



## CASE STUDY

# Zhejiang Titan completes Xiamen Omic bio-science blavor manufacturing facility ahead of schedule and under budget

### Key facts:

**Company:** Zhejiang Titan Design & Engineering Co., Ltd.

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

**Industry:** Chemicals & Petrochemicals

**Country:** China

**Octave products used:**  
Forte 3DWorx (*CADWorx Plant Professional*)

### Key benefits:

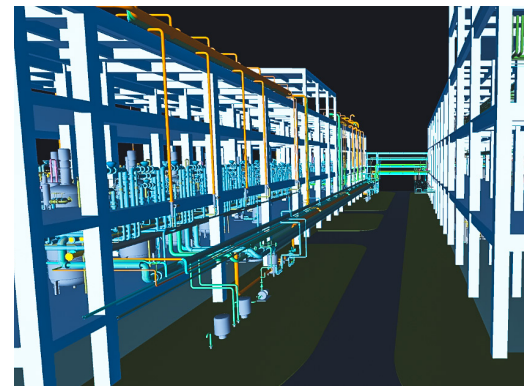
- Improved data quality with 3D design
- Optimized the design flow
- Developed the project management, procurement and construction more efficiently

Headquartered in the city of Hangzhou, Zhejiang Province, China, Zhejiang Titan Design & Engineering Co., Ltd. (Zhejiang Titan) performs engineering, procurement and construction (EPC) services for a wide range of industries. These include petrochemical, chemical, pharmaceutical, textile, gas processing and storage, and involve equipment, civil engineering and utilities. Zhejiang Titan's 600 employees include 110 senior engineers and 280 nationally registered engineers, and the company has a Grade A certificate of engineering design, engineering consulting and EPC services.

Xiamen Omic Bio-Science Co. Ltd. chose Zhejiang Titan for the engineering design of its Natural Functions Chemistry project. A major flavor material manufacturer and supplier in China expanding globally, Xiamen Omic requires high safety, health and environmental standards. The company uses renewable raw materials to make flavor products with natural characteristics.

### Identifying goals

The 65,000-square-meter (m<sup>2</sup>), 690 billion RMB project includes six units, five production workshops and an area for storage tanks. The largest two workshops are 147 x 20 meters and each workshop has



four floors. The design model for equipment included 1,163 static and 393 moving pieces of equipment and 6,083 pipes, with diameters primarily of 100 meters or less. The project required a fast turnaround, while the space for equipment and high number of associated piping was limited.

*“By interfacing the design with analyses at key stages, we were able to identify and address potential errors and clashes.”*

**Hailang Liu**  
Project Engineer,  
Zhejiang Titan Design &  
Engineering Co., Ltd.



## Overcoming challenges

With so many pipes in a small area, many could not be clearly indicated in a two-dimensional drawing. Additionally, the team had to change the piping. The project also required numerous deliverables including more than 9,000 isometric drawings, 919 pipe drawings, 146 material lists and 141 plane layout drawings.

“Facing these many challenges, our engineers leveraged the 3D modeling capabilities of Forte 3DWorx and its ability to interface with engineering analysis throughout each phase of the design,” explained Hailang Liu, project engineer.

## Realizing results

The five engineers on the project completed the piping design and issued drawings within nine months - a month ahead of schedule.

This saved the cost of addressing issues later in the project, helping the company manage the project flow to ensure a quality design. The team saved 300 work hours and reduced the cost of material and construction by three percent, reducing project costs by an estimated 5 million RMB.

## About Octave

Octave is a leader in enterprise software, turning data into decisive action and intelligence into your edge. Our software solves for and simplifies complexity, from the design and build to operations and protection of people, property and assets – for any scope, at any scale. For decades, we’ve partnered with customers to sharpen performance, elevate efficiency and amplify results. From factory floors to entire cities, our solutions are tuned to scale up what’s possible from day one onward.

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