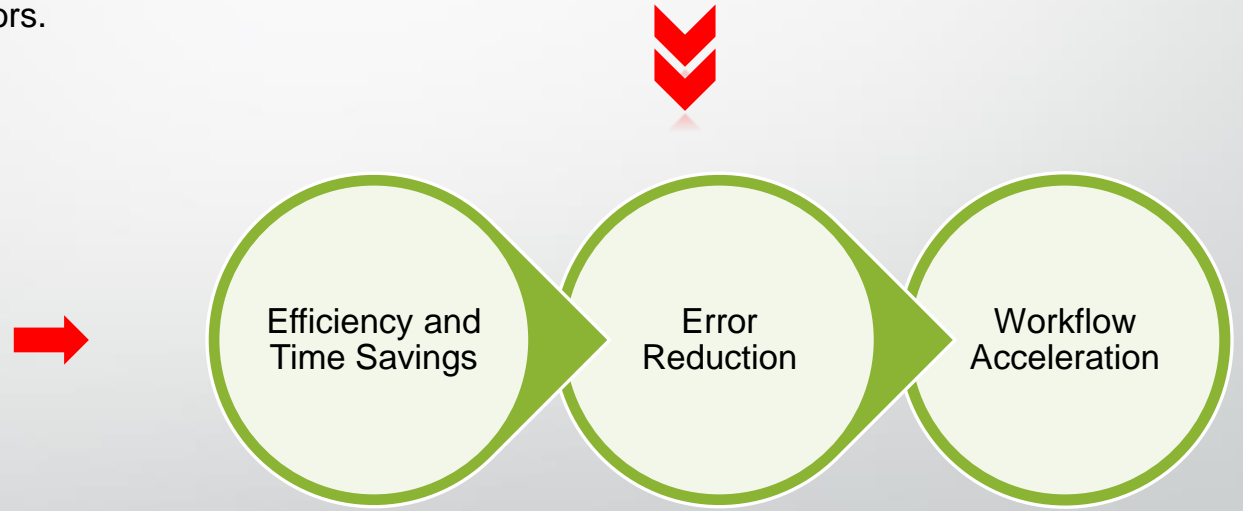
Efficiency and Time Savings

Error Reduction

Workflow Acceleration

③ Generating 2D Drawings

ABOUT OUR ACHIEVEMENTS WITH SMART 3D

3 – Macro For Setting Piping Support Material

Setting Support Material by Default S3D

Developed Macro by Shinsei

Manual Edit

An extremely effective tool
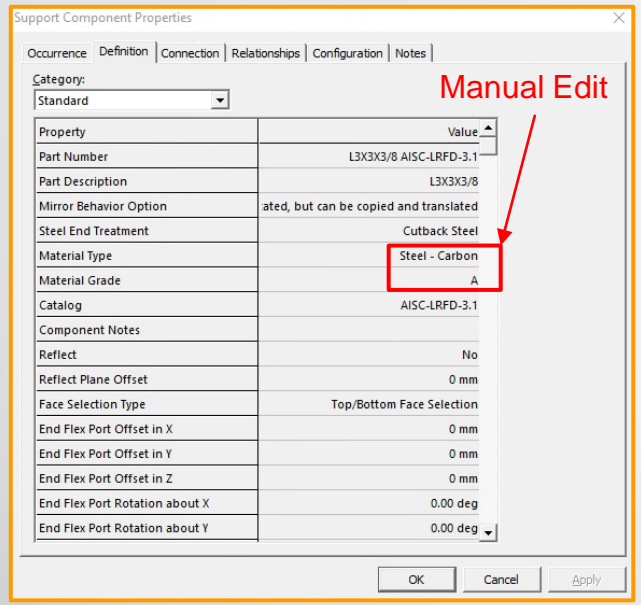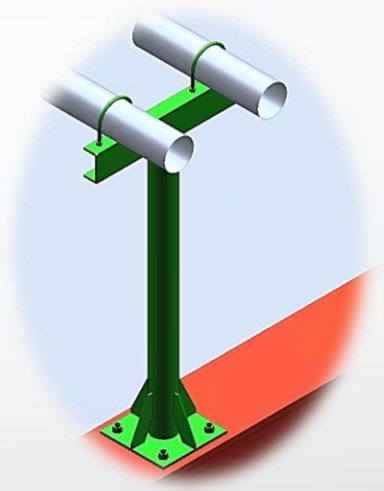
❑ In projects with numerous of piping supports, editing materials manually becomes a significant issue.

❑ This approach not only consumes a lot of time but also increases the likelihood of errors, which is unavoidable.

➢ We have created a new macro that quickly change all piping support material.
➢ Users can save time and boot work efficiency.

