



FACTS AT A GLANCE

Company: Jecc Torisha

Website: www.jeccotorisha.co.jp

Description: Jecc Torisha was founded in 1997. The company's line of business includes the design, manufacture, sale, and maintenance of scientific equipment, high-performance jacketed piping, cryogenic apparatus, high-pressure gas equipment, vacuum apparatus, and related goods.

Industry: Manufacturing

Country: Japan

PRODUCTS USED

- CADWorx® Plant Professional
- CAESAR II®

KEY BENEFITS

- Significant reduction of transcription errors
- Bi-directional links between CADWorx Plant Professional and CAESAR II allow design information to be shared without data loss
- Ability to customize the software to the specific needs of vacuum jacketed piping design
- CAESAR II support for Japanese seismic code
- Minimal time taken to implement the solution and train staff

JECC TORISHA MINIMIZES MANUAL ERRORS WITH INTERGRAPH® CADWORX & ANALYSIS SOLUTIONS

CADWorx® Plant Professional and CAESAR II® combine to deliver results for scientific equipment manufacturer

BACKGROUND

Japan's Jecc Torisha Co. Ltd. (Jecc Torisha) was established in April 1997 by the merger of Torisha Co., Ltd. and Jecc Co., Ltd. The aim of the merger was to pursue advanced, diversified, and compound technologies, with a focus on high vacuum and cryogenic related technologies, by harnessing the strengths of each company. Today, Jecc Torisha's line of business includes the design, manufacture, sale, and maintenance of scientific equipment, high-performance jacketed piping, cryogenic apparatus, high-pressure gas equipment, vacuum apparatus, and related goods.

The company's Vacuum Jacketed Piping Engineering Division is tasked with the job of designing vacuum jacketed pipe (VJP) systems, the preferred solution for the safe, reliable, and cost-effective transfer of cryogenic liquids. VJP systems are specifically designed to transfer cryogenics with the minimum amount of heat leak.

THE CHALLENGE

The main function of the division is to design jacketed piping systems with adiabatic insulation by vacuum, which is fabricated by a shop and assembled as a unit.

The drawings and pipe spools are produced unit by unit, and the spools are then joined by bayonet connections to create the overall system. A unit drawing is also prepared, including a large number of parts that are limited in type. These parts are included in a Bill of Materials so they can be easily incorporated into a separate drawing, as required.

Previously, the combination of AutoPipe and AutoCAD LT was used to handle this process. However, Jecc Torisha's designers were interested in investigating other solutions on the market, particularly those that would reduce the time and money spent on the following tasks:

- Material take-off for piping components
- Production of cut pipe length lists
- Generation of design drawings

Another requirement of the new system was to minimize errors when creating the various lists required for procurement and construction, such as Bills of Materials and work packages. These lists were created manually using the old system,

leaving significant margin for human error and mistakes. This, in turn, can have a negative impact on project costs and schedule downstream.

THE SOLUTION

The designers in Jecc Torisha's Vacuum Jacketed Piping Engineering Division investigated products offered by Intergraph® CADWorx & Analysis Solutions, which are specifically designed to suit small-to-medium projects.

"Intergraph's solutions are well-regarded in the industry, and also came highly recommended by Jecc Torisha employees who were already familiar with the company," said the manager of Jecc Torisha's Vacuum Jacketed Piping Engineering Division, Fumio Teramura.

The two products selected for the task of designing VJP systems going forward were CADWorx® Plant Professional, a leading AutoCAD®-based 3D software series for small-to-medium project design; and CAESAR II®, the world's most widely used pipe flexibility and stress analysis software.

The key factors that helped Jecc Torisha to make the decision to purchase these solutions included:

- Automated creation of deliverables such as Bills of Materials, therefore reducing human error
- Bi-directional links between CADWorx Plant Professional and CAESAR II, allowing design information to be shared without data loss
- Ability to customize CADWorx Plant Professional to the specific requirements of VJP design
- Support for Japanese seismic code in CAESAR II

THE RESULTS

So far, Jecc Torisha has been impressed by the performance of CADWorx Plant Professional and CAESAR II in designing VJP systems for its clients.

"We have already noticed a significant reduction in the number of errors when producing project deliverables," said Fumio Teramura. "Additionally, the system was fully implemented in under two months, and our people were trained in just one week. This allowed us a smooth transition to the new tools and minimal disruption to active projects."

THE FUTURE

After the successful implementation of Intergraph's solutions in the Vacuum Jacketed Piping Engineering Division, Jecc Torisha is considering further deployment across other divisions within the company.

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Vacuum Jacketed Piping (Liquid/Gas Separator)

ABOUT INTERGRAPH

Soon to be known as Hexagon Process, Power & Marine, Intergraph Process, Power & Marine is the leading global provider of engineering software for the design, construction and operation of plants, ships and offshore facilities.

Process, Power & Marine is part of Hexagon (Nasdaq Stockholm: HEXA B; hexagon.com), a leading global provider of information technologies that drive quality and productivity improvements across geospatial and industrial enterprise applications.

