HEXAGON

Case Study

Shinseigiken Engineering, Japan

Key Facts

Company: Shinseigiken Engineering Co. Ltd. (Shinseigiken Engineering)

Website: www.shinseigiken.co.jp

Description: Founded in 1987, Shinseigiken Engineering is a leading company that specializes in plant engineering. The company provides comprehensive engineering services covering the entire plant life cycle, from planning to detailed engineering design and renewal engineering for nuclear power plants and chemical plants.

Industry: Plant Engineering

Country: Japan

Products Used:

- Intergraph Smart® 3D

Shinseigiken Engineering Digitalizes 3D Models with Hexagon Solutions to Deliver an Integrated Engineering Environment

Shinseigiken Engineering was the first company in the industry to lead the development of the 3D design for industrial facilities with more than two decades of engineering design experience and has since achieved many milestones. Chemical plant projects that are built-in harsh outdoor environments pay high importance on 3D models of the facilities, where on average about 70 design engineers use 3D design tools for piping isometric drawings on a total annual pipe length of between 130,000 to 150,000 meters The company's goal is to build a robust IT ecosystem to stay ahead of the competition and its expanded business to support small to large engineering projects in the region.

Increased project delivery efficiency and improved engineering data accuracy

Mr. Fujii, Managing Director at Shinseigiken Engineering, shares his insights on staying ahead of the competition with a robust 3D design software and about the decision to move from AVEVA™ PDMS which they have been using for many years to Intergraph Smart® 3D.

“We have been working on 3D engineering design for more than 20 years, however, when we thought about our medium to long term vision for the future, we were confronted with the fact that we would not be able to be competitive if we only used the functions of the existing 3D design software we had been using. We felt that we needed to rethink the way we were going things including the functionality of our 3D design software to further improve work efficiency, overall productivity and reduce costs to stay competitive.”

Transitioning from old to new; how did it all begin?

Shinseigiken Engineering is working towards enabling seamless interoperability with legacy systems, databases across multiple project sizes and partners. Their previous 2D engineering drawings were managed on a file-by-file basis and were not flexible enough for multiple users to access at the same time.

A comparison and demonstration of Smart 3D with existing systems were carried out to identify gaps for improvements. Its findings showed similarities in the functionality and features of Smart 3D to their existing 3D system, with the advantage of Smart 3D being cost-efficient and easy to use.

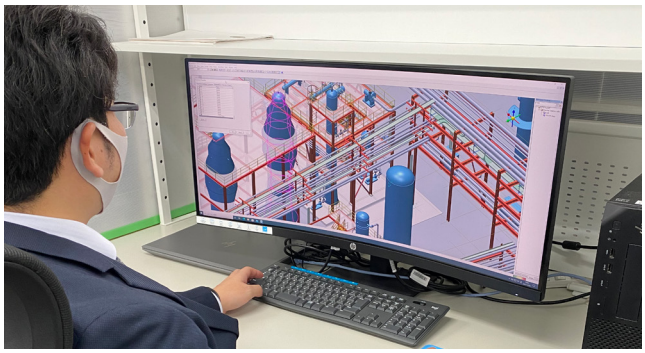
Additional benefits include a 'To Do List' dialog box displaying issues or inconsistencies that need to be resolved in the 3D model. This feature enables engineers to keep track of design changes and historical engineering data that needs revisiting later in the design process like interference routing reviews that were not available in their previous engineering design system. Shinseigiken Engineering's engineering team use to have tens of thousands of interferences late in the design process and had to verify the data to see which modules needed corrections. Smart 3D will enable early detection of problems to the 3D model as data is entered into the system without having to wait until the drawings are fully completed.

Smart 3D interactively reviews and analyses large and complex 3D models, proactively prompting engineers to verify engineering data uploaded into the system. The system also manages changes from multiple stakeholders who are concurrently working on the same project drawing that matches accurately to the physical 3D model of the plant. Therefore, elimination re-work and duplication of engineering data.

Shinseigiken Engineering's key focus is on piping design, however important elements like the structure, civil engineering equipment, and facilities are entered into the overall 3D model to provide a total view of the plant. The piping support data is then entered into the system where the importance of the 'To Do List' function is significant as it provides a true view and detailed brief of the actual piping design work.

Looking to the future

Shinseigiken Engineering plans to continue expanding its use of Smart 3D in an integrated engineering environment, continuously working together with its engineers and Hexagon to improve existing features and enrich the experience of Smart 3D. Shinseigiken Engineering decided to move to Smart 3D because we are confident that we can build such a relationship.



We decided to move to Smart 3D because we knew that Hexagon would understand and work with us and that we would be able to grow and collaborate with them. As a result, we have seen significant cost benefits."

Mr. Hisashi Fujii
Managing Director, Shinseigiken Engineering

About Hexagon

Hexagon is a global leader in digital reality solutions, combining sensor, software and autonomous technologies. We are putting data to work to boost efficiency, productivity, quality and safety across industrial, manufacturing, infrastructure, public sector, and mobility applications.

Hexagon's PPM division empowers its clients to transform unstructured information into a smart digital asset to visualize, build, and manage structures and facilities of all complexities, ensuring safe and efficient operation throughout the entire lifecycle.

Hexagon (Nasdaq Stockholm: HEXA B) has approximately 22,000 employees in 50 countries and net sales of approximately 4.3bn EUR. Learn more at hexagon.com and follow us @HexagonAB.