3 **Generating 2D Drawings**

ABOUT OUR ACHIEVEMENTS WITH SMART 3D

Setting Support Detail Drawings Package

Original Package by Default S3D
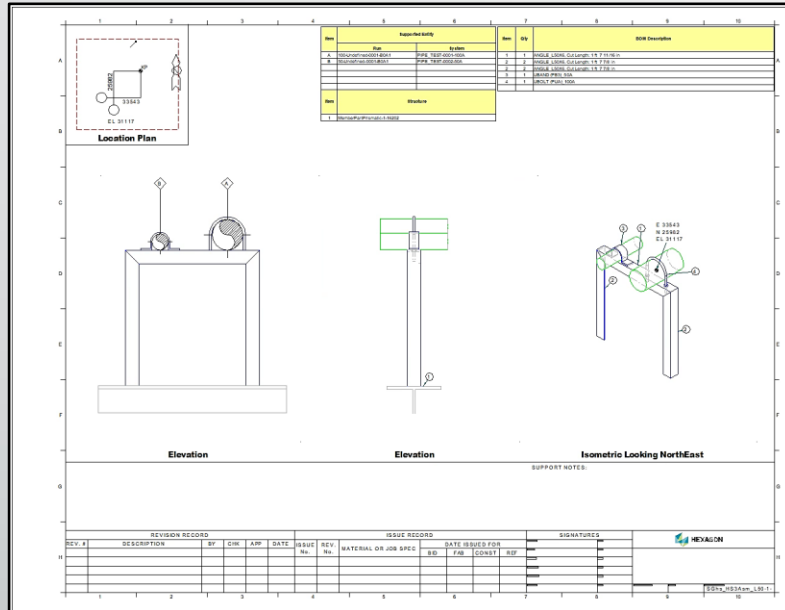
Customize Package by Shinsei
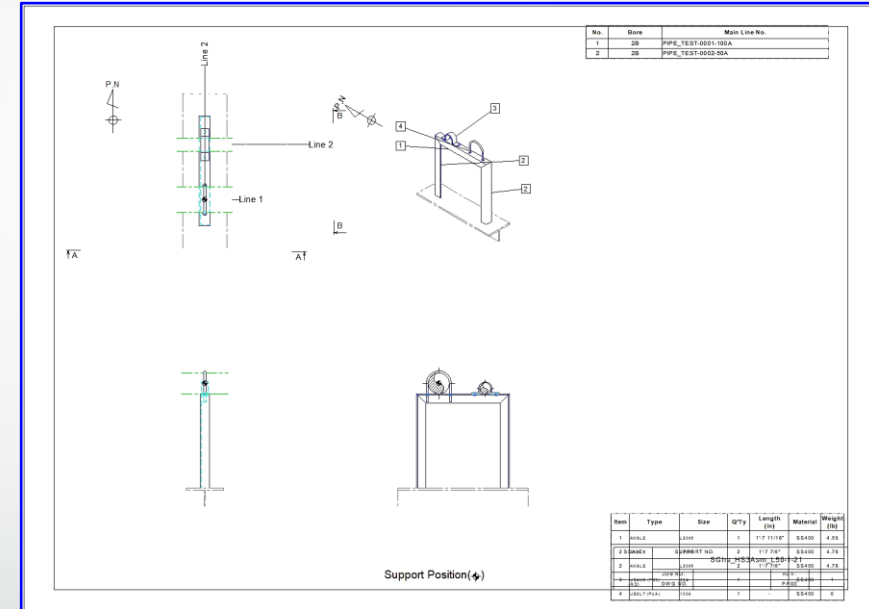
❑ The default setup for support detail drawings does not meet our company's requirements in terms of format, layout, and the information displayed on the drawings.

➢ Therefore, we have created a new setup guide tailored to our company's specific requirements and customer needs.

➢ Drawings generated using this new setup are displayed as shown above.

3 Generating 2D Drawings

ABOUT OUR ACHIEVEMENTS WITH SMART 3D

4 – Macro For Changing All Views Scale

Customize Package by Shinsei without Macro
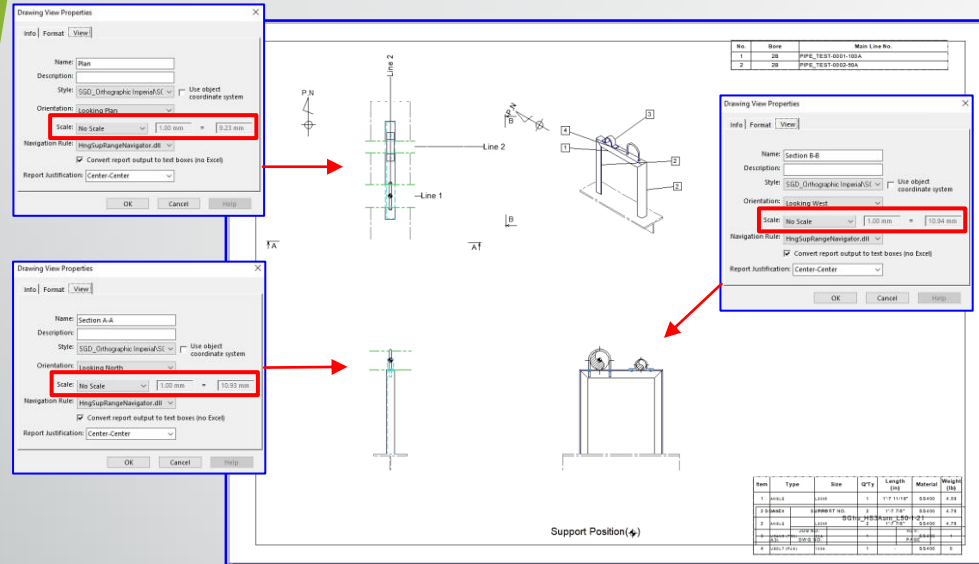
Customize Package by Shinsei using Macro
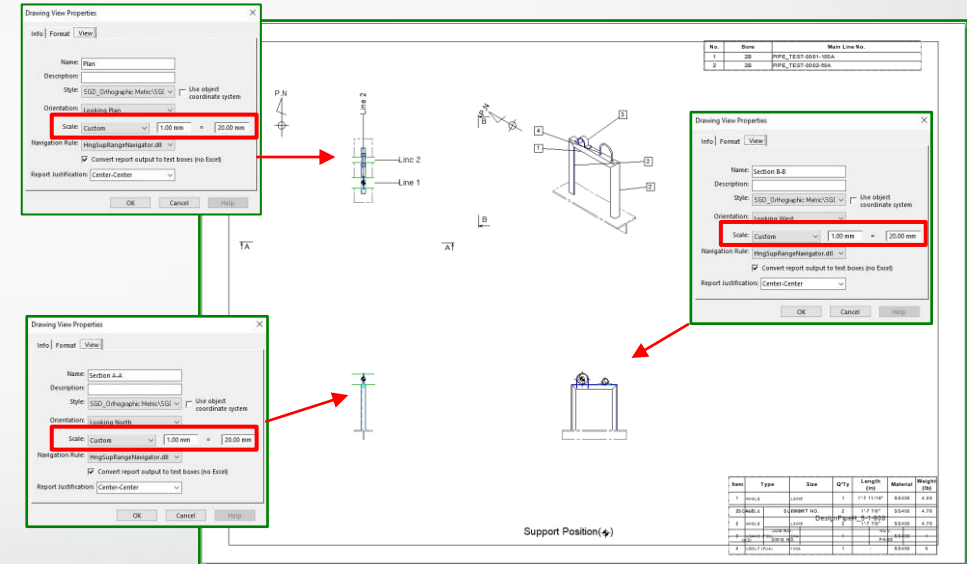
- ❑ After using the customized setup, the drawings meet the format and layout requirements, but the view scales, such as Plan View, Section A-A, and Section B-B are inconsistent.
- ❑ This requires users to manually adjust the scale properties for each view and then update the entire drawing.
- ❑ This process is time-consuming, and if there are even minor changes to the piping support on the model, all these steps must be repeated from the beginning.

