



## FACTS AT A GLANCE

**Company:** Sino Pharmengin Corp.

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

**Description:** Sino Pharmengin Corp., a subsidiary of China National Pharmaceutical Group Corp., is a leading engineering, procurement, and construction firm serving pharmaceutical firms such as Pfizer and Sagent. Formed from combining the Chongqing Pharmaceutical Industry Design Institute CPIDI and Wuhan Pharmaceutical Industry Design WPIDI, Sino Pharmengin Corp. is affiliated with China National Pharmaceutical Group Corp., the largest state-owned pharmaceutical and healthcare company. The firm's 600 trained and registered staff members include 10 experts with State Council Awards and 3 industrial design specialists. More than 200 employees have earned registered licenses and certificates.

**Industry:** Pharmaceutical

**Country:** China

## PRODUCTS USED

- CADWorx®
- Isogen®

## KEY BENEFITS

- Provided building information modeling (BIM) for large, complex pharmaceutical facility.
- Eliminated costly clashes and rework.
- Improved productivity by 20%.
- Enhanced accuracy by 30%.

## SINO PHARMENGIN SUCCEEDS WITH INTERGRAPH® CADWORX® IN PHARMACEUTICAL SECTOR

### IDENTIFYING GOALS

For a recent project, Sino Pharmengin Corp. (Pharmengin) designed a pharmaceutical plant producing over 2 million medical doses per day. This building information modeling (BIM) project included a building 70m long, 23m tall, and 40m wide. Pharmengin chose Intergraph CADWorx to design hundreds of pieces of equipment, 872 unique piping systems with sizes ranging from 15 to 300mm, and more than 2000 isometric drawings.

The large Chinese Medicine Industrial Park (CMIP) project has a gross floor area of 55,000 square meters including workshops of pretreatment, extraction, preparation, and powder. The extraction plant building is 66m long, 30.3m wide, and 23.4m high. In addition to mechanical, electrical, and plumbing, Pharmengin designed 250 sets of equipment and 872 piping systems with diameters ranging from DN15 to DN300.

### OVERCOMING CHALLENGES

Prior to CADWorx, this type of multi-disciplinary collaborative design, with a large amount of pipelines in a small space with so many complex pieces of equipment, would experience collisions leading to expensive rework. The company's man-hours would have increased 20% or more, and errors would have likely been extensive throughout the design process. With CADWorx, Pharmengin eliminated these problems, and the advantages it provided increased both client satisfaction and employee motivation.

### REALIZING RESULTS

This project was the first use of Intergraph CADWorx for a pharmaceutical project in China. Pharmengin was able to improve productivity by 20% and enhance accuracy by 30%. The BIM multidisciplinary design included the workshop, equipment, process pipes and mechanical, electrical, and plumbing (MEP) over three months.

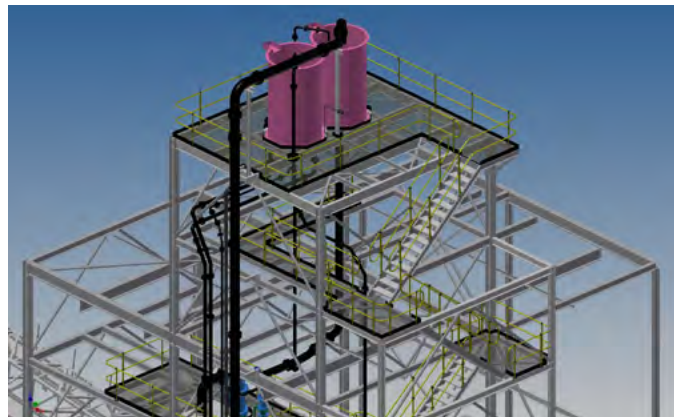
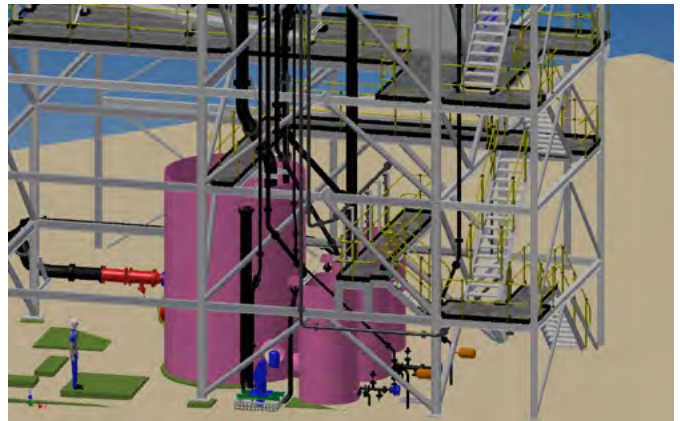
Pharmengin leveraged CADWorx for construction drawings, including a total of 872 isometric drawings using Isogen, plus videos and pictures to form a visual impression of the model. CADWorx proved easy to use and helped solve complex engineering problems, expedite construction, and improve productivity and accuracy.

“CADWorx has been proven to be highly suitable for pharmaceutical engineering in China,” explained Jia Xie, marketing manager at Pharmengin.

“It is capable of multi-disciplinary collaborative design and provided success for Building Information Modeling (BIM) and Mechanical, Electrical and Plumbing (MEP), including complex projects and confined spaces.”

## AWARD-WINNING PROJECT

Pharmengin received the 2014 CADWorx Drivers of Success Runner-Up Award for its use of the software. The annual Drivers of Success competition recognizes innovative applications of Intergraph products, impressive project results, and significant benefits from collaboration among disciplines and the integration of the products.



## 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.

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