



Jiangxi, China

Key Facts

Company: China Hi-Tech (Jiangxi) Textile Design Institute Company, Ltd.

Website: www.jtdi.com.cn

Description: Founded in 1958, China Hi-Tech (Jiangxi) Textile Design Institute Company, Ltd. was one of the first engineering design institutes in Jiangxi Province. The company's 80 employees focus on advancing technology and productivity in chemical and textile engineering, light industry and civil design, including extensive experience in viscose plant design and in glue works.

Industry: Textiles

Country: China

Products Used:

- CADWorx® Plant Professional

Key Benefits:

- Improved data accuracy
- Reduced labor requirements
- Improved customer satisfaction

China Hi-Tech (Jiangxi) Saves Time and Improves Accuracy with CADWorx® on Viscose Facility

Identifying Goals

The PT Rayon Utama Makmur Group facility in Solo, Central Java Province, Indonesia, will produce an annual 80,000 tons of viscose staple fiber and is the company's second such international viscose project. Because of Indonesia's limited industrial base, China Hi-Tech (Jiangxi) Textile Design Institute Company, Ltd. had to import all materials from China, and the country's complex import procedures demanded that the bills of material be highly accurate. Also, the installation was to be built by local workers, which elevated the importance of producing 3D isometric (ISO) drawings for the construction. Jiangxi chose CADWorx® Plant Professional to address these design challenges.

Overcoming Challenges

Three-dimensional design work included three main factory sections including stations for viscose preparation, spinning and spin bath. The preparation area contains 19,500 square meters (sm) in four levels 38 meters high with 580 devices and 1,000 pipes. The spinning area is 12,000 sm in three levels 21.6 meters high with 300 devices and 500 pipes. The spin bath is 15,300 sm in three levels 37 meters high with 540 devices and 1,500 pipes. The ancillary design included alkali, acid and carbon disulfide storage facilities and piping.

The overall project contained 1,340 pieces of equipment and more than 3,000 pipelines totaling 55,000 meters in length with 64,000 fittings and 28 specifications. Nominal diameters ranged up to 1400 and materials included:

- Carbon
- Stainless
- Galvanized
- Polypropylene
- Fiberglass reinforced pipe (FRP)
- Fiberglass reinforced plastic pipe (FRPP)

It was the first use of CADWorx for Jiangxi, but the software proved to be easy to learn. From training to final drawing, the project took only three months, including specifications and equipment modeling, and all done by just eight people.

Realizing Results

CADWorx helped the company improve the accuracy of the bills of material from 85% to 95% and reduced labor time with the software's automated isometrics and materials lists, saving an estimated 2,120 hours. CADWorx helped Jiangxi eliminate errors and complete the project on schedule, improving customer satisfaction significantly.

Award-Winning Project

Jiangxi received the CADWorx Drivers of Success Award for its use of the software. The annual Drivers of Success competition recognizes innovative applications of Hexagon products, impressive project results and significant benefits from collaboration among disciplines and the integration of the products.

About Hexagon

Hexagon is a global leader in sensor, software and autonomous solutions. We are putting data to work to boost efficiency, productivity, and quality across industrial, manufacturing, infrastructure, safety, 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.

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