- ➢ However, all these issues have been resolved with our new tool. As a result, all view scales are set to the same value and updated automatically.

- ➢ No matter how the design is modified, users only need to update the drawing once, and the pre-configured scale settings will be retained.

3 Generating 2D Drawings

5 – Macro For Displaying Piping Support Information

Customize Package by Shinsei without Macro

Customize Package by Shinsei using Macro

No dimensions, elevation.
Origin position is center of pipe.

Dimensions, elevation are displayed.
Origin position is top of steel.
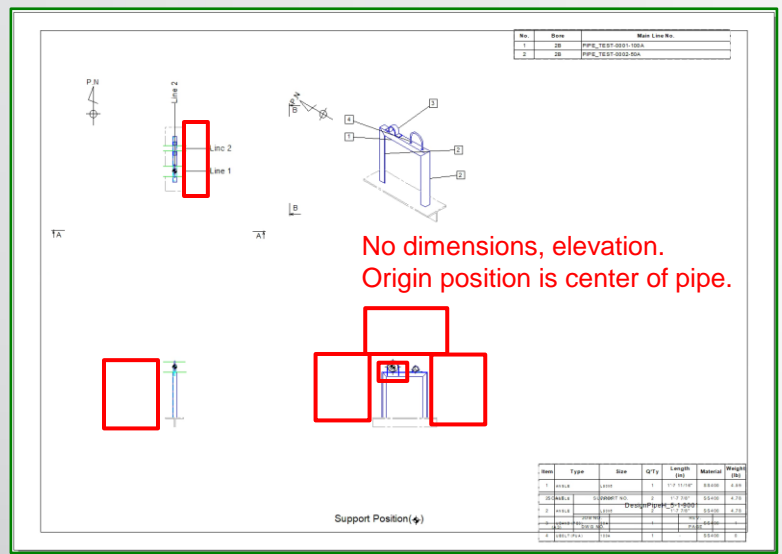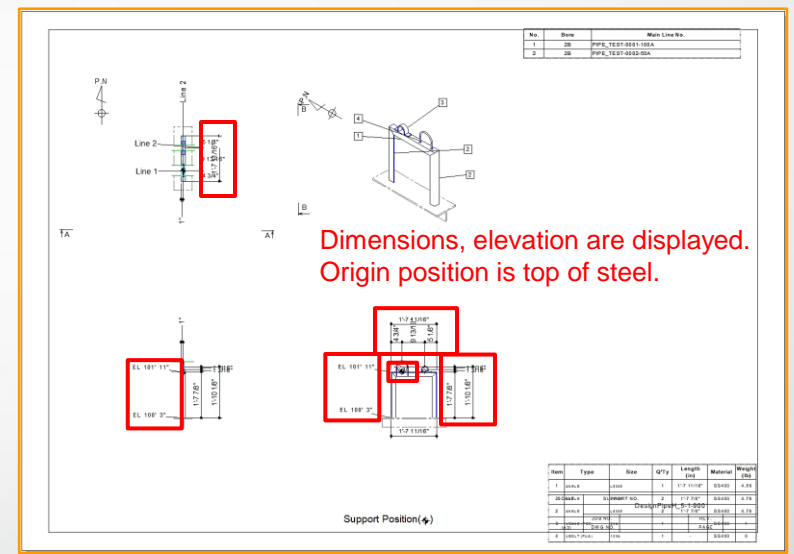
❑ However, the drawings still lack necessary information such as dimensions, specific elevations, and the desired origin position.

❑ Therefore, users must manually add various control points to the required object positions and adjust their properties accordingly.

❑ This process is prone to errors and requires moving the control points along with the objects if the piping support is relocated.

➢ All these manual tasks have been automated and optimized with our new macro, making the process more convenient and minimizing unnecessary errors.

➢ Users can easily create or remove control points as needed.

➢ As a result, the drawings accurately display desired information such as origin positions, dimensions, elevation.

③ Generating 2D Drawings

ABOUT OUR ACHIEVEMENTS WITH SMART 3D

6 – Macro For Creating Grid Symbols

Customize Package by Shinsei without Macro

Cannot create grid symbol at origin position.

Customize Package by Shinsei using Macro

Grid symbol at origin position.

❑ The default drawing setup does not allow us to create custom gridline symbols as per customer requirements.

