



### FACTS AT A GLANCE

**Company:** Mayekawa Manufacturing Company

**Website:** [www.mayekawa.com](http://www.mayekawa.com)

**Description:** Mayekawa has expanded its business by focusing on freezing and compression technologies ever since its establishment in 1924. It is one of the most advanced companies in manufacturing industrial refrigeration compressors. As a thermal engineering company, Mayekawa has long contributed to providing business solutions to its customers based on these technologies, and in turn continuously evolved its technology and services. The company has expanded its capability by combining R&D and manufacturing understanding in order to cope with a wider and deeper range of problems that confront customers in the 21st century.

**Industry:** Process

**Country:** Japan

### PRODUCTS USED

- CADWorx®
- CAESAR II®
- PV Elite®

### KEY BENEFITS

- Increased productivity and design quality
- Improved accuracy in engineering deliverables
- Consistency in engineering design across global projects

## MAYEKAWA EXPANDS INTRODUCTION OF INTERGRAPH® CADWORX® GLOBALLY

**Intelligent 3D design solution enables Japanese manufacturing company to create deliverables more quickly and accurately**

### IDENTIFYING GOALS

Headquartered in Japan, Mayekawa Manufacturing Company (Mayekawa) is one of the most advanced companies in manufacturing industrial refrigeration compressors. Mayekawa develops markets with new plant-improving technologies that achieve energy-saving, conserving-water, resource-saving, and various robotic technologies, utilizing the knowledge of tremendous industrial refrigeration experience.

Mayekawa has been a user of Intergraph® CADWorx® Plant Professional at its Japanese headquarters, using the solution for piping design of the refrigeration package and gas compressor units it manufactures. As Mayekawa grows its business globally, the company wants to ensure consistency of design all over the world via a standardized engineering computer-aided design (CAD) platform.

### OVERCOMING CHALLENGES

- Reduce time required to create and modify 3D models and pipe design drawings
- Ensure consistency of engineering design with a single 3D CAD system across all its global sites
- Improve engineering design quality and overall productivity

### REALIZING RESULTS

Mayekawa's previous 3D CAD system (prior to implementing CADWorx) had severe limitations in operability and processing speed, which was slowing down the company's production. As Mayekawa's workload grew, it became increasingly apparent to the engineering firm that it needed to replace its 3D CAD system to support its growing business.

Mayekawa's package design department first selected CADWorx because it was the perfect fit with Mayekawa's selection criteria: user-friendly software that is compatible with AutoCAD® and CAESAR II® data. CADWorx is an integrated, AutoCAD-based software solution, and has bi-directional links with CAESAR II for pipe stress analysis and PV Elite® for pressure vessel analysis. Another key draw was the availability of local Japanese language support for CADWorx. The Intergraph solution was quick and easy to set up and use, enabling Mayekawa to start designing right away. Training was completed within only a month, and CADWorx was used for projects the next month.

"CADWorx had a positive impact on our business almost immediately, enabling us to reduce the time to create and modify 3D models and pipe design drawings for manufacture," said the chief engineer of Mayekawa's Unit Products Division. "The efficiencies that CADWorx has brought to our engineering processes allow us to create engineering deliverables more quickly and accurately."

CADWorx Plant Design Suite is an integrated, complete AutoCAD-based software series for plant design that provides intelligent drawing and database connectivity, advanced levels of automation, and easy-to-use drafting and design tools. The comprehensive suite of design tools includes piping, structural steel, equipment, process and instrument diagrams, and design review, plus automatic isometrics and bills of material. CADWorx has revolutionized the plant design industry with its ease of use, flexibility, inter-connectivity, and scalability.

As Mayekawa takes on more global projects, the engineering company wants a standardized platform worldwide to ensure consistency of design. With Intergraph's global presence and worldwide support, Mayekawa determined that it could easily expand the use of CADWorx to its overseas locations, including Korea, Europe, Brazil, and USA. Engineering design information can now be easily shared among Mayekawa's global teams, enabling the company to better meet the needs of global projects.

Today, Mayekawa – with over 20 designers, including engineers in international business departments – will use CADWorx worldwide, deploying the solution for pipe design and equipment drawings. The company has found CADWorx very effective for general arrangement (GA) drawings, spool drawings, and bills of material – the time to create GA drawings has been halved,

with spool output productivity improving ten-fold. In addition, enhanced accuracy has also helped to eliminate errors for construction drawings.

## MOVING FORWARD

Mayekawa has been very impressed with the application of CADWorx and the local support provided by Intergraph. As it extends the use of CADWorx to its overseas sites, it will continue to enhance the Intergraph system to improve its efficiencies in 3D modeling. The Japanese engineering company also plans to expand its use of Intergraph technology by adopting other Intergraph CADWorx & Analysis Solutions so as to fully maximize the benefit of its CADWorx environment.



## ABOUT INTERGRAPH

Intergraph is the leading global provider of engineering and geospatial software that enables customers to visualize complex data. Businesses and governments in more than 60 countries rely on Intergraph's industry-specific software to organize vast amounts of data to make processes and infrastructure better, safer, and smarter. The company's software and services empower customers to build and operate more efficient plants and ships, create intelligent maps, and protect critical infrastructure and millions of people around the world.

Intergraph operates through two divisions: Process, Power & Marine (PP&M) and Security, Government & Infrastructure (SG&I). Intergraph PP&M provides enterprise engineering software for the design, construction, operation, and data management of plants, ships, and

offshore facilities. Intergraph SG&I provides geospatially powered solutions, including ERDAS technologies, to the public safety and security, defense and intelligence, government, transportation, photogrammetry, and utilities and communications industries. Intergraph Government Solutions (IGS) is a wholly owned subsidiary of Intergraph Corporation for the SG&I U.S. federal business.

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For more information, visit [www.intergraph.com](http://www.intergraph.com).