❑ This forces us to use the software's predefined symbols, which may not meet our customers' expectations.

➢ Therefore, we have developed a tool that can automatically generate grid symbols according to the desired template.

➢ It also makes selecting and editing reference grids quicker and easier.

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③ Generating 2D Drawings

ABOUT OUR ACHIEVEMENTS WITH SMART 3D

7 – Macro For Aligning The Attributes of Labels

Customize Package by Shinsei without Macro

Customize Package by Shinsei using Macro

No title name for all views.
No align labels of elevation, table,...

Created title name.
Aligned labels, tables.
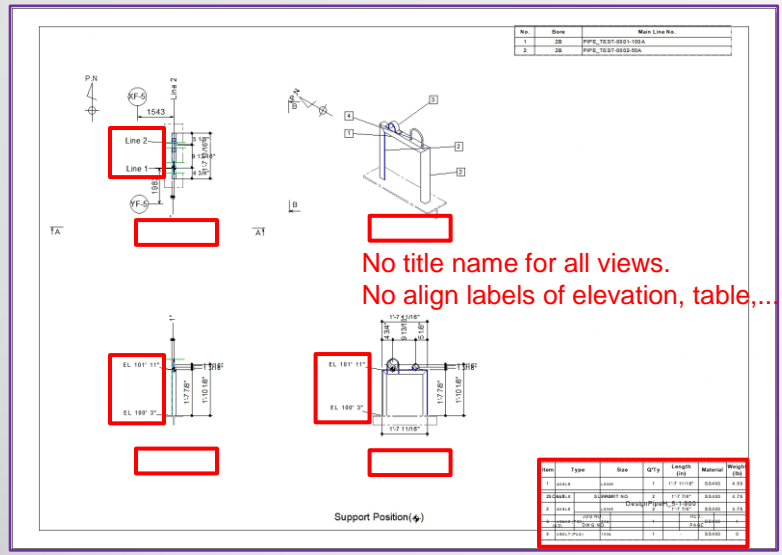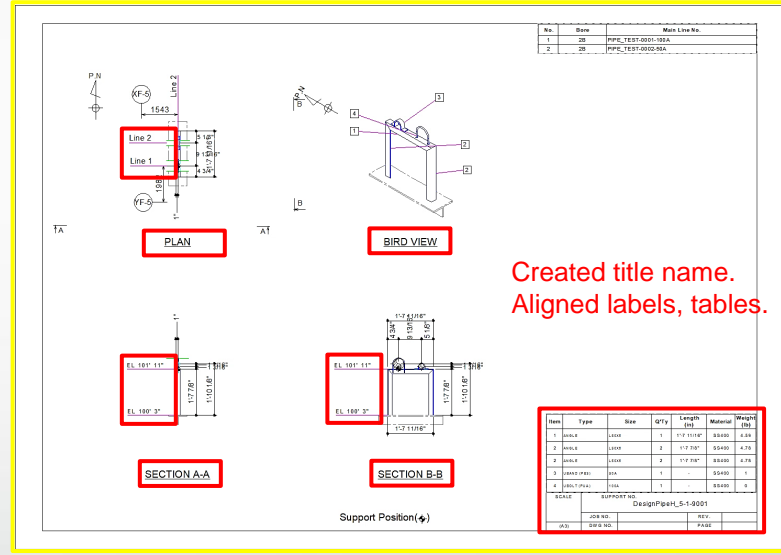
❑ Although the formatting and layout have been set up, the material information tables still need to be adjusted for proper placement and lack title names in all four views.

❑ Users are forced to manually correct and add these title name, which is very time-consuming.

❑ Additionally, any design changes and updates to the drawings will cause all previous adjustments to be lost.

➢ We have developed a macro that automatically adjusts the positions of the tables on the drawings and adds title names to all necessary views quickly and efficiently.

➢ Additionally, this macro can also generate centerlines for equipment in piping and support layout drawings.

SYSTEM DEVELOPMENT

ABOUT OUR ACHIEVEMENTS WITH SMART 3D

③ Generating 2D Drawings

Below is the completed Support Detail Drawing after using our macros. All specifications for formatting, layout, view scale, dimensions, elevations, origin, title names, etc., meet the required standards.
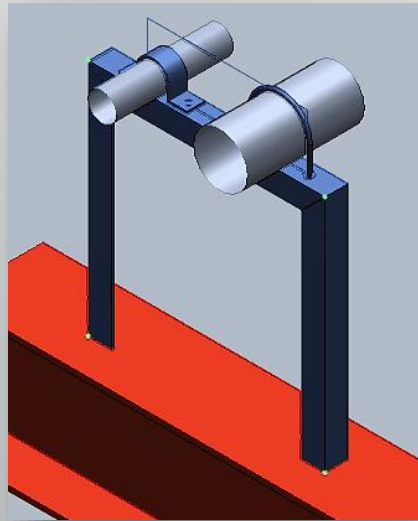
(3D Model)
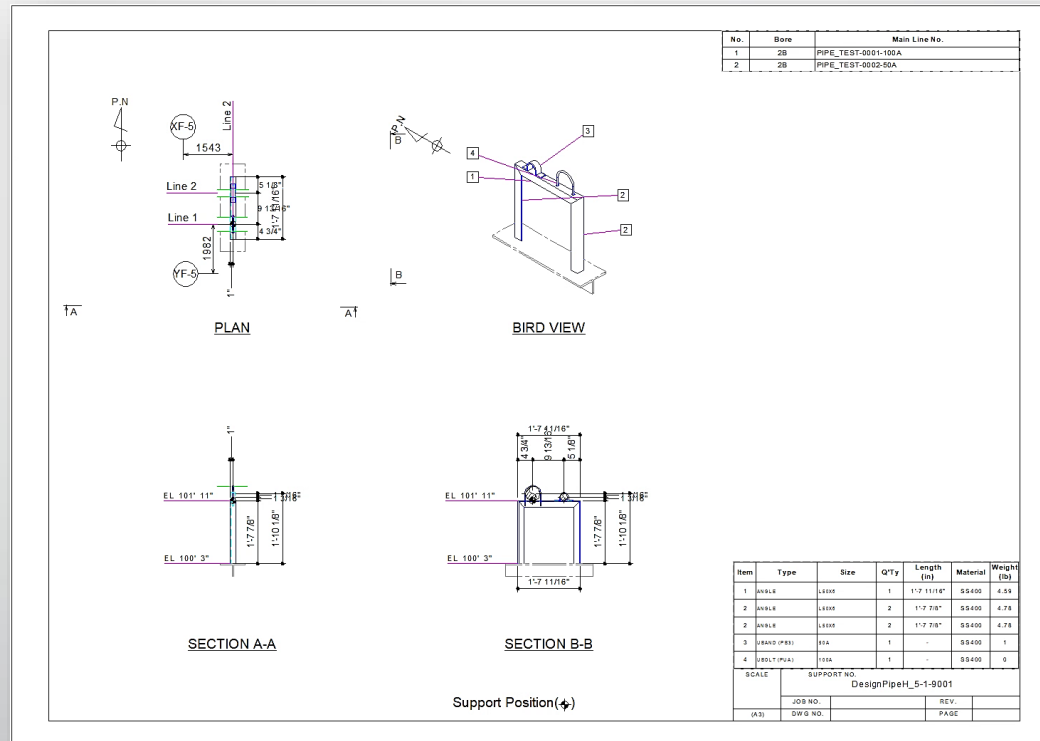
(2D Drawing)

4 **Generating Material list**

ABOUT HOW WE RESOLVE THE CHALLENGES

❖ Is it possible to generate material lists according to our company's requirements?

Specific Problems

Solutions

- The MTO report process is still quite complex, requiring many manual operations.

- Many necessary details are not reported as desired, requiring extensive edits.

- The interface is not user-friendly and difficult to understand.

- We strive to clearly understand the relationships and operations of MTO reporting to produce standard-compliant results.

- Good SQL query skills are required to retrieve additional missing information that the default S3D does not provide.

4 **Generating Material list**

ABOUT OUR ACHIEVEMENTS WITH SMART 3D

➤ We have created complete MTO reports that meet our company's standards, including:

Plant Name: **Date:**
User:

BOLT MTO REPORT

ITEM NUMBER	PIPE LINE	CATEGORY	SIZE	DESCRIPTION	MATERIAL	BOLT LENGTH	PIPING CLASS	TOTAL QUANTITY	REMARK
1	HW-755091MC-1-B4aC3	BOLTS	5/8 in	MACHINE BOLT AND NUT	SUS304/SUS316	55.00 mm	B4aC3	8	
2	VG-750031MG-1_1/2-B4aC3	BOLTS	5/8 in	MACHINE BOLT AND NUT	SUS304/SUS316	60.00 mm	B4aC3	8	
3	APoly-716161MG-1/2-B8jC70-CF30(危)	BOLTS	1/2 in	MACHINE BOLT AND NUT	SUS304/SUS316	50.00 mm	B8jC70(K)	16	
4	APoly-716162MG-1/2-B8jC70-CF30(危)	BOLTS	1/2 in	MACHINE BOLT AND NUT	SUS304/SUS316	50.00 mm	B8jC70(K)	16	
5	APoly-717161MG-1/2-B8jC70-CF30(危)	BOLTS	1/2 in	MACHINE BOLT AND NUT	SUS304/SUS316	50.00 mm	B8jC70(K)	16	
6	APoly-717162MG-1/2-B8jC70-CF30(危)	BOLTS	1/2 in	MAC					
7	APoly-718161MG-1/2-B8jC70-CF30(危)	BOLTS	1/2 in	MAC					
8	APoly-718162MG-1/2-B8jC70-CF30(危)	BOLTS	1/2 in	MAC					
9	APoly-719161MG-1/2-B8jC70-CF30(危)	BOLTS	1/2 in	MAC					
	APoly-719162MG-1/2-B8jC70-CF30(危)	BOLTS	1/2 in	MAC					

① Bolt MTO Report

② Piping Material Report

③ Support Checking Report

Plant Name: **Date:**
User:

PIPING MATERIAL REPORT

ITEM NUMBER	PIPE LINE	CATEGORY	SIZE	ITEM CODE	DESCRIPTION	MATERIAL	PIPING CLASS	TOTAL QUANTITY	TOTAL WEIGHT (kg)	REMARK
1	HW-755091MC-1-B4aC3	PIPE	1 in	/JIPA000/SCH20S-BE	PIPE BE SCH.20S	SUS304, JIS G 3459	B4aC3	4503.7	0.00	
2	HW-755091MC-1-B4aC3	FITTING	1 in	/JIEA002/SCH20S	ELBOW 90DEG. LR SCH.20S BW	SUS304, JIS G 3459	B4aC3	4	0.00	
3	HW-755091MC-1-B4aC3	FLANGE	1 in	/JIFPJGB/D	FLANGE SO JIS10K RF	Undefined	B4aC3	3	0.00	
4	HW-755091MC-1-B4aC3	VALVES	1 in	/10UTBD_10K_RF/D	BALL VALVE JIS10K RF	Undefined	B4aC3	1	0.00	
5	HW-755091MC-1-B4aC3	GASKETS	1 in	/JIGBJG2.8t/D	GASKET FLAT					
6	VG-750031MG-1_1/2-B4aC3	PIPE	1 1/2 in	/JIPA000/SCH20S-BE	PIPE BE SCH.2					
7	VG-750031MG-1_1/2-B4aC3	FITTING	1 1/2 in	/JIEA002/SCH20S	ELBOW 90DEG					
8	VG-750031MG-1_1/2-B4aC3	FLANGE	1 1/2 in	/JIFPJGB/D	FLANGE SO JIS					
9	VG-750031MG-1_1/2-B4aC3	GASKETS	1 1/2 in	/JIGBJG2.8t/D	GASKET FLAT					
	/WSO-750181MC-1/2-B4aC3-E(危)	PIPE	1/2 in	/JIPA000/SCH20S-BE	PIPE BE SCH.2					

Plant Name: **Date:**
User:

SUPPORT CHECKING REPORT

SUPPORT NAME	DESCRIPTION	Q'Ty	LENGTH (mm)	MATERIAL	WEIGHT (kg)	ZONE
/PS4216MG-004	L50X50X6	1	530	SS400	0	PS4216MG
/PS4216MG-004	L50X50X6	2	881	SS400	0	PS4216MG
/PS4216MG-006	100A PipeBand (PB2)	1		SS400	0	PS4216MG
/PS4216MG-006	L50X50X6	1	400	SS400	0	PS4216MG
/PS4216MG-006	L50X50X6	1	157	SS400	0	PS4216MG
/PS4216MG-006	L50X50X6	1	510	SS400	0	PS4216MG
/PS4226MG-011	50A PipeBand (PB2)	2		SS400	0	PS4226MG
/PS4226MG-011	L65X65X6	1	505	SS400	0	PS4226MG
/PS4226MG-011	L65X65X6	1	250	SS400	0	PS4226MG

ABOUT OUR ACHIEVEMENTS WITH SMART 3D

Here are a of summary the S3D Macros currently in use for company projects.

Using Macros results in high-quality products and exceptional performance, significantly reducing time & minimizing errors due to manual operations.

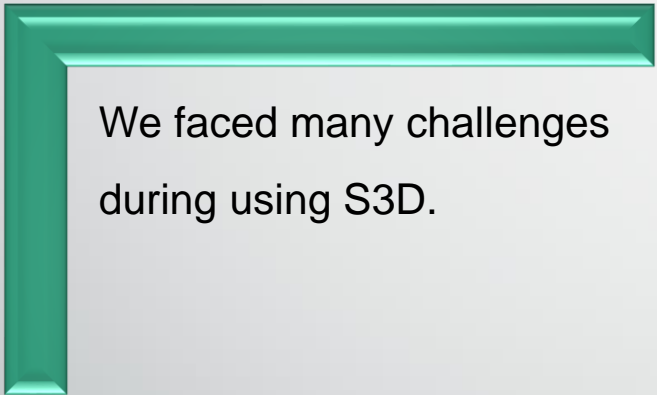| Scope	No.	Functions	Efficiency (Time Reduction)
Piping Catalog Macro	1	Create Catalog, Spec & Insulation for piping simply.	87.5%
Support Catalog Macro	2	Input support shape follow to SG standard easily.	66.67%
	3	Create dummy/trunnion at specific positions quickly.	83.33%
Modelling Macro	4	Rename all PipeRun according to the project's rules.	95.2%
	5	Adjust pipe elevations based on BOP/COP automatically.	83.33%
	6	Quickly display information for objects in S3D model.	Tag Display Possible
	7	Show relevant information for objects in S3D model.	91.7%
	8	Create positioner for control valve rapidly.	90%
Isometric Drawings Macro	9	Create design supports to display project-specific information as required for iso drawing automatically.	97.6%
	10	Modify the attribute of desired Pipeline at the same time.	98.6%
Support Detail Drawings/ Piping Plan Drawing/ Support Plan Drawings Macro	11	Modify the material of support components quickly.	95%
	12	Automatically create control points to display information on the support detail drawing.	93.33%
	13	Change the scale of views in the support detail drawing easily.	90%
	14	Automatically create grid symbols according to SG standard.	96.67%
	15	Automatically align the attributes of labels (Elevation, Title, Centerline of Equipment), change color of supporting steel.	90%
Conversion Macro	16	Convert piping models created in Galaxy Eye to S3D.	90%

Content

Shinsei Group Overview

Business Activities

System Development
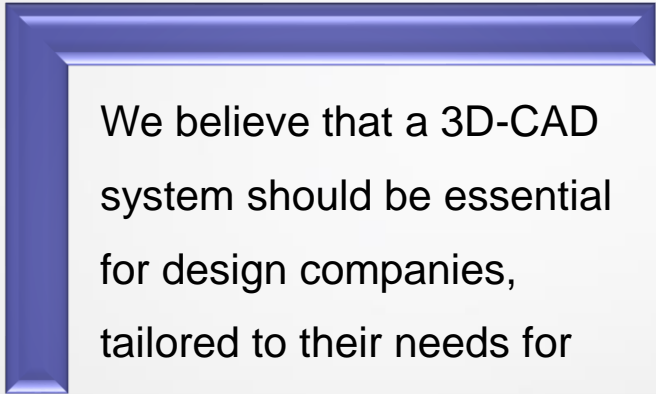
Future Business Strategy

FUTURE BUSINESS STRATEGY
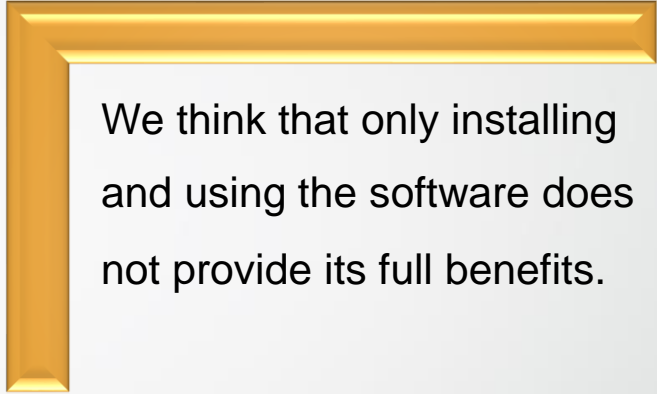
We faced many challenges during using S3D.

We believe that a 3D-CAD system should be essential for design companies, tailored to their needs for profit optimization.

We think that only installing and using the software does not provide its full benefits.

As a design company, not a software manufacturer, our goal is to provide valuable solutions that meet the specific needs of design firms.

FUTURE BUSINESS STRATEGY

① Building Catalog
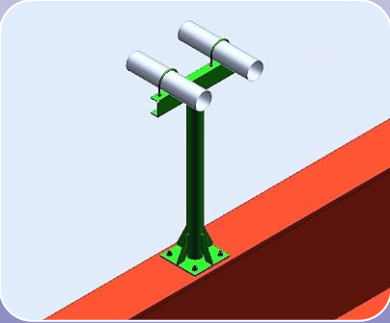
Support Assembly

- Provide Support Assembly according to Customer company Standards.
- Update Macro for creating piping support with best version for all S3D users.
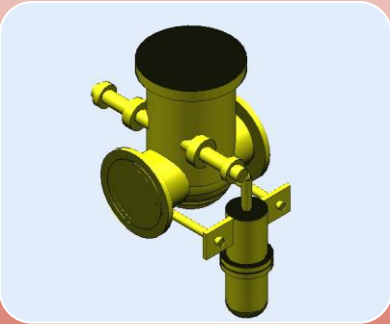
Piping Catalog/Spec

- Provide Catalog/Spec according to JIS Standards and other Standards upon request.
- Update Macro for creating Catalog & Specification version for all S3D users.

➡ Provide support Services for building Catalog & Database for all S3D users around the world.

② **Creating 3D Model**

Develop specified Macro according to customer requirements.

Provide solutions to support S3D model creation.

Provide training & operational support for S3D modeling.

3 **Generating 2D Drawings/MTO**

- Provide drawings package setting and support setup for all 3D users.

- Output 2D drawings/MTO follow customer standard.

- Customize & develop Macros according to specific customer requirements.

FUTURE BUSINESS STRATEGY

Training Services

- We also provide practical support for new and existing S3D users, separate from HEXAGON's training.
- It offers practical and immediate assistance to operators and managers.
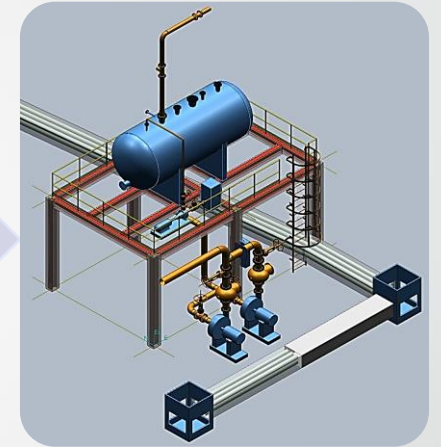
Consulting Services

- We can provide effective support for design work carried out by design companies and for their designers.

FUTURE BUSINESS STRATEGY

Below is a list of Training Services we provide to all S3D users.

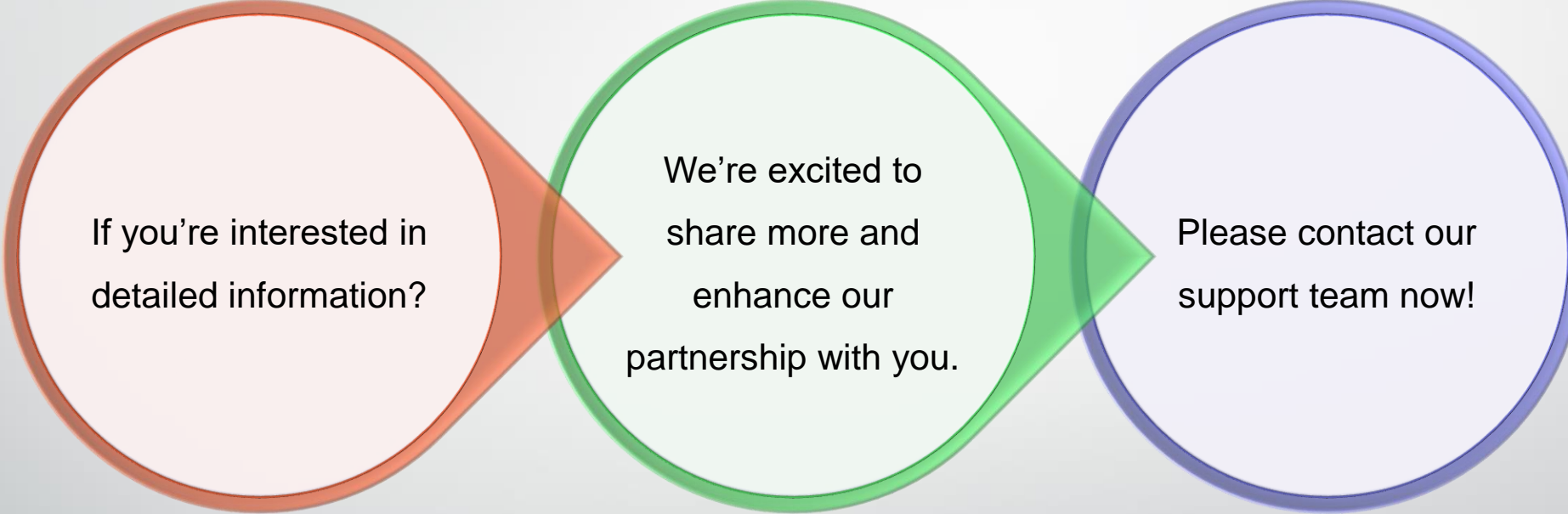| No.	Scope	Service Name
1	S3D Admin	S3D Project Setup
2	S3DCatalogue	S3D Catalogue & Specification Creation
3	S3DModel Input	S3D Common Command
4		S3D Equipment Operation
5		S3D Piping Operation
6		S3D Structure Operation
7		S3D Gridline Operation
8		S3D Civil Operation
9		S3D Support Operation
10		S3D Space Management Operation
11	SmartSketch Output	S3D ISO Extraction
12		S3D Support Detail Drawing
13		S3D Piping plan & Support plan drawing

The detailed content is shown below.

NO.	PRODUCT NAME	MAIN CATEGORY	SUB CATEGORY
1	1	S3D Setup and Administration	
1.1	TRPS-001	Setup New Project	- Connect to SQL server. - Create new Site database, Catalog and Model database.
1.2		Project Management	- Create a backup of the Site, Catalog and Model from Project Management. - Restore Model database (Option 1, 2, 3).
1.3		Project Creation	- Creation System Hierarchy by manual. - Creation of System Hierarchy by import Excel spreadsheet.
1.4		Isometric Drawing Setting	- Create backing sheet, Option file, Package, Export and Import option. - Isogen setting: Dimension, Flow Arrow, Bend Radius, Coordinate at Turn, Support Display, Grid reference, Drawing area, Material list, Isogen Atext, Note,
1.5		Piping Plan Drawing Configuration	- Create Border and Layout Template. - Setting View Style and Filter.
1.6		Support Detail Drawing Configuration	- Create and Edit Template. - Place and Setting View (Main view and Detail view).
1.7		Report Custommization	- Create the Report using default Template of S3D. - Create the Report using empty Template and Edit.
2	2	Catalogue & Specifications	
2.1	TRPS-002	Overview	- Catalogue Database Structure, Catalogue hierarchy, Code list, Bulkload excel data, Symbol, Project Rule...
2.2		Piping Component Creation	- Creating the Catalogue hierarchy, Creating a Componen: Tee, Elbow, Flange...
2.3		Valve and Instrument Creation	- Understand about catalog of Valve and Instrument (Body, Operator, Actuator...). - Parameter, TagNumber, EnginerringTag.
2.4		Piping Specifications	- Creating a Pipe Specification, creating a tee using branch table - Bolt and Gasket Selection Filter
2.5		Insulation Specification	- Insulation specification, Insulation material, Insulation thickness - Insulation parameter: Temperatupe, pressure...
2.6		Nozzle Specification	- Creating a Nozzle Specification, Modify a Nozzle Specification
2.7		Equipment Reference	- Equipment catalog Database and Hierarchy - Create Equipment and copy to Catalog as Template.
2.8		Structure Reference	- Create a Project Reference Standrad. - Create Standard Structure Member: H, C, L type.
2.9		Support Reference	- Overview about Standard Support and Design Support. - Under stand about Catalog Hierarchy and Port of Support Part

FUTURE BUSINESS STRATEGY

The detailed content is shown below.

NO.	PRODUCT NAME	MAIN CATEGORY	SUB CATEGORY
3	3	Modeling Task	
3.1	TRPS-003	Common Command	- Define workspace, Create Filter, Task, View, Select Object, PinPoint, SmartSketch Points, Measure, S3D Option, Clip View. - Copy, Move, Rotate Object.
3.5	TRPS-004	Equipment Modeling	- Equipment Overview and Hierarchy. - Input Design Equipment, Equipment Component, Shapes.
3.6	TRPS-005	Piping Modeling	- Piping Hierarchy, Ppiping system, Pipeline, Pipe Run, Feature, Part, Connection. - Routing pipe, Insert Flange, Valve, Split point.
3.3	TRPS-006	Structure Modeling	- Structure hierarchy, Memner System, Member Part, Connection, Cadinal Point. - Input Structure (Column, Beam, Bracing…).
3.2	TRPS-007	Grid Line	- Place Grid/Coordinate System. - Edit Grid Plan, Extend Grid Line.
3.4	TRPS-008	Civil Modeling	- Civil Hierarchy. - Input and Adjust Floor, Wall, Ceiling.
3.7	TRPS-009	Support modeling	- Support Overview and hierarchy. Standard and Design Support. - Place Support by Point, By Structure, By Reference.
3.8	TRPS-010	Space management	- Understand about Space Management: For what, Hierarchy, Properties. - Place Space by 2 Points, 4 Points.
4	4	Drawing Task	
4.1	TRPS-011	Isometric drawing	- Check connection, Todolist - Create Drawing by Query, Setup Filter and Package.
4.2	TRPS-012	Support Detail Drawing	- Create Drawing by Query, Setup Filter and Package. - Create Support Detail Drawing and Update.
4.3	TRPS-013	Piping Plan and Support Plan Drawing	- Create Composed Drawing, Create Drawing. - Place View and link to Space Management.

FUTURE BUSINESS STRATEGY

If you're interested in detailed information?

We're excited to share more and enhance our partnership with you.

Please contact our support team now!

THANK YOU VERY MUCH

Shinsei Group

Shinseigiken Engineering Co., Ltd

http://shinseigiken.co.jp

ShinseiVietnam Engineering Co., Ltd

http://shinseivietnam.com.